Recommendations for Professional Development Needed for Technology Integration in a 1:1 Environment

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Abstract
With the recent adoptions of 1:1 technology initiatives such as the iPads in schools, it is urgent to provide appropriate professional development opportunities for teachers to maximize student use of the technology. This study provides vital information on the professional development needs of teachers for initial implementation of technology such as the iPad device and what is needed beyond the first year to sustain use in classrooms. One hundred and ninety-one teachers from 10 school districts participated in the study. The results of this study indicate that successful professional development occurs when teachers are allowed time to collaborate with colleagues and learn from peers on how they integrated curriculum with the technology. Collaboration with peers and work time was more important to teachers than one-on-one coaching, or large group professional development. Teachers also voiced a need for ongoing, differentiated professional development due to the wide range of teacher expertise and learning levels with technology.

Keywords: Professional development, 1:1, iPad, integration, implementation, 21st Century Skills
Classroom instruction in a 1:1 environment with technology has increased in schools since the initial iPad launch in 2010 and launch of similar tablet devices. To support teachers’ use of technology for instruction, some schools use professional development time to train teachers on how to use the device and how to integrate the technology into their curriculum. Initial training on the device, learning management systems, and content-specific apps are common during initial adoption as teachers implement the device for the first year, but little research has identified specific professional development activities or topics that teachers feel are needed to sustain the technology use in the classroom. For teachers to use technology to increase student achievement and prepare students with 21st century skills, teachers need to be provided with specific professional development not only to initially implement the technology use, but also to sustain the use on a daily basis as the technology evolves. Research on technology adoption and integration clearly states that if school districts fail to recognize and plan for regular, relevant, and ongoing professional development they are not likely to see widespread use or benefit to most students (Topper & Lancaster, 2013). In addition, specific professional development activities or topics to support classroom instruction with an iPad or similar tablet technology have not been identified. But teachers have identified that they long for professional development to take them to a higher level, the need for more professional development, and time prep with the technology (Chou, Block, & Jesness, 2012; Pogany, 2009). Learning from teachers who have been using the tablet devices provides a foundation for professional development needs specific to the iPad device and can identify other needs for future research in technology integration.
Literature Review

Reform in education has called for increased use of technology in schools to increase student achievement and technology skills. Technology integration, in which the students are the primary user of technology, results in increased student understanding, engagement, and critical thinking (Sheehan & Nillas, 2010). According to Lei (2010), the quantity of technology use has no impact on student achievement, but high-quality technological usage is beneficial to students academically. With the increase of technology in the classroom, the skills that teachers now need to develop and deliver curriculum and instruction has changed. It is critical for teachers to learn how to use the modern day technology to deliver instruction on a daily basis.

According to the National Center for Education Statistics (NCES), in 2009, the ratio of students to computer in a classroom every day was 5.3 to 1. Yet, only 41% of elementary and secondary teachers surveyed use technology often and only 29% sometimes use technology. Previous barriers of limited technology resources have now been reduced as many schools in the United States are moving to 1:1 learning environments (Bebell & O’Dwyer, 2004; Bouterse, Corn, & Halstead, 2009; Inan & Lowther, 2010b; Spires et al., 2012). With the rapid increase of technology, barriers still exist that prevent teachers from integrating technology into their daily curriculum. According to the National Education Association (NEA) and the American Federation of Teachers (AFT), a survey of 1,923 teachers showed there was little evidence that teachers were able to successfully use computers in their teaching yet they had access in their classrooms (NEA, 2008). Failure to use technology effectively can result in a digital disconnect for students and limit the effectiveness of 1:1 initiatives (Dornisch, 2013; Levin & Arafeh, 2002). Some researchers report the overall impact of 1:1 initiatives on student achievement over the last decade is still unclear (Abell, 2008; McLester, 2011; Storz & Hoffman, 2012). Maine
continues to be the largest program of 1:1, despite lack of clear evidence of results (McLester, 2011). Other research groups have documented increased student achievement when technology is integrated successfully in the classroom and the technology can improve student learning and engagement in lessons using technology (Bebell & Kay, 2010; Cheung & Slavein, 2011; Judson, 2010; Shin, Sutherland, Norris, & Soloway, 2011).

As schools continue to acquire more technology, the benefit to students will depend on the teacher’s technological skills and uses in the classroom. Many teachers are still uncomfortable in blending traditional pedagogies with those required to teach in a 1:1 environment (Donovan, 2007). Storz and Hoffman (2012) reported that before and after implementation of a 1:1 initiative, teachers reported feeling unprepared, frustrated, and out of their comfort zone and the shift of teaching practices has not dramatically changed (Storz & Hoffman, 2012). This literature review provides information on technology integration, 1:1 technology adoptions, barriers to technology integration, and the need for research in professional development practices to support teachers in the implementation and sustained classroom use of 1:1 technology.

Technology Integration

Many different definitions for technology integration in education exist in research. Various research groups have attempted to define technology integration into steps or phases for an educator and the skills that are performed (Cuban, Kirkpatrick, & Peck, 2001; Mills & Tincher, 2003; Sandholtz, Ringstaff & Dwyer, 1997). Most recently, schools have used SAMR (Substitution, Augmentation, Modification, and Redefinition) as a framework to evaluate technology integration (Puentedura, 2013). While technology integration lacks a common definition, the common idea of using computing devices (tablets, laptops or PCs) for
instructional purposes is consistently referred to as integration. Some teachers use technology primarily to deliver instruction (Bauer, 2002; Moersch, 1995), however, this would be considered technology use and is different than technology integration. For teachers to use technology as a tool for learning, it incorporates pedagogical principles of active learning, mediation, collaboration, interactivity, and is used to augment or improve instruction (Gorder, 2008; Kulik, 2003; Ross, Hogaboam-Gray & Hannay, 2001). Basic levels of technology integration would be using technology as a substitute for a common classroom practice such as research or writing a paper. In higher-level technology integration, students are using technology to collaborate with someone outside the school or creating an interactive presentation with video or audio that the student has created. Teachers must have the basic knowledge of technology in order to decide when or how to use the technology with the students. In order to effectively use technology, teachers must have also the knowledge and skills to integrate technology beyond substitution and augmentation of existing curriculum. The idea of technology integration is for the learning environment to be more student-centered, transitioning to where the learning activities that are occurring would not have been possible without the use of the technology. Technology integration takes place at different levels depending on the teacher and the situation, and should not be measured by the amount of time technology is used (Earle, 2002). According to previous studies, several factors can lead to effective technology integration: access to technology and support (Hohlfeld, Ritzhaupt, Barron & Kemker, 2008); teachers’ beliefs and attitudes (Becker, 2000; Chen, 2008; Jimoyiannisa & Komisb, 2007; Lim & Chai, 2008; Van Braak, Tondeur, & Valcke, 2004; Vannatta & Fordham, 2004; Wozney, Venkatesh, & Abrami, 2006); pedagogical, content, and technological knowledge (Koelher & Mishra, 2006; Pierson, 2001); demographic characteristics of teachers, such as years of teaching (Bebell, Russell, &
O’Dwyer, 2004; Van Braak, 2001); and ongoing professional development (Becker, 2000); and teaching models or mentors (Bitner & Bitner, 2002).

Despite the barriers, technology integration will continue to be a theme in schools as the rate of placing devices in students’ hands in a 1:1 environment increases. Therefore, continued research in this area to best support teaching will be ongoing. Successful integration into a class ultimately will depend on the teacher regardless of what type of computing device. Common movements in 1:1 adoptions today include laptop or tablet devices over desktop environments. This change is due to the declining cost, increased availability of wireless Internet, curriculum resources from textbook companies that are Internet based, student accommodation features for special education, durability, size, and portability. Also, many educational content-specific applications or apps have been developed for classroom use. Apps are self-contained programs or software designed for mobile technology.

Generally, 1:1 programs are designed to increase academic achievement, increase student engagement, transform the learning environment, increase equity, and increase student’s skills to compete in the 21st century (Abell, 2008). In a 1:1 teaching environment, teachers use computer devices to meet both the professional needs of the teacher and to support the needs of students. Technology in schools can help student learning, prepare students for the future, increase quality of instruction and increase student engagement (Abell, 2008; Hew & Brush, 2006; Lowther, Inan, Strahl & Ross, 2008). One-to-one initiatives also vary on the amount or level of use in each classroom where some teachers use it on a daily basis using multiple apps where other teachers use it occasionally as they see fit into their curriculum. The challenge teachers face today is redesigning lessons for the 1:1 environment where it is not just a tool in the classroom but the teaching and learning for students is different from the past. To truly change the nature
of teaching in a 1:1 environment, it takes a significant transformation in how teachers teach (Pogany, 2009). Research on professional development to understand how to change teacher instruction using 1:1 technology is needed. Research related specifically is needed with iPads. Instruction with iPads is relatively new and instruction relies on course specific apps loaded on the mobile device and/or access to other content via the Internet. According to Tim Cook, CEO of Apple, iPads make up 94% of the market share for educational tablets (Cheng, 2013). Due to the high use in schools of iPads, the need to research iPad specifically benefits a large amount of schools and teachers. It is recognized that technology will continue to evolve, but research in this area provides a base knowledge that could apply to later technologies.

**Teacher Barriers to Technology Integration**

As teachers gain the access to technology in their classroom and begin the implementation process, the level of integration differs among teachers. Based on a study of classroom teachers’ experiences, the primary motivation for teachers to use technology is the belief that the technology will improve them as a professional and it will positively impact student learning (Ottenbreit-Leftwich, Glazewski, Newby, & Ertmer, 2010). While most teachers believe that technology will benefit students, many of today's educators fail to integrate technology into their curriculum or integrate it in a meaningful way. Confusion in teacher practices lies, in part, in the definition of technology integration. Technology integration is not just simple technology use for grading or looking up resources. Technology integration is teachers using technology on a daily basis within lessons (Gorder, 2008). For example, technology integration could mean collaboration with students in different schools in real-time to write a story, or perhaps narrating a story by capturing an audio clip and embedding it in the document. With the increased access to technology devices for both teachers and students and availability of 1:1 Internet access, teaching with technology and technology integration is more than a substitution of what was done in the past. Technology
integration in today’s classrooms should be redefining learning activities in ways that could not have been done in the past. Integration is still limited in teacher practice. This problem of technology integration is not new (Al-Bataneh, Anderson, Toledo & Wellinksi, 2008). Increased availability of technology devices in schools does not necessarily lead to improvement in teaching practices (Inan & Lowther, 2010). Some barriers that have been identified include fear, time, hardware, training, support, climate, technology skills, teaching experience, age, beliefs, and professional development (Hew & Brush, 2007; Inan & Lowther, 2010). Studies have been conducted to identify what factors predict if teachers will integrate technology, but the results have been conflicting. Teachers’ beliefs and readiness, along with support and professional development, were reported by Inan & Lowther (2010a) as key factors as to whether a teacher would integrate technology. However, Males (2011) reported that teacher beliefs and attitudes were not the main reasons a teacher decides to integrate technology nor was amount of time a teacher has been at a school have a bearing on how much that teacher will integrate technology. Educators engaging in professional learning programs that are focused on instructional technology has been found to increase the level of technology use in the classroom, increase student achievement, and alter their beliefs in educational technology (Carter, 2008). Schools do provide educators with various levels of professional development, but effective integration is not happening (Bauer & Kenton, 2005). Therefore, identification of professional development that teachers perceive as beneficial is important as more and more schools convert to a 1:1 environment with technology.
Professional Development

Professional development related to technology integration is now of importance to schools as teachers must change how they teach. Professional development is a cornerstone in professional growth (Carter, 2008). Professional development has taken on various forms over the last 40 years due to research in the field and the spread of information with technology. Strategies for professional development include workshops, expert training, learning communities, job embedded learning, and shared decision-making (Carter, 2008). Not all strategies of professional development work equally well and success may depend on the goal or focus. Professional development efforts that fail tend to be those where the activities are irrelevant to teacher classroom practice or one-shot approaches with little follow-up. Effective professional development is organized around real teacher practice, provides teachers with the opportunity to work and learn together, and brings together teachers who are engaged in similar efforts (Mouza, 2002). In addition, high quality professional development should focus on training teachers to improve student learning and achievement (Carter, 2008).

Teachers no longer have the option to not use technology when they teach if technology is available. Teachers who have been teaching for many years may not have been trained with the same level of technology skills as those who are currently graduating from teacher preparation programs, since most teacher preparation programs infuse technology to varying degrees. Regardless, instructional strategies designed in the past are no longer appropriate in today’s classroom and teachers must be more advanced technology users and implement new teaching strategies (Brooks-Young, 2005). The International Society for Technology in Education (ISTE) established standards for both teachers and students in 2008 to encourage teachers to focus on 21st century skills and to use technology to learn and explore and not simply
just employ technology. Teaching strategies must prepare students with digital age skills. The current standards are focused on higher-order thinking skills and digital citizenship. The standards encourage teachers to help students: (1) demonstrate creativity and innovation; (2) communicate and collaborate; (3) conduct research and use information; (4) think critically, solve problems, and make decisions; and (5) use technology effectively and productively (ISTE, 2008). In order for teachers to adopt new technology standards, professional development must be offered to aid in alignment with these new strategies to effectively incorporate technology.

Frequent professional development that focuses on technology integration is needed for teachers to move from a level of uncertainty to familiarity (Al-Bataineh et al., 2008; Lawless & Pellegrino, 2007; Sugar & Kester, 2007). An expansive literature review conducted by Lawless and Pellegrino (2007) on professional development related to technology found that the best professional development programs are spread out over time with opportunities for follow-up and feedback; and fragmented professional development of one hour or one day does not meet the pedagogical needs of teachers. A realistic technology integration plan should span two-to-five years to get a return for the investment and should include clear expectations, mentoring and practice (Hinson, Laprarie, & Cundiff, 2005; Tournaki, Lyublinkaya, & Carolan, 2011).

Professional development should also be designed to meet the needs of the teacher. Teachers are more likely to integrate technology into their teaching when the professional development is aligned to the content they are expected to teach and it is relevant and useful to their teaching (Penuel, Fishman, Yamaguchi, & Gallagher, 2007). At this time, it is not clear what specific professional development activities teachers feel are most effective to integrate and sustain iPad technology implementation in secondary classrooms. In a recent study of an iPad implementation project, teachers did not feel they had support in the content areas and relied on
colleagues and students for support. This study also indicated that pedagogical behaviors of the teachers remained unchanged after the implementation (Benton, 2012). More information on the type of professional development to support teachers is needed.

**Theoretical Framework**

Challenges in a 1:1 environment still exist with technology integration and teacher use on a daily basis. Although many studies have been conducted to identify teacher barriers, many of those barriers have been eliminated: the number of devices seem to be ubiquitous, students no longer lack technology skills and are often more advanced than the teacher, the Internet connectivity has improved with wireless environments, technology software and hardware is easier to use, and teacher training is prevalent in teacher preparation programs. There appears to be little effort in the amount of daily classroom integration even with readily available technology and research must continue to find out the underlying cause of the problem (Males, 2011). Research in this area could help identify specific professional development that can lead to best practice teaching with this technology. It could also identify when and where the professional development should take place for teachers to most effectively integrate technology.

Second, if technology has been integrated into the classroom, what additional support is needed to sustain the use of technology integration beyond the first year? Research should be conducted to identify strategies that help teachers to implement and sustain technology use at a higher level in the classroom (Mills & Tincher, 2003). Identification of what teachers feel is important for professional development allows for targeted professional development in other schools that are initiating 1:1 technology integration plans. Schools often have limited funding and limited time devoted to professional development and often have professional development needs related to curriculum or district trainings in addition to technology. This research could
assist in making better use of the professional development funds and time.

Lastly, with the need to teach students the skills required for the 21st century, professional development related to technology as a whole needs to be addressed to change teacher practice. We need to consider how to move teachers toward student-centered practices (Ottenbreit-Leftwich et al., 2010). Sheehan and Nillas (2011) have determined that technology integration, in which students are the primary users of the technology, results in increased student understanding, engagement, and critical thinking. Relationships between student achievement and technology use in a statewide study in Idaho showed a statistical significant effect size different in achievement gains based on whether their teachers used technology (Ravitz & Mergendoller, 2002). Yet, teachers still struggle with student-centered instruction especially related to technology. Student-centered instruction is still problematic as teachers focus more on superficially teaching the technology rather than collaborative problem solving or authentic tasks (Polly & Hannafin, 2010). Teachers lack good models to emulate for effective integration of technology in the curriculum (Bitner & Bitner, 2002). Professional development strategies should be designed to show how the technology could enhance student learning. Research is needed to understand high-quality practices for training teachers on strategies to use technology. Continuing to explore the needs of teachers will help move forward 1:1 implementation adoption plans and advanced professional development strategies to propel teachers to a higher level of integration (Pogany, 2009).

**Purpose of the Study**

The purpose of this study was to identify professional development activities or topics that were necessary for technology implementation in secondary classrooms with the iPad and also activities or topics teachers still need to sustain integration in secondary classrooms. This
study also determined if the professional development needs differed based on demographic data of the teachers and the availability of content-specific electronic curriculum resources. Identification of professional development needs that are more strategic towards teachers’ needs can help administration make informed decisions on how to allocate resources for future professional development.

**Research Questions**

1. What professional development activities/topics do teachers identify as necessary for iPad implementation in secondary classrooms?

2. What professional development activities/topics do teachers still need to sustain iPad use in secondary classrooms beyond the first year?

3. Is there a difference in professional development needs for iPad use based on the demographic characteristics of the teachers?

4. Is there a difference between the professional development needs of teachers and the availability of electronic textbooks, curriculum resources, and iPad apps?
Methodology

This study used a mixed methods approach to identify professional development activities and topics that were critical for implementation of iPad technology and what is still needed to sustain the use of the iPads beyond the first year of adoption. A survey instrument was used to collect data on professional development activities and topics critical to implement or sustain iPad integration. The survey was designed by the researcher since a survey tool to identify professional development activities and topics for iPad implementation or sustainability could not be found. The survey consisted of four multiple response questions to identify professional development activities and topics needed to implement and sustain iPad use in classrooms. Open-ended questions were also used to identify any challenges, positive elements, or additional information they wanted to share related to professional development.

Demographic data was collected on content taught, age, gender, years teaching with the iPad, and ethnicity to determine if a difference exists between professional development needs and teacher demographic characteristics. Lastly, multiple response questions were used to identify if content-specific electronic resources, curriculum, and apps are available to determine if there is a difference in the professional development needs based on the availability of electronic resources. The focus population was teachers using iPad devices in schools with 1:1 adoption programs and who have been using the iPads for more than nine months. Twenty-seven school districts in Minnesota were identified with secondary teachers who have used iPads for more than nine months. Ten districts agreed to participate in the study. A total of 533 teachers were invited to participate from the 10 identified school districts. A 90% confidence interval was achieved with 191 teachers participating in the study. This was a volunteer sampling of secondary teachers who have used iPads.
Data Analysis

Quantitative data from the survey was exported from Qualtrics into Statistical Package for Social Sciences (SPSS). Quantitative data from the survey was used to identify professional development activities and topics needed to implement and sustain iPad use. Quantitative data from the survey was also used to determine if the professional development needs for teachers differ based on the availability of electronic resources. Calculating descriptive statistics and creating frequency distributions comprised much of the data analysis. A Pearson Chi-Square test was used to examine the relationship between the professional development needs and demographic characteristics (the content taught, age, years teaching with iPads, and gender). A Pearson Chi-Square test was also used to examine the relationship between the professional development needs and the availability of electronic resources.

Qualitative data was obtained from the open-ended questions related to professional development challenges, successes, and additional information related to professional development and iPad integration. This data was organized and coded into themes by the researcher. The database of the qualitative data was compared to the quantitative data results.

Results

The results showed differences between professional development activities for implementation and what is needed to sustain beyond the first year. The professional development activities needed for implementation reported by teachers included iPad device training, iPad app training, and learning management training. The researcher expected these results, since during the first year of using the device, it would seem likely more training would be required to learn the device. As technology continues to evolve with the iPad or other devices,
professional development during implementation phases would need to address training on the device.

Learning how to use apps on the device was also needed for implementation according to the teachers. New apps are continually being released, but some apps for education are fairly standard within schools. Learning how to integrate the apps into traditional instruction or a former lesson is a challenge that teachers now face. While this finding may be more specific to the iPad, this could be applied to other devices that have similar platforms.

Training on learning management systems was also reported as needed professional development during implementation. Depending on the school district of choice, learning management systems such as Schoology, Edmodo, and Moodle all have different functions for delivery of curriculum. Training on how to upload content, release content for student use, and deliver assessments are some of the various tasks that are needed within the first year.

Lower in priority, but still a need during implementation, was professional development related to instructional strategies with technology. Teaching with technology in the students’ hands, should be less teacher-centered and more student-centered. To keep students engaged, instructional strategies should differ from traditional classroom instruction. The need for instructional strategies carried through to what is needed during sustaining years. As teachers become more comfortable with the device itself, this appears to be a greater need.

Lastly, collaboration with colleagues on technology was a professional development activity that teachers need not only during the implementation phase, but also to sustain iPad use beyond the first year. A teacher learning from other teachers on how to change lessons or how to use the technology to engage students was reported as critical for professional development by many teachers and was supported in the qualitative data as well.
Professional Development Topics

This study shows that teachers feel professional development on instructional strategies is a necessity for sufficient integration. Teacher identified instructional strategies as important for professional development both during implementation and what is needed to sustain beyond the first year. Instruction with devices in the hands of students is very different than a traditional teacher centered lesson. This was not surprising to the researcher because instructional strategies when first using the iPad should look different than traditional instruction. Teachers would no longer be using paper and pencil activities, but lessons and instruction would be more interactive using apps and Internet-based activities.

Other topics for professional development voiced by teachers were classroom management and engagement. More teachers identified classroom management as a topic needed for implementation that shifted to engagement as a topic needed to sustain beyond the first year. Classroom management and engagement are two topics for teachers that go hand-in-hand. If students are engaged, classroom management issues are reduced. If a teacher has good classroom management, it is easier to engage the students in learning. Simply putting the device in a student’s hands does not guarantee engagement or classroom management. The information provided from the qualitative data indicated an increase of students being off-task and trouble with students playing games or being on sites other than what was supposed to be used for instruction. Therefore, teachers expressed frustration and value in professional development related to this topic of management and engagement.

Course design and assessment seemed to be less important topics for teachers for professional development during implementation compared to what is needed for sustaining use. The researcher suspects from personal experience that as a teacher becomes more familiar with
how to use the device, the activities and topics would naturally shift to better instructional practices and course design or assessment. This was also found in a 1:1 study when integrating laptops; there is an evolution that occurs once teachers become familiar with the functionality of the device (Pogany, 2009).

**Qualitative Interpretation**

To provide a richer description of the professional development needs, three open-ended questions were used to identify challenges, successes, or additional information with iPad integration. The responses were hand-coded into themes based on the similarity of response. The qualitative data further sheds light on the specific challenges and successes with professional development and additional information related to iPad integration that was not captured in the close-ended questions. Classroom management and engagement seems to be a greater challenge with the iPad device, and teachers reported the need for professional development in this area. While other studies have indicated increased engagement with technology use, teachers voiced management and engagement as a challenge with issues related to gaming. Perhaps this is a natural occurrence with the iPad since one primary use of the iPad device is iPad gaming apps. Many teachers mentioned that students have a hard time transitioning from gaming to a learning device. The results are similar to results in a 1:1 integration study with laptops in that classroom management is different with a classroom of students looking at the devices and the social interactions and attention of students changed (Pogany, 2009).

Lack of time for training and time for collaboration was also a concern with many teachers as a challenge to the professional development for iPad integration. This correlates well with the activities teachers identify as critical for implementation and needed to sustain iPad integration beyond the first year. The challenges of learning how to use the device or a specific
app and then having no time to play or incorporate that into existing lessons was reported. Time to collaborate with colleagues was limited and some of the successes of the professional development happened when they could learn from others. One teacher stated, “Collaborating with colleagues has been the most beneficial to me. We all have things that work well, and it’s very important to share those ideas.” Another reported, “When we have time to see how other teachers are integrating iPads into their curriculum and are given specific ideas to use in our content areas, I feel that the PD is successful. Most people are intrigued by seeing awesome ideas others have and think, ‘hey, I could do that’, that's pretty cool.” The need for collaboration and time was a major finding in other technology integration studies (Pogany, 2009; Sugar & Kester, 2014).

Another significant theme that emerged from the challenges, successes, and additional information is how the professional development training is delivered. The teachers reported challenges with having large group professional development or a one-size-fits-all approach. Teachers have varied abilities and expertise with technology. One teacher expressed this concern in this way:

The biggest challenge my colleagues and I have faced is that a majority of professional development related to iPad integration is geared toward users who are least familiar with the device or its use. This means that I, along with some friends, are often bored at these PD events, because we already know how to use apps and are comfortable with the iPads. Some teachers, including myself, in our school are proficient with iPads and integrate tech into the curriculum with little or no problem; others don't know how to do simple functions such as getting to their camera roll. This makes PD frustrating—I feel like I do not learn anything.
Teachers reported success when professional development was delivered in small groups and differentiated based on the needs of the teachers. “Offering breakout sessions with a different focus for different learner needs (beginning skills, assessment on iPads, student engagement, etc.) was really respectful and beneficial. Also, training that simulates actual activities we could do in class was also very helpful”, reported one teacher. These results were similar to a study where 1:1 laptops were implemented, that differentiated professional development was recommended to be the best to address the diversified needs of staff (Donovan, Hartley, & Strudler, 2007).

Additional information regarding the qualitative responses is that teachers did not comment on too much training, but rather commented on lack of training, needing more training, ongoing training, and how future training should be designed to meet the needs of the teachers. These results provide evidence that if the training is provided, and teachers are given time to work and collaborate; the integration will likely follow in the classroom. Other research supports these findings that for professional development to be effective it needs to be ongoing and highly focused for improving instruction (Sugar & Kester, 2014; Tournaki, Lyublinskaya, & Carolan, 2014;).

**Demographic Comparisons**

To determine if the professional development needs for implementation and to sustain iPad use had any relationships with the demographic characteristics of the teachers surveyed, a Pearson Chi-Square analysis was used. The demographics analyzed were gender, age, frequency of iPad use, length of time using the iPad, and whether or not electronic resources were available. Analysis of demographic data and the professional development needs showed a few trends that have not been seen in other studies. There was no relationship between the
professional development needs and academic content area or the frequency of use. Regardless of the content taught or how often teachers used the device, there was no difference found in what teachers needed related to professional development. This was also reported in a technology integration study by Gorder (2008).

Age seems to be a bigger factor with the professional development needs. Younger teachers (ages 21-30) seemed to need less device training, training with apps, and one-on-one coaching, where the older (ages 50 years or more) needed more training with the device, training with apps, and one-on-one coaching. This was not surprising to the researcher since younger teachers would be considered more digital natives having experiences with devices providing a comfort level different than that of older teachers. Classroom management results seemed to be the reverse where younger teachers (ages 21-30), showed a greater need for classroom management and older teachers (ages 41-50 and ages 50 and older) less of a need. This information supports the need of differentiated professional development as indicated in the qualitative responses.

The professional development needs related to length of time using the device did show some differences. Teachers who have used the device longer (19 months or greater) showed the need for professional development for device training and instructional strategies during implementation, and those using it from 0-9 months did not need this training. This was surprising to the researcher, that those who had used the device for a shorter period of time needed less training. The increased availability of iPads in recent years for personal use may have contributed to this result as more and more people are using this technology on a daily basis. This also may be attributed to age, with a larger group of older teachers in the “who have used the device 19 or more months”; they might be the group of teachers who indicated the need
for more device training and instructional strategies for professional development. Another possible reason for more training needed for those who have used the device 19 or more months, may be due to the lack of professional development when the adoption in their school took place.

The professional development needs related to the availability of electronic resources showed no relationship except for collaboration. The teachers who indicated there were sufficient electronic resources reported the need to collaborate with colleagues during implementation. This supports the earlier results that listed collaboration with high frequency being needed for both implementation and for sustaining iPad use. This also supports the information provided with challenges and successes with professional development. Teachers voiced the challenge of not having enough time to collaborate and had the most success with professional development when allowed to collaborate with colleagues.

**Discussion**

The findings of this research have implications for teachers, administrators, and those organizing professional development efforts related to technology integration plans in 1:1 environments, specifically with iPads.

For teachers to integrate and sustain iPad use beyond the first year, it is clear from teachers that professional development is essential for technology integration both for implementation and to sustain use. It is also clear that professional development needs are different in the first year as teachers learn the device. Device training, app training and learning management are critical during year one. Collaboration and learning about instructional strategies seem to be an ongoing need for professional development with iPad integration. Teachers should be encouraged to participate in the training provided to improve and increase
classroom use. Teachers voiced a strong emphasis on learning from each other and time to work as critical components for professional development.

For administration and those planning professional development, providing differentiated professional development seems to be very important with technology integration. Level of comfort and expertise can be very different among teachers. Recognition of the various technology levels, learning styles, and implementation rates should be taken into consideration when designing professional development. In addition, meeting the teachers where their needs are, providing frequent training with adequate time to collaborate with colleagues was viewed as the most successful professional development. Professional development traditionally is very structured and a one-size-fits-all approach. Creative approaches with professional development to be less “teacher” directed instruction and a more “student” centered approach where teachers are working together would benefit teachers most. The shift of student-centered classrooms should be consistent with professional development being teacher centered. One common type of professional development that is emerging is the idea of an “unconference” or “open space” conference. This type of professional development activity has also been given the name “ed camps”. This is where groups of professionals collaborate and design professional development around what they need on the spot, rather than a structured session approach. The outcome is not predetermined. This type of professional development provides structure for a community of learners to identify their learning need and be empowered to address that need (Herrington, 2006; Kenny, 2014).

**Recommendations for Future Research**
Collaboration and time to work with colleagues is essential to implement and sustain technology use with the iPad. Future research should be expanded to devices beyond the iPad to see if the needs are the same for technology integration with a wide variety of devices.

Identification of specific instructional strategies may also be an area that should be investigated in future research. Teachers identified the need for professional development related to instructional strategies was needed but which instructional strategies are the most effective has not been identified.

Lastly, past studies have investigated barriers for teacher use. Many of the barriers such as Internet access and device access have been eliminated. With 1:1 adoptions, the vast majority of teachers should be using technology on a daily basis, yet only 65% of the participants in this study were using it daily. It is still unclear what is preventing some teachers’ use of technology.

**Concluding Comments**

The outcomes of this research suggest critical activities and topics that teachers need for professional development for iPad integration. The findings indicate that the professional development needs during implementation do change from what is needed for sustaining use. Device training, app training, and learning management training are critical during implementation. Collaboration and instructional strategies are needed for both implementation and sustaining. While some districts just put the devices in teachers’ hands, the results of this study show the need for differentiated, on-going professional development for implementation and to sustain use beyond the first years. Structured, large group professional development seems to be less favorable for technology integration compared to small group collaboration and individual work time according to the teachers in the study. Time given to learn the technology and the opportunity to learn from other teachers should increase the frequency of teacher and
student use in the classroom and the quality of use as well. As technologies continue to change, giving teachers time to “play” with the technology together might just be the best approach to professional development.

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National Education Association. (2008). *Access, adequacy, and equity in education technology*. Results of a survey of America’s teachers and support professionals on technology in public schools and


Abstract

Equity and social justice are the basis of a democratic society. The schools are fundamental nurseries for developing democratic values and social justice in a democratic country. Equity in provision of education has been one of the key components of the National Educational Policies of Pakistan. However, the dogmatic and intolerant situation in Pakistan, marked by terrorism, indicates that the schools in Pakistan may not have succeeded in creating spirit of social justice among the students. This study explored how much the schools in Pakistan have succeeded in developing the spirit of democracy and social justice among the students. Main focus was upon teachers’ effectiveness in developing sense of social justice, this was analyzed on Hackman’s (2005) five essential components for social justice education [i.e. tools for (a) content mastery, (b) critical thinking, (c) action and social change, (d) personal reflection, and (e) awareness of multicultural group dynamics]. The data collected from 94 (49 male+45 female) teachers of Multan City schools revealed that teachers adopted pedagogical approaches which lacked in Hackman’s five essential components for social justice education. It is recommended that curriculum and professional development of teachers should be reviewed for making teachers’ pedagogy effective to enable students develop spirit of social justice.

Key Words: Education, Social Justice, Challenges for schools, Punjab, Pakistan

Introduction

Education plays vital role in developing children’s academic, social, emotional and physical abilities. The academic growth cannot be separated from social, emotional and physical potential of the children (Marcinah & Nirmalah, 2015). Hackman (2005) considers five essential components for social justice education, these are tools for (a) content mastery, (b) critical thinking, (c) action and social change, (d) personal reflection, and (e) awareness of multicultural group dynamics. Therefore for the balanced development of students, all the factors are equally important and the students should be prepared to survive among their peers having different socioeconomic backgrounds. Turhan (2010) defined social justice as equality and freedom practiced by all equally. Furthermore, Hytten
and Bettez (2011, p.8) quoted Hackman (2005) that “Social justice education helps students in taking an active part to educate themselves and also provide support to teachers in creating democratic and critical educational environment in institutions”. Hytten and Bettez (2011, p.8) also quoted Murrell (2006) that social justice involves “help to eradicate all kinds of oppressions and unequal treatments”. According to Sommers (2014) it is the responsibility of school to ensure equal participation of all groups for equal distribution of resources to maintain socially justifiable environment in the school. Westheimer and Kahne (2004) suggested that school should develop justice oriented people having broader vision to look at political, economic and social problems in systematic way and able to design workable strategies to bring social change which help to flourish social justice among the masses in general and in educational institutions in particular.

The role of teacher is important in bringing social equity among his/her students, Kaur (2012) stated that “teacher must know the teaching skills and understanding about how the children learn and develop”. Author has also stressed upon idea that for the best teacher who is enthusiastic to move from theory to practice to create a culture of social justice which is different from other contemporary schools. Furthermore, its school administration obligation to work effectively and equitably for all learners. It is moral and political responsibility of institution to provide rich learning opportunities for all learners irrespective of their socio-cultural backgrounds (Kaur, 2012).

Government of Pakistan have incorporated in educational policy of 2009 important facts related to social and national development of all individuals and quoted that “Education is a categorical imperative for individual, social and national development that should enable all individuals to reach their maximum human potential. The system should produce responsible, enlightened citizens to integrate Pakistan in the global framework of human-centered economic development.”
Furthermore, Iqbal (2016) has quoted the constitution of Pakistan under Article 37b is about the provision of social justice and removal of social injustice in general and particularly in educational institutions, it is given under this heading that the state shall “remove illiteracy and provide free and compulsory secondary education within minimum possible period”. Overall, Pakistan is confronted with the problems like poverty, social inequalities and somehow extremism and these problems are directly related to literacy which is crucial for the individual’s development. Iqbal (2016) further added that without providing equal educational opportunity to all individuals by not considering their social and economic status is important role of school to provide such conducive environment for all including poor and ignored people of the society and encourage to become the part of mainstream. Some experts have opined that the countries are under developed because the people are under developed and have limited opportunities to expand their potential and capabilities to serve themselves and the society. Pinto et al (2012, p.3) quoted Gerwirtz (1998) that teachers as well as administrators need a mandatory skills, knowledge and disposition to tackle the challenges of social injustice in their schools. In these situation the only hope is education which can help to get out of this problem, Iqbal (2016), says that “In a developing country like Pakistan, where there is low economic activity, education is the only vehicle for upward social mobility of poor and marginalized people”. It is obvious that education plays a vital role for changing the societies approach towards all social and economic issues. So, schools’ role is unmatchable to transfer culture, values and social justice among students from very beginning of their future practices in their practical life and the education is imparted by our teachers. The researchers decided to seek teachers’ opinion about their practices of social justice through education among their students of different socio-economic and religious status to ascertain the challenges faced by our society.

The present study was delimited to the factors (d) and (e), i.e., to (d) personal reflection, and (e) awareness of multicultural group dynamics. It was further delimited to secondary schools of public sector and private sector of Multan City.

Objectives of the study included, among others, to find views of secondary teachers of public sector and those of the private sector schools about their concept of social justice and their awareness of multicultural group dynamics. The views of male and female teachers among themselves and with those of the other type of schools were compared. The responses were tabulated and analyzed by computing weighted means and compared by using t-test and ANOVA.
A questionnaire for the teachers was developed, pilot tested and finalized. It contained 30 items based upon five point Likert type scale. In the light of factor analysis, 11 items were dropped from the final questionnaire. The instrument was given to 100 teachers, out of which 94 (Male 49 + Female 45) completed questionnaires were received, 94% return. The public/private sector teachers and male/female distribution of the respondents is given in tables 1 and 2.

Table 1. Distribution of respondents by School Type

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>School Type</th>
<th>No. of Teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Government</td>
<td>62</td>
<td>66</td>
</tr>
<tr>
<td>2</td>
<td>Private</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Distribution of respondents by Gender

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

The items of the research tool were categorized into four factors:

Factor 1: Equality and sensitivity to social problems.
Factor 2: Solidarity with people and national pride
Factor 3: Prejudice-free attitude
Factor 4: No distinction of social status, sex.

Table 3: Exploratory factor analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>Loadings</th>
<th>Variations</th>
<th>Reliability Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1</strong>: Equality and sensitivity to social problems.</td>
<td></td>
<td>19.75%</td>
<td>.823</td>
</tr>
<tr>
<td>In our school, we treat others in line with the principle of equality</td>
<td>.811</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My colleagues treat persons of different faiths and sects with equal respect</td>
<td>.781</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All staff members are sensitive to social problems of the people around</td>
<td>.775</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My colleagues are aware of their social responsibility as members of this society</td>
<td>.680</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I am sensitive to the social problems of my country .529
We respect people talking different dialects/languages .528
We believe in gender equality .658

**Factor 2:** Solidarity with people and national pride 16.169% .801
I believe in peace and harmony everywhere .822
I try to be in solidarity with the people around .770
I feel democratic attitude helps to bring social justice .711
Acceptance to all cultural groups is our priority .661
I feel proud to be a citizen of Pakistan .578
I am willing to take part in activities to improve the society .578

**Factor 3:** Prejudice-free attitude 9.932% .632
I believe in prejudice-free environment in our school .841
All religions are equally respectable .680
Among my colleagues, we treat peers of higher and lower pay scales equally .588

**Factor 4:** No distinction of social status, sex. 9.589% .595
All of us do not care for the people who are not financially well off .763
My colleagues do not distinguish between girls and boys .660
In our institution, people from families of higher social status receive more acceptance .635

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor1</td>
<td>Male</td>
<td>49</td>
<td>1.3946</td>
<td>.62882</td>
<td>.08983</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45</td>
<td>1.2029</td>
<td>.28949</td>
<td>.04316</td>
</tr>
<tr>
<td>Factor2</td>
<td>Male</td>
<td>49</td>
<td>1.0067</td>
<td>.28942</td>
<td>.04135</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45</td>
<td>1.1434</td>
<td>.46000</td>
<td>.06857</td>
</tr>
<tr>
<td>Factor3</td>
<td>Male</td>
<td>49</td>
<td>1.2935</td>
<td>.55278</td>
<td>.07897</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45</td>
<td>1.3537</td>
<td>.50575</td>
<td>.07539</td>
</tr>
<tr>
<td>Factor4</td>
<td>Male</td>
<td>49</td>
<td>1.9312</td>
<td>.76984</td>
<td>.10998</td>
</tr>
</tbody>
</table>

Total 55.540% .752

Exploratory factor analysis using the varimax rotation method reveals a 4 factor solution explaining 55.540% variation in the data with an alpha reliability value of .752 as shown in the table 3. All those items were removed from the analysis, which had factor loading lesser than 0.40 or did not load in any of the factors. As a result, a total of eleven items was removed from the questionnaire.

**Table 4: Descriptive statistics of gender**

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor1</td>
<td>Male</td>
<td>49</td>
<td>1.3946</td>
<td>.62882</td>
<td>.08983</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45</td>
<td>1.2029</td>
<td>.28949</td>
<td>.04316</td>
</tr>
<tr>
<td>Factor2</td>
<td>Male</td>
<td>49</td>
<td>1.0067</td>
<td>.28942</td>
<td>.04135</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45</td>
<td>1.1434</td>
<td>.46000</td>
<td>.06857</td>
</tr>
<tr>
<td>Factor3</td>
<td>Male</td>
<td>49</td>
<td>1.2935</td>
<td>.55278</td>
<td>.07897</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>45</td>
<td>1.3537</td>
<td>.50575</td>
<td>.07539</td>
</tr>
<tr>
<td>Factor4</td>
<td>Male</td>
<td>49</td>
<td>1.9312</td>
<td>.76984</td>
<td>.10998</td>
</tr>
</tbody>
</table>
Female 45 1.8298 .60270 .08985

An independent sample t-test was applied to evaluate whether significant differences existed between genders along the four factors. The results in the table 5 show that significant differences existed between two genders in the factor 1 and factor 2 at p<0.1 significance level with p values of 0.059 and 0.092 respectively. On factor 1, males were relatively more disagreeable with a mean of 1.395 as compared to females with a mean of 1.2029. On factor 2, females were relatively more disagreeable with a mean of 1.1434 as compared to males with a mean of 1.0067. On other factors no significant differences were found as shown in the table 5.

<table>
<thead>
<tr>
<th>Factors</th>
<th>t</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.871</td>
<td>92</td>
<td>.065</td>
<td>.19170</td>
<td>.10249</td>
</tr>
<tr>
<td>Factor 2</td>
<td>1.924</td>
<td>68.719</td>
<td>.059</td>
<td>.19170</td>
<td>.09966</td>
</tr>
<tr>
<td>Factor 3</td>
<td>-1.708</td>
<td>72.967</td>
<td>.092</td>
<td>-.13679</td>
<td>.08007</td>
</tr>
<tr>
<td>Factor 4</td>
<td>-.552</td>
<td>91.999</td>
<td>.582</td>
<td>-.06025</td>
<td>.10918</td>
</tr>
</tbody>
</table>

An independent sample t-test was also applied to evaluate whether significant differences existed between government and private institutions along the four factors. The results in the table 4 and the table 6 show that there is no significant differences existed between two institutions on all the factors.

<table>
<thead>
<tr>
<th>Factors</th>
<th>School</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>Govt</td>
<td>62</td>
<td>1.3480</td>
<td>.54667</td>
<td>.06943</td>
</tr>
</tbody>
</table>
Table 7: Independent sample t-test for government and private institutions

<table>
<thead>
<tr>
<th>Factors</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor1</td>
<td>1.343</td>
<td>81.401</td>
<td>.183</td>
<td>.13286</td>
<td>.09893</td>
</tr>
<tr>
<td>Factor2</td>
<td>-1.174</td>
<td>39.939</td>
<td>.247</td>
<td>-.11789</td>
<td>.10043</td>
</tr>
<tr>
<td>Factor3</td>
<td>.487</td>
<td>52.905</td>
<td>.628</td>
<td>-.05997</td>
<td>.12321</td>
</tr>
<tr>
<td>Factor4</td>
<td>.946</td>
<td>68.160</td>
<td>.348</td>
<td>.13859</td>
<td>.14652</td>
</tr>
</tbody>
</table>

One way analysis of variance (ANOVA) test was conducted to see whether significant differences existed in the perception of respondents with respect to their qualification levels. The results reveal that significant differences exist in the factor 1 at p<0.1 significance level. As shown in the table 8. The results in the table 6 show that respondents with lower education level (B.A B.Ed) have relatively lower agreement levels towards social equity and fairness (factor 1) with a mean of 1.5748 as compared to the respondents with higher education level for instance MA/M.Ed with a mean of 1.2753, M.A/B.Ed with a mean of 1.1639 and M.A with a mean of 1.2660. Rest no significant differences were found in other factors with respect to education levels.

Table 8: Descriptive statistics of qualifications

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>Factor</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor1</td>
<td>1.705</td>
<td>3</td>
<td>.568</td>
<td>2.343</td>
<td>.078</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>21.825</td>
<td>90</td>
<td>.242</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23.529</td>
<td>93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor2</td>
<td>.515</td>
<td>3</td>
<td>.172</td>
<td>1.167</td>
<td>.327</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>13.255</td>
<td>90</td>
<td>.147</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>13.770</td>
<td>93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor3</td>
<td>.395</td>
<td>3</td>
<td>.132</td>
<td>.463</td>
<td>.709</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>25.612</td>
<td>90</td>
<td>.285</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26.007</td>
<td>93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor4</td>
<td>1.031</td>
<td>3</td>
<td>.344</td>
<td>.709</td>
<td>.549</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>43.640</td>
<td>90</td>
<td>.485</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>44.672</td>
<td>93</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9: ANOVA with respect to qualification levels
**Conclusion:**

Exploratory factor analysis using the varimax rotation method reveals a 4 factor solution explaining 55.540% variation in the data with an alpha reliability value of .752. The factors being:

- **Factor 1:** Equality and sensitivity to social problems.
- **Factor 2:** Solidarity with people and national pride
- **Factor 3:** Prejudice-free attitude
- **Factor 4:** No distinction of social status, sex.

An independent sample t-test was applied to evaluate whether significant differences existed between genders along the four factors. The results show that significant differences existed between two genders in the factor 1 and factor 2 at p<0.1 significance level with p values of 0.059 and 0.092 respectively. On factor 1, males were relatively more disagreeable with a mean of 1.395 as compared to females with a mean of 1.2029. On factor 2, females were relatively more disagreeable with a mean of 1.1434 as compared to males with a mean of 1.0067. On other factors no significant differences were found.

An independent sample t-test was run to evaluate whether significant differences existed between government and private institutions along the four factors. The results show that no significant differences existed between teachers of the two types of institutions on all the factors.

One way analysis of variance (ANOVA) test was conducted to see whether significant differences existed in the perception of respondents with respect to their qualification levels. The results reveal that significant differences exist in the factor 1 at p<0.1 significance level. The results show that respondents with lower education level (B.A B.Ed) had relatively lower agreement levels towards social equity and fairness (factor 1) with a mean of 1.5748 as compared to the respondents with higher education level for instance MA/M.Ed with a mean of 1.2753, M.A/B.Ed with a mean of 1.1639 and M.A with a mean of 1.2660. Rest no significant differences were found in other factors with respect to education levels.
The results show that teachers have strong agreement towards social equity and fairness. This could be attributed to social desirable responses which stipulates that people have tendency to give those responses which are more socially acceptable.

References


Title: Institutional Isomorphism Meets Academic Disciplinarity: Two Approaches to Implementing a Global Leaders Program at a Japanese University

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Abstract:

What is the best way to train "global leaders"? To what extent should an educational institution scaffold their development or, alternatively, let them 'sink or swim'? Should a special class for top-performing students be isolated from the student population to receive independent socialization or integrated to rub elbows with everyone else? These questions are raised in a case study investigating the differing approaches taken by two departments at the same university as they simultaneously implement a curriculum renewal for which they jointly proposed and received government funding.

Observed through the lens of institutional isomorphism, one could predict a priori that the two departments would adopt a similar implementation strategy. Yet, differing approaches were taken. This presentation will discuss reasons for this result, drawing on internal documents, interviews with department leaders, students, and faculty, and participant observation. One of the reasons suggested is academic disciplinarity, and this will be explored in detail. Finally, although it is too early, three years into the curricular reform, to draw definitive conclusions on the relative benefits of each approach as the first cohort has not yet graduated, the presentation will conclude with some interim insights into what each approach has contributed thus far.
What is Known About Elementary Grades

Running Head: WHAT IS KNOWN ABOUT ELEMENTARY GRADES

What Is Known About Elementary Grades Mathematical Modeling

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What is Known About Elementary Grades

Abstract

Mathematical modelling has often been emphasized at the secondary level, but more research is needed at the elementary level. This paper serves to summarize what is it known about elementary mathematical modeling to guide future research. A targeted and general literature search was conducted and studies were summarized based on five categories: content of mathematical modelling intervention, assessment data collected, unit of analysis studied, population, and effectiveness. It was found that there were three main units of analysis into which the studies could be categorized: representational and conceptual competence, models created, and student beliefs. The main findings from each of these units of analysis is discussed along with future research that is needed.
What is Known About Elementary Grades

Mathematical modelling has mainly been emphasized at the secondary level, but for students to become more adept modelers the elementary grades need to be given more focus. We know that mathematical modelling abilities improve over time (Ikeda & Stephens, 2010). It then makes sense then to start mathematical modelling at earlier ages. There are many benefits to mathematical modelling that elementary students are missing if they are unable to participate in mathematical modelling: developing mathematical understandings (Brown & Edwards, 2011; Lesh & Carmona, 2003), coming to appreciate mathematics more and see it as more real life and applicable (Kaiser & Schwarz, 2006; MaaB, 2010), and developing communication and life skills (English, 2006).

At the elementary level, real world mathematics problems are often traditional word problems where teachers may instruct students on finding key words. Students come to believe that they should identify the numbers in the problem and do some operations with these numbers (Karp, Bush, & Dougherty, 2014; Verschaffel, De Corte, & Lasure, 1994). For example, Alan Schoenfeld (2013) describes a study that Heinrich Radatz did in the elementary grades. Radatz told students this story. “Mr. Lorenz and three colleagues started at Bielefeld at 9 AM and drove the 360 kilometers to Frankfurt with a rest stop of 30 minutes.” There is no question, it is just a story. He told this to kindergartners and they just say, “Thank you for the story.” He tells it to first graders and a few of them combine the numbers to get an answer. Radatz tells the story to 2nd graders all the way up to 6th graders. Every year, more students than the previous grade level combine numbers and give an answer.

We want students to have the opposite effect, where each year they become more adept at reasoning with real world situations. If mathematical modelling is integrated
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more in the elementary grades students will be more used to situations that can be solved, making assumptions and approximations and identifying which is the most important information in a problem and what more information needs to be known. There is good work being done in the elementary grades in mathematical modelling, but more can be done in conducting research with this age group. This paper describes what is known about mathematical modelling at the elementary grade level (age 10 and under) in order that future research can be identified and situated in this literature.

**Essential Elements of Mathematical Modelling**

Mathematical modelling begins with a key question that stems from the real world problem. A key question can guide the solution and work of a mathematical modelling activity. An example of a key question is, how big is someone based on his or her footprint and stride length? (Lesh & Doerr, 2003b) A key question can serve to focus work and is often the way that people approach problems in their jobs.

Both clear verbal and written communication is paramount while students work on a mathematical modelling task and detail their solution. Students must also reflect on the modeling process in order to make explicit the mathematics that they used and how well they understood it. In addition, modelling activities should also be open-ended (Lesh, Carmona, & Moore, 2009).

Our definition of mathematical modelling is an iterative process that involves open-ended, real world, practical problems that students make sense of with mathematics using assumptions, approximations, and multiple representations. Other knowledge besides mathematics can be used as well. Mathematical modeling curricula should have multiple acceptable models that can be developed.
A modelling cycle that appears often in the literature is from Blum and Leib (2007) and connects to several of our essential elements. There is a distinction between the real world and mathematics. It can be seen that students must make sense of the problem with mathematics involving assumptions and approximations, often called mathematizing, and then ensure that the model developed makes sense in the realistic context. Though not shown in the cycle it is well known that the modelling process is iterative in nature (Lesh & Doerr, 2003a).

**Figure 3.** Blum and Leib (2007) modeling cycle

In summary, there are seven essential elements of mathematical modelling: (a) start with a real world problem, (b) work from key questions (c) make sense of the problem with mathematics often involving assumptions and approximations, (d) ensure the mathematics is accurate and makes sense in the realistic situation, (e) goal of clear verbal and written communication throughout often including multiple representations, (f) modeling is an iterative process that involves open-ended problems, and (g) reflection on mathematics used or the modeling process. All of these ideas are included in one
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mathematical modelling activity that appeared frequently in the articles in this paper:

Model-Eliciting Activities

Model-Eliciting Activities (MEAs)

MEAs are client driven, open-ended, realistic problems that are developed based on six principles (Table 1). Often while completing an MEA students will refine, revise, and extend powerful mathematics constructs (Lesh & Doerr, 2003b). MEAs are implemented starting with an opening article or video, then readiness questions to help students become familiar with the real world context and the problem statement. Next students work in groups to solve the problem. They then present their ideas to the whole class. Finally, in their small groups they are given time for revision of their models and for reflection.

Table 1. Principles for Guiding MEA Development

<table>
<thead>
<tr>
<th>Principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Construction</td>
<td>Ensures the activity requires the construction of an explicit description, explanation, or procedure for a mathematically significant situation</td>
</tr>
<tr>
<td>Generalizability</td>
<td>Also known as the Model Share-Ability and Re-Useability Principle. Requires students to produce solutions that are shareable with others and modifiable for other closely related situations</td>
</tr>
<tr>
<td>Model Documentation</td>
<td>Ensures that the students are required to create some form of documentation that will reveal explicitly how they are thinking about the problem situation</td>
</tr>
<tr>
<td>Reality</td>
<td>Requires the activity to be posed in a realistic context and to be designed so that the students can interpret the activity meaningfully from their different levels of mathematical ability and general knowledge</td>
</tr>
<tr>
<td>Self-Assessment</td>
<td>Ensures that the activity contains criteria the students can identify and use to test and revise their current ways of thinking</td>
</tr>
<tr>
<td>Effective Prototype</td>
<td>Ensures that the model produced will be as simple as possible, yet still mathematically significant for learning purposes (i.e., a learning prototype, or a “big idea” in mathematics)</td>
</tr>
</tbody>
</table>

(Lesh, Hoover, Hole, Kelly, & Post, 2000)
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**Methods**

The results of this paper stem from a literature search for studies in the elementary grades on mathematical modelling (age 10 and under). The goals of this paper are to identify empirical studies done with elementary grades mathematical modelling, summarize the studies, and identify areas for future research based on the units of analysis that have been studied. Bryman (2004) describes three central features of any quality literature review: (1) identifying adequate papers, (2) categorizing the papers, and (3) extended analysis including identifying areas of further research. First adequate papers were identified through a targeted and a general literature search. The targeted literature search involved looking at the edited books arising from the conferences of the International Community of Teachers of Mathematical Modelling and Applications (ICTMA). Specific journals were looked at which included the Journal of Mathematical Modelling and Application, Teaching Mathematics and its Applications, Educational Studies in Mathematics, Boletim de Educaco Matematica, Ensenanza de las Ciencias, and Revista latinoamericana de investigacion en matematica educativa. Special issues of journals that focused on mathematical modelling were also investigated which included two issues of ZDM from 2006, one issue of Mathematical Thinking and Learning from 2003, and one issue of the Journal of Mathematics Education at Teachers College in 2013. The general literature search went back to 1970.

This study followed the method of Diaz and Cox’s (2012) study that summarized engineering education articles. All studies on elementary grades mathematical modelling that also meet the essential elements of mathematical modeling were summarized using the categories of content of mathematical modelling intervention, assessment data
collected, unit of analysis studied, population, and effectiveness. There were 21 publications identified. Table 2 describes the number of articles identified from each journal, book, or conference.

Table 2

<table>
<thead>
<tr>
<th>Journal, book, or conference</th>
<th>Number of publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Community of Teachers of Mathematical Modelling and Applications (ICTMA) edited book chapters</td>
<td>3</td>
</tr>
<tr>
<td>Learning and Instruction</td>
<td>3</td>
</tr>
<tr>
<td>Mathematical Thinking and Learning</td>
<td>3</td>
</tr>
<tr>
<td>Educational Studies in Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics Education Research Journal</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics Education Research Group of Australasia Annual Conference</td>
<td>2</td>
</tr>
<tr>
<td>Journal for Research in Mathematics Education</td>
<td>1</td>
</tr>
<tr>
<td>ZDM</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Mathematical Modelling and Application</td>
<td>1</td>
</tr>
<tr>
<td>Cognition and Instruction</td>
<td>1</td>
</tr>
<tr>
<td>American Educational Research Association Annual meeting</td>
<td>1</td>
</tr>
<tr>
<td>Boletim de Educacao Matematica</td>
<td>1</td>
</tr>
</tbody>
</table>

Results

Content of Mathematical Modelling Intervention

The content of the mathematical modelling activities fell into three main categories: ratios and proportional relationships, number and operations, and measurement and data/statistics. Three studies’ activities had connections to proportionality (Chan, 2010; English, 2006; Lieven & DeCorte, 1997). Fifth grade students from Belgium experienced a two and a half week unit on realistic modeling. The part of the unit on proportionality had students determine whether solutions based on direct proportional reasoning were appropriate or not. For example using a 100 meter race time to predict an athlete’s 400 meter race time (Liven & De Corte, 1997).
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Australian students used informal notions of proportions as part of a three-year study that involved MEAs, model-exploration activities in which students apply their model to a similarly structured problem with a different context, and model-adaptation problems in which students need to adapt their model to solve a new problem. The example activity discussed in the article has students develop a guide for how consumers can determine the best snack chip (English, 2006). In another study students are given choices of materials and costs to determine the best choice for covering the floor of a room (Chan, 2010). In a butter beans MEA students are given tables of data displaying the weight of butter beans over time and must decide which condition is better. This activity can have connections to rates (English & Watters, 2005).

In the number and operations category the content included arithmetic operations (e.g. Vershaffel, De Corte, & Lasure, 1994), estimation (Peter-Koop, 2004), algebraic tasks that allow for generalizations (Cyrino & Oliveira, 2011), union or separation of two sets (Lieven & De Corte, 1997), and averages (e.g. English, 2010a). There were five studies that involved arithmetic operations with three of the studies using the same ten pairs of word problems that were first used in Verschaffel et. al (1994). For these word problems the first pair could be solved in a straightforward way while the second could not be if the real world situation was seriously taken into account. For example, a first straightforward question asks if a man cuts a clothesline of 12 meter into pieces of 1.5 meters each, how many pieces does he get? The second question in this pair requires some assumptions and approximations to be made. A man wants to have rope long enough to stretch between two poles 12 meter apart, but he has only pieces of rope 1.5 meter long. How many of these pieces would he need to tie together to stretch between
the poles? (Greer, 1993). Six studies had activities with connections to the concept of average (English, 2006; English 2010a; English & Watters, 2005; Reusser & Stebler, 1997; Verschaffel et. al., 1994; Yoshida, Verschaffel, & De Corte, 1997). English (2010a) had two classes of fourth grade students complete two MEAs in which they selected the Australian swimming teams for the Commonwealth Games given swimming times at different meets.

The largest amount of content connections were in the measurement and data/statistics category. The content included: interpreting and dealing with multiple tables of data (e.g. English, 2009), quantifying qualitative data (English, 2006; English, 2007), operationally defining constructs (English, 2006), exploring relationships and trends (e.g. English, 2012), representing and structuring findings/data in visual and text forms (e.g. Watters, English, & Mahoney, 2004), selecting, ranking and aggregating data (e.g. English, 2007), weighted ranks (e.g. English, 2009), sampling (English, 2006), identifying variation in data (English, 2012; Lehrer & Shauble, 2000; Petrosino, Lehrer, & Schauble, 2003), using an optimization model that uses a two-dimensional coordinate grid (Carmona & Greenstein, 2010), area (Chan, 2010), developing a survey and collecting data (Lehrer & Romberg, 1996; Watters et. al, 2004), and simple randomization distribution to test a hypotheses about the nature of ESP (Lehrer & Romberg, 1996).

**Assessment Data Collected**

The studies were mostly qualitative with typical data collected from audio and video recordings, student work, and researcher field notes. As mentioned above there were three studies that used the same ten paired word problems (Reusser & Stebler, 1997;
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Verschaffel et al. 1994; Yoshida et. al, 1997). The second set of ten problems that could not be answered in a straightforward manner were scored with a code of expected answer (not dealing with the real world), technical error, realistic answer, no answer, and other answer. Petrosino et. al (2003) used a seven item test to assess graphical interpretation and statistical reasoning developed in part from National Assessment of Educational Progress (NAEP) items.

An experimental study was conducted that looked at the effects of an experimental realistic modeling program (Lieven & De Corte, 1997). One experimental class and two control classes completed a pre-post test while the treatment group also completed a retention test one month after the post-test. The test consisted of ten items in five pairs of non-standard modelling problems. The first problem in the pair was similar to the problems the students solved in the experimental classes while the second problem in the pair was the same structure but a different context. The test also consisted of five other straightforward word problems. The test questions were similar to those used by Verschaffel et al. (1994).

Another experimental study investigated the effects of a 4 month program on solving mathematics application problems in regards to ability to solve mathematics application problems, beliefs, and standardized mathematics test scores. As part of the program students were taught heuristics for solving problems such as draw a picture, make a table, look for patterns, and simplify the numbers (Verschaffel, De Corte, Lasure, Van Vaerenbergh, Bogaerts, & Ratinckx, 1999).

The Verschaffel et al. (1999) study had the experimental and control classes completed a pre and post test and a retention test. The test had ten nonroutine tasks that
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were scored as correct, wrong, technical errors, or no answer. A self-made Likert
questionnaire was used to assess students’ beliefs about the teaching and learning of
mathematical word-problem solving. In order to get a better insight into the qualitative
changes in students’ problem-solving processes as a consequence of the treatment, three
pairs of students, (one pair high ability, one pair of medium ability, and one pair of low
ability) from each of the four experimental classes were videotaped solving nonroutine
problems. The videotapes were analyzed for the use of the eight heuristics taught in the
program, the frequency of four valuable metacognitive activities (orientation, planning,
monitoring, and evaluation), and the final result of the problem-solving process (correct,
wrong, technical error, or no answer). Teachers in the experimental group were also
observed four times and scored based on ten categories of teacher activities that were
considered essential for the successful implementation of the experimental learning
environment.

Population

The studies were done in a range of countries with nine of the studies occurring in
Australia: Australia (9), U.S. (4), Belgium (3), Singapore (1), Japan (1), Portugal (1),
Germany (1), and Switzerland (1). While the studies did provide some demographic
information, the analysis done in the studies did not focus specifically on this. One of the
studies was conducted in the inner city (English, 2012), four in a suburban location
(English & Watters, 2005; Lehrer & Romberg, 1996; Watters et. al, 2004; Yoshida et. al,
1997), and five with middle Social Economic Status students (English, 2010; English,
2012; Lehrer & Schauble, 2000; Lieven & De Corte, 1997; Verschaffel et. al, 1994). The
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studies covered a good range of ages except no studies were done with kindergarten students or younger.

Considerations for the teachers in the studies were mentioned in four of the studies in which the teachers received professional development on implementing mathematical modelling (English, 2007; English, 2009; English & Watters, 2005; Watters et. al, 2004). A quality example of this is how English (2009) employed a multilevel teaching experiment (Lesh & Kelly, 2000) in her three year longitudinal study of four classes of 3rd grade students. At the first level students create models in their work. At the second and third level the teachers work with the researcher in designing and implementing the modelling problems. The modelling activities challenge the teachers as they consider the mathematical ideas that students might use and the best ways to respond to students’ ideas. Researchers make sense of both the students’ models and the teachers implementation of the modelling activities.

Units of Analysis

There are three main units of analysis for the studies: representational and conceptual competence, models created, and student beliefs. Each of these will be described in more detail below.

Effectiveness

**representational and conceptual competence.**

Representational and conceptual competence involves students developing fluency in working with different representations to develop their conceptual competence or understanding through modelling (e.g. English, 2006; English, 2010a). The studies showed that representational and conceptual competence increases over time as students
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have more experience with modelling. Three studies demonstrated that if students have limited experiences with mathematical modelling they may not take into account the real world situation appropriately (Reusser & Stebler, 1997; Verschaffel et al., 1994; Yoshida et al., 1997). In these studies with fourth and fifth grade students done in Switzerland, Belgium, and Japan all students completed ten pairs of word problems with the first pair being a straightforward word problem and the second a non-routine modelling problem. Students performed poorly on the modelling problems and solved them in a straightforward manner. It was only when the teachers in Switzerland told the students specifically to think about if there is sufficient information to get an answer and also to consider what additional information would be needed did the percentage of students responding appropriately increase to a modest fifty percent. In all three studies students did not have prior experience with mathematical modelling.

Using similar problems to these studies as a pre-post test, Lieven & De Corte (1997) did an experimental study and found the two and a half week modelling treatment group to do statistically better on the post-test. Like the three studies above, both groups of students on the pre-test did not appropriately take into account the real world situations. In a study that used younger students 1st and 2nd grade students had difficulty with the idea of creating a model. The task was for students to guess the grade level of student produced drawings. The 1st and 2nd graders came up with systems of attributes that described categories, but failed to use these rules as a model to guide classification. Fourth and fifth graders also completed the task and were able to use their category systems as rules that sent drawings into fixed categories (Lehrer & Schauble, 2000).
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Students can have developing conceptual understanding before instruction by participating in modelling activities. In an Australian study with seven 4th grade classes where students completed two MEAs, English (2010a) found that students developed concepts that were far more advanced than what would have been taught in a traditional classroom. In another Australian study done with MEAs over a six month period 3rd grade students were able to interpret and work with mathematical information, identify trends and patterns in data, represent their mathematical ideas in different formats, and communicate and justify their mathematical ideas (Watters et. al, 2004). Another study with four classes of 3rd grade students in Australia with MEAs found that there was the emergence of important ideas that students had not experienced in class such as rate of change, aggregating, and averaging (English & Watters, 2005). In a study with one elementary student Cyrino & Oliveira (2011) found the student was able to think algebraically before being subject to explicit teaching of algebra.

There is research support that students can do better at mathematics in general when mathematical modelling is integrated in the elementary classroom. Using an pretest-posttest-retention test experimental design, Verschaffel et. al (1999) had four classes of 5th graders in a modelling treatment group and seven control classes. After receiving modelling instruction with a specific focus on problem solving heuristics the treatment group did statistically better on the posttest and retention test on mathematical modelling. The treatment group also had a medium significant effect size on a mathematics standardized achievement test compared to the control group. In a three year longitudinal study English (2006) found that MEAs enabled students’ mathematical understanding to develop in multiple ways when compared to the traditional classroom
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problem posing. The students were able to create complex mathematical processes and constructs.

**models created.**

Across different studies it was found that elementary students can successfully participate in mathematical modelling (Carmona & Greenstein, 2010; Chan, 2010; English, 2010b; English, 2009; English, 2007; English, 2003; Peter-Koop, 2004). With a modelling activity focused on determining what are important factors in buying a pair of sneakers, students used multiple interpretations and approaches and developed mathematics content (English, 2003). While doing a Fermi problem, which requires estimation of large quantities, most students did not develop and implement a solution plan but still in most cases modelling cycles led to highly appropriate solutions (Peter-Koop, 2004).

Students develop a range of strategies while engaged in mathematical modelling (Carmona & Greenstein, 2010; English, 2003; English, 2007; English, 2009; English, 2010b). In the team ranking MEA in which students need to rank the top five teams out of twelve, students had three primary criteria that were evident in the responses: (a) greatest number of wins, (b) greatest difference between wins and losses, and (c) team with the greatest ratio of wins to losses. In a modelling unit based on the theme of looking after our environment students created a broad range of models in organizing, structuring and representing data. The students also identified a wide range of attributes in their process of sorting a pre-determined set of items that might be in a messy room such as a ribbon, shoe, toy, or dog bone (English, 2010b). In another study, students developed six different types of models that included ranking and aggregating data and
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weighted scores in a problem on where the best place to have a settlement in Australia in 1788 (English, 2007).

**Student beliefs.**

There was one experimental study that investigated student beliefs with fifth grade students in Belgium. The treatment group received twenty lessons total on solving math application problems over a four month span. Beliefs were measured using a Likert survey with two scales. One was on pleasure and persistence in solving word problems and the other was on whether there was one right way to solve problems or if different paths could be taken. The treatment group was statistically significantly higher than the control group on the beliefs items at the conclusion of the study.

**Discussion and Concluding Points**

This paper summarized what is known about mathematical modelling at the elementary school level. While mathematical modelling traditionally has been confined to the secondary school level (English, 2010a), the studies here have shown that elementary students are capable of participating in mathematical modelling and benefit from it. Mathematical modelling done in the studies was often interdisciplinary integrating English language arts, history or STEM concepts. This is a great benefit of mathematical modelling in the elementary grades and can be used as a buy-in to have mathematical modelling implemented more frequently.

As more studies are done with mathematical modelling at the elementary level what is studied can be expanded. Modelling competencies are an important concept that have been researched at the secondary level (e.g. Biccard & Wessels, 2011; Grunewald, 2013; MaaB, 2007) that can be expanded to the elementary level. Modelling
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competencies involve understanding the realistic problem and setting up a model based on reality, setting up a mathematical model from the real world, solving mathematical questions within a mathematical model, interpreting mathematical results in a real solution, validating a solution, metacognition, effective communication and argumentation, and positive attitudes toward real world application problems (MaaB, 2006). English (2010b; 2012) has looked at this in part with her investigation of students’ metarepresentational competence which is students’ explicit recognition of why they represented their data/model in the way they did.

Students’ modelling processes and how they can improve over time can also be investigated further. Experience with the modelling process helps students improve but more research can focus on the best way for elementary students to become familiar, comfortable, and adept with the modelling process. Two modelling processes that appear frequently in the literature can be used or adapted to be focused on with elementary students: Blum and LeiB’s (2007) modelling process and Lesh and Doerr’s (2003a) four step modelling process of description, manipulation, prediction, and verification. Blum and Borromeo Ferri (2009) have also suggested a four step modelling process that they have been found is useful for students in their grant projects that entails: (1) understanding the task, (2) establishing a model, (3) using mathematics, and (4) explaining the results.

Teaching mathematical modelling can be difficult for teachers and studies should take this into consideration. This is due to the fact that when students are engaged in modeling activities, teachers are likely to encounter substantial diversity in thinking (Doerr & Lesh, 2011). This requires teachers to listen to students, respond with useful
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questions, and help students make connections to other mathematical ideas. This is what Shulman (1986) has called pedagogical content knowledge. Hill, Ball, and Schilling (2008) have further developed this construct by breaking it into teachers’ knowledge of content and students, knowledge of content and teaching, and knowledge of curriculum. Teachers’ knowledge of content and students is intertwined with how students think about, know, or learn particular content. Teachers’ knowledge of content and teaching is knowing what misconceptions that students are likely to have, what strategies they will use, and how to respond to them effectively. In four of the studies professional development was provided for the teachers (English, 2007; English, 2009; English & Watters, 2005; Watters et. al, 2004), which should be included in more research to help teachers develop their pedagogical content knowledge. Many of the articles discussed in this paper can be used as a part of professional development because the articles described or provided the modelling curriculum and students’ range of ideas or concepts developed from the activities (e.g. English 2003; English 2007; English 2009). The one main missing piece is questions that teachers can ask and how they can respond appropriately to students’ models to help them further develop their mathematical concepts.

Mathematical modelling needs to begin in the elementary grades and the studies discussed here have shown that elementary students are capable of effectively participating in mathematical modelling and benefit from this approach. Model-Eliciting Activities were used often in the studies and have a solid research base for their structure and implementation. More research can be done on developing, implementing, and assessing MEAs in the elementary grades on a wider range of mathematical content.
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Future research can also focus on expanding the units of analysis that are studied including focusing more on student beliefs, modelling competencies, and how students progress through modelling processes in the same way resources, heuristics, control and beliefs have been studied as key aspects in mathematics problem solving (Schoenfeld, 1985).

References


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(Eds.), *Beyond constructivism* (pp.3-38). Mahwah, NJ: Lawrence Erlbaum Associates.


Submission ID: 47

1) Title of the submission:

Best Practices for Working with Undocumented Students: Applying Two Career Counseling Theories

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6) Abstract:

In the United States, approximately 65,000 undocumented immigrants graduate from high school each year. School counselors are tasked with the role to support these students’ academic, career, and social/personal success. By and large, undocumented students face barriers in accessing higher education and career pathways due to limited information, resources, self-efficacy beliefs, and outcome expectations. This poster project is grounded in Social Cognitive Career Theory (SCCT) and Krumboltz’s Planned Happenstance Theory. We will apply these two counseling career theories to the undocumented student population and provide counseling considerations, recommendations, and tools for helping professionals who serve this population.
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1) Title of the submission:
Best Practices for Helping Professionals: Supporting Undocumented Youth in Schools

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6) Abstract:
By and large, undocumented students face barriers in accessing higher education with limited information, resources, and ongoing mental health related issues such as anxiety, depression, Post-Traumatic Stress Disorder (PTSD), and Complex PTSD. School counselors are tasked with the role to support these students’ academic, career, and social/personal success. Due to the gravity of this prevalent issue, school counselors need to be well equipped to support this burgeoning population. This poster session will be grounded in theories such as Multiculturalism, Feminist, Social Justice, and Narrative Therapy frameworks. Presenters will offer two case vignettes that reflect the reality of undocumented students today in the secondary school setting. In addition, presenters will provide resources, recommendations, and creative tools for helping professionals who serve this population.
Blue to White:

The Career Transition of Trades Teachers

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Abstract

This paper describes research conducted at three Western Canadian technical institutes to explore the second-career transition of tradespeople moving from industry trades practice to teaching trades. Topics included motivation for career change, prior learning transfer, additional learning related to the new role, vocational identity change, and factors affecting satisfaction with the second career of teaching. The research findings suggest a strong connection between the first career and the second, serving as both a positive and negative factor in the transition. Recommendations arising from the research for technical institute human resources practice are also presented.
Blue to White: The Career Transition of Trades Teachers

The concept of career has changed with time to include not a singular path from adolescence through to retirement (Holland, 1985; Super, 1957) but changing paths, second careers, and recycling in midlife (Super, 1990). Causes leading to a second career have been identified as external events such as job loss, or decisions regarding work-life balance, family or new interests. The second career can lead to re-experiencing the self-reflection, personal choices and identity negotiation of the first career choice (Erikson, 1980; Marcia, 1980; Smart & Peterson, 1997).

Within education, research has looked at the second-career teacher; however, in a pattern similar to that of educational research in general, examination of the experience of people moving from an established career outside of teaching to teaching has focused on elementary and secondary teachers (e.g., Castro & Bauml, 2009; Eifler & Potthoff, 1998; Swain, Schmertzing & Schmertzing; 2011; Tigchelaar, Brouwer & Korthagen, 2008). There has been relatively little attention in research to post-secondary education and particularly, vocational-technical education; yet, this sub-set of practitioners are, by definition, second-career teachers. Vocational teachers or instructors, including those teaching apprenticeable trades, are recruited and hired as subject-matter experts based on their professional training and experience from industry practice. These industry experts, as they move into a second career to become teachers, could be expected to experience the usual disruptions of any midlife career change. Additionally, they might encounter particular difficulties due to the differences between their first and second careers. They are, in the words of one participant in the current study, “moving from blue to white,” from the blue-collar world of trades to the white-collar world of post-secondary education. These broad occupational categories have been shown to differ not only in the type of work typically
done and the socio-economic class of members, but to use different learning methods, hold
different values, and to have strong sociological separation between the two groups (Lamont,

This paper describes research conducted at three Western Canadian technical institutes to
explore the career transition from industry trades practice to teaching trades. While the group
studied was specialized and relatively small in number (Lin, 2005), understanding the career path
of trades teachers may serve not only those undertaking the transition from trades practice to
teaching as a second career, but also inform the career transition of other teachers drawn from
industry, providing suggestions for practice or further research in the broader picture of post-
secondary vocational-technical education. This understanding could also improve the quality of
instruction for students, potentially improving the historically low completion rates for
apprentices in Canada (Laporte & Mueller, 2011). Topics included motivation for career change,
prior learning transfer, additional learning related to the new role, vocational identity change, and
factors affecting satisfaction with the second career of teaching. This paper sets out the results
from the current research for each topic, relating those results to previous research, followed by a
discussion and recommendations arising from the research.

Background to the Study

Apprenticeship in Trades and Teaching

Teaching is a career often considered in childhood or early adulthood, based on an
“apprenticeship of observation” (Lortie, 1975, p. 67) served by students in the classroom, leading
to university study in education, and then a classroom of one’s own in early adulthood. For post-
secondary professors or lecturers, the observational apprenticeship is typically extended by years
of academic study for graduate degrees to qualify for teaching at the university level. Within the
technical-vocational segment of post-secondary education, however, teachers follow a different path to the instructional role: they must first establish expertise in industry via study and work experience, then move to teaching as a second career.

Within this segment of education, typically delivered in Canada by technical institutes and polytechnics, the instructors who teach trades form a sub-group with a unique path to teaching. Rather than an apprenticeship of observing classroom teaching for many years in both grade school and university, their background includes a formal trades apprenticeship, resulting in journeyperson status. This is the credential upon which hiring is based, along with several years of industry experience.

The educational path of trades apprenticeship is well established, but quite different from that of many other occupations, including teaching. The majority of learning is expected to occur by working alongside a journeyperson on the job site; a small portion of learning happens within the classrooms and shops of a post-secondary institution. In apprenticeship, the workplace is the primary learning space and teaching there relies on observation, demonstration, then practice of skills, rather than on lectures and textbooks (Canadian Council on Learning, 2006; Epstein, 1998; Mokyr, 2003; Sennett, 2008).

Throughout its history, apprenticeship has been defined by its hands-on methods of teaching and learning, a process so common in everyday practice outside of formal education that it is “nearly invisible as a way to explicitly teach and learn” (Johnson & Pratt, 1998, p. 83). Guile and Young (1999) identified apprenticeship as an educational form underpinned by two assumptions: learning by doing and a master as a role model. Coy (1989) describes apprenticeship as “associated with specializations that contain some element that cannot be communicated, but can only be experienced” (p. 2). These descriptions echo Polanyi’s (1958)
concept of tacit knowledge, a form of knowing difficult or impossible to put into words, and also reflect Schon’s (1983) concepts regarding knowing in action, Kolb’s theory of experiential learning (Kolb, 1984; Kolb & Kolb, 2005), and the practical learning heritage of Dewey (1938).

Importance of Teaching in Trades

Trades training is an important part of post-secondary education and job preparation in Canada, supported by government, students, parents, and industry (Laporte & Mueller, 2011). Yet, despite the demand for more training opportunities, and efforts to attract more students to the trades, the completion rate in major trades in Canada has been assessed as low as 7% (Laporte & Mueller, 2011, p. 9). While many factors affect student non-completion, one factor that has received little attention in research is the instructor who work with trades students (Canadian Apprenticeship Forum, 2011; Karmel, 2010).

Finding trades teachers is complicated by the pro-cyclical nature of enrolment in apprenticeship programs (Laporte & Mueller, 2011). Student numbers rise as industry demand rises, creating a need for more teachers. At the same time, trades teachers are part of the pool of existing journeypersons who are in high demand and competitively paid by industry. This simultaneously intensified need for experienced journeypersons, in education and industry, limits the ability of institutions to compete for those who may be the most effective teachers.

Additionally, the challenges of trades teaching may be greater than similar work in other educational settings. Grubb (1999) argued that post-secondary vocational teaching is more complex than post-secondary academic teaching, as open-admission policies create a diverse student population with a variety of learning styles, the wide variety of programs create multiple learning settings, and specialized reading and mathematical skills must be taught so students can use the tools of the occupation. Vorhaus (2010), in an analysis of research on vocational learners
and learning styles, found that vocational learners tend toward a learning style distinct from students in more academic post-secondary settings. Barabasch and Watt-Malcolm (2013) suggested vocational teachers need continuous learning since industry standards and technology are constantly changing, and teacher-student interaction is often one-on-one project-based learning, quite different from the standard classroom. Billett (2012) argued that the particular needs of vocational education would suggest its teachers need “to be carefully selected, prepared, rewarded and permitted to practice” (p. 187) so as to meet the needs of the students and industry.

**Methodology of the Current Study**

The current research set out to understand the career transition of tradespeople, who have learned within a trades apprenticeship model, as they move to teaching in a college setting. The research question asked: what leads tradespeople to move to trades teaching; what competencies do they bring from the first career to the second; how do they learn to teach; how does the vocational identity change with a career change; and what are the factors leading to satisfaction or dissatisfaction with the teaching role.

Given the relatively meagre research in the specific field of trades education, I chose an exploratory mixed-methods approach for this study. Using a constructivist approach to create a qualitative dominant crossover mixed analysis (Creswell & Plano Clark, 2011; Denzin and Lincoln, 2005; Frels & Onwuegbuzie, 2013) gave voice to the self-defined reality of the participants. An electronic survey was created that adapted portions of similar surveys conducted among teachers, although not trades teachers specifically (Berger & D’Ascoli, 2012; Dainty, 2012; Hong, 2010; Ruhland, 2001; Simmons, 2009; Watt & Richardson, 2007). This new instrument gathered input through email invitation and electronic submission from trades teachers (N = 165) at three Western Canadian colleges. This phase was followed by
interpretation panels to explain the quantitative results and add further qualitative data (Noonan, 2002).

The survey was conducted in June 2014. The quantitative data were analyzed with statistical analysis software plus manual coding of qualitative survey data. The results of this analysis were compiled in a report and shared with participants who had indicated a willingness to be a part of interpretation panels and who had provided contact information in the survey. In September through November 2014, panels were conducted with participants ($N = 12$) at the three colleges, asking participants to interpret the survey results and to add further qualitative data through discussion. Panel results were transcribed, member checked, and manually coded. Final analysis by the researcher looked for triangulation within the sets of results.

**Results of the Study**

**Demographic Profile**

The 165 respondents to the survey represented 27 trades areas, with electrician, welder, automotive service technician, and carpenter as the most frequent responses. Ages ranged from 26 to 56 or older, with the 46-55 years category chosen by 46% of respondents. Survey participants were asked to indicate the number of apprentices they had supervised while practicing their trade. The results showed a range of responses: 29% had supervised 26 or more and 10.3% indicated no supervision of apprentices. The survey was dominated by male respondents (97.6% vs. 2.4%); this distribution is in keeping with the ratio of male to female participation in the trades generally (LeFebvre, Simonova, & Wang, 2012; Meredith, 2011).

Years of teaching experience ranged from three years or less (21.2%) to 18 years or more, which was the most common response (21.8%). Survey participants were asked to indicate
any teacher training prior to beginning teaching in post-secondary education and the majority (85.5%) indicated no formal training in teaching prior to being hired to teach.

Motivation to Change Careers

Teaching as an opportunity to share their trades knowledge was the most common choice among survey participants regarding motivation to change careers. This option received the highest overall level of agreement (95.8%), and showed no significant correlation to any other listed motivation factors. Better hours, described within comments in the survey and through the interpretation panels as primarily related to more time with family, received the second highest level of agreement (84.3%). The other six factors received considerably lower levels of agreement, from 49.1% for teaching as *Always something I wanted to do, that I felt called to do* to 13.9% for teaching as *An opportunity for higher pay*. Teaching as a calling was more strongly agreed to by the most-experienced teachers.

Correlation analysis grouped the responses into two categories, with the exception noted above: extrinsic factors, including higher pay, better hours, better benefits, and higher status; and intrinsic factors, including higher status, following a family member’s career path, continuing an enjoyed volunteer activity, and teaching as a calling. Qualitative results spoke to both categories, with comments including: “I instruct because I truly enjoy it. I get a true sense of job satisfaction from preparing students as millwrights for industry,” and “In the field I began to find the work load too much, the opportunity to work less in the field was just not possible. I took the opportunity to teach as a way to help myself and others at the same time.”

**Previous research on motivation.** The mix of intrinsic and extrinsic motivation for career change, and particularly the desire to share knowledge with a new generation as shown in the survey results, is supported by previous research. Backes and Burns (2008) surveyed trades
and health-science teachers regarding motivation to choose teaching as a second career and found the most commonly stated reasons were both extrinsic in the appeal of hours that allowed more family time (30%) and better pay and benefits (28%), and intrinsic in the appeal of a sense of vocation (31%) and love of subject matter and wish to share it (10%) (pp. 103-105). Backes and Burns (2008) also observed an affinity for the first career that was allowed to continue through teaching: “Teaching allows them to make a career change without giving up the identity of being part of their original occupation or profession” (p. 109).

Mealyea (1989) reported altruism as motivation among tradespeople training to enter vocational teaching, as they sought to pass on the industry knowledge they had gained through their previous occupations. Gowdy (1987) studied tradespeople enrolled in a program to train teachers for high school industrial education and found motivation was most commonly rooted in previous teaching experience, indicated by 91.9% of participants, and the positive feelings related to teaching (p. 110). Harms and Knobloch (2005), in their study of students choosing a career in vocational education versus a career in industry, showed that career choice for teachers was guided by intrinsic motives for entry and by extrinsic motive for exit, and suggested recruitment for vocational teachers should focus on intrinsic motivation.

**Continuation and generativity.** Lortie (1975) listed five main attractors to teaching: *interpersonal*, working with people; *service*, helping others; *material benefits*, including salary, pension and working conditions; *time*, the compatibility of the work with family and personal interests; and *continuation*, the attraction of passing on knowledge to a new generation and personal continuation of a place within school and the traditions of schooling. Elements of all five attractors can be seen in the responses within this study; however, the strength of agreement
to teaching as *An opportunity to share my knowledge of the trade* (95.8%) suggests *continuation* is a primary motivator for trades teachers.

Lortie (1975) commented that “widespread contact with each generation is a powerful recruitment resource possessed by few occupations” (p. 29), but that this attraction is not always seen by young recruits to teaching. Unlike sequentially trained teachers, however, trades teachers are not young. The most common age of study respondents was 46-55 years, quite different from the 22-year-old new graduate of an elementary or secondary school teacher training program. The motivation of sharing knowledge with the next generation also connects with Erikson’s (1980) life stages where, in mid-adulthood, the primary challenge is *generativity vs. stagnation*, including a desire to see one’s work continue to the next generation.

**Transition to Teaching**

Once the choice is made to change careers, a transition or “change from one state to another” occurs (Concise Canadian Oxford Dictionary, 2005, p. 1453). This portion of the research looked at the transition in terms of competencies brought to the new role and those developed within it. The preferred methods of learning to meet the requirements of teaching were also examined.

**Teaching competencies.** The survey asked participants to rate themselves against a listed set of 17 competencies common to teaching, both as recalled from initial teaching experience and at the time of the survey. The competency list was established through an analysis of numerous frameworks (Arreola, 2007; Campbell, 2009; Darling-Hammond, 2012; Goldhaber, 2002; Schulman, 1986; Rockoff & Speroni, 2011; Volmari, Helakorpi, & Frimodt, 2009). When viewed through a Knowledge, Skills, Abilities and Other characteristics (KSAO) lens (Landy & Conte, 2007), the retrospective self-ratings showed strongest agreement in the Abilities and
Other categories, representing personality traits or characteristics such as sense of humour, organization, and enthusiasm for teaching. The points of least agreement were in Knowledge and Skills specific to teaching such as preparing lesson plans, use of educational technology, and curriculum development. Over time, it appears these competencies are strengthened, as the present-day self-ratings showed all competencies agreed to by 90% or more of respondents. The teaching knowledge and skill competencies showed the largest magnitude of change when analyzed via a Wilcoxon signed-rank test (Elliott & Woodward, 2007).

The qualitative portion of the research supported these results, with interpretation panel participants expressing a strong feeling that, despite a lack of formal teacher training, teaching competencies had been gained through working with apprentices. As stated by one participant, “In the trades, we’re teaching. We’re teaching all the time.” Another said: “I was all the time on the tools, but all the time I was teaching and sharing with someone else . . . It’s always been part and parcel [of the trades].” In addition to teaching experience gained in the trade, the idea of being “naturally born to teach” was also expressed, supporting the high self-ratings within the survey on competencies such as communications, enthusiasm for teaching, and sense of humour.

In contrast to research participants’ view of the tradesperson as a teacher to apprentices and the teaching competencies brought to the new career, participants expressed the view that their employing institutions did not see them in the same light, often equating teaching competence to specific credentials such as an Education degree. This attitude affected the transition to the new role, being perceived as a lack of support. As stated by one participant:

I do not have a Bachelor of Education. Does that make me a bad teacher, a poor teacher, a horrible teacher? Absolutely not. I brought to [institution] 35 years of life skills, plus a Red Seal. What do I get for those life skills? Nothing.
Learning about teaching. An evaluation of the learning methods preferred by trades teachers was also part of the research. This topic is closely connected to the changes in competence and confidence, essentially asking respondents how they increased their knowledge and skills about teaching and gained confidence. Respondents showed a definite preference for non-formal learning over formal learning. Survey questions asked what methods of learning had been used during the teaching career, ranging from formal classes at a university to self-study and trial and error. Overall, respondents chose discussions with other instructors (96.4%) as the most often used method, with informal mentoring (87.9%) as the next most popular method. Formal training through a university or college was chosen least (38.8%). Use of training methods clustered in two groups in correlation tests: formal methods, including formal training at the employing institution, workshops and formal mentoring; and non-formal methods, including informal mentoring, discussions, self study, and trial and error. Respondents with formal teacher training prior to being hired as a teacher were more likely to indicate use of formal training methods to continue learning about teaching.

Non-formal methods rated most effective. Survey participants were asked to rate learning methods by effectiveness. Mentoring was rated the most effective method of learning to teach; workshops were rated least effective. Discussions within the interpretation panels supported these results. Participants expressed a strong dislike for academically oriented teacher training delivered in a classroom setting. They spoke in favour of a more practical focus, looking for information that could be easily translated into their work with students. Participants praised an informal mentorship program operating at one institute as helpful to new teachers and as building on the traditions of trades practice.
Previous research on learning to teach. Struggles in learning new knowledge and skills in the transition from tradesperson to trades teacher are depicted both in the current study and by previous research. Karmel (2010) described a situation with little support for the new role and concluded that the processes used to train vocational teachers reflect historical influences that see vocational education as simple training for work, rather than education for learning and culture, and as such, the emphasis has been on occupational experience rather than pedagogical knowledge and full preparation for the teaching role. Kouri (2009) detailed personal narratives of individuals who moved from being electricians to teachers and found that “second career teachers begin teaching practice with preconceived beliefs about students, the prescribed curriculum, and teaching practice. They construct curriculum based on these beliefs” (p. 226). The new teachers relied on these beliefs, and previous examples of observed teaching, in the absence of training or an assigned mentor being provided for them within the college. Early frustrations as teachers included a heavy teaching load, and a sense of being alone in their struggles with developing lessons, managing the physical space and equipment in workshops, and maintaining control with students; however, they reported that when asked, colleagues would provide advice and support (Kouri, 2009).

Sauder (2001) found new trades teachers reported stress due to lack of balance between work and personal life, as they put in many extra hours to prepare for the classroom. They expressed feelings of loneliness and isolation, in part because they hesitated to ask for assistance for fear of revealing a lack of expertise. “This situation creates a period of struggle as the newcomer attempts to perform the teaching role while not knowing exactly how the role should be performed” (Sauder, 2001, p. 89). These findings are in keeping with those of Sorcinelli (1992, 1994) regarding new faculty in American colleges. Mealyea (1988) followed a cohort of
new vocational teachers in Australia. Unlike many other post-secondary vocational settings, these teachers received some training for their new roles; nevertheless, Mealyea (1988) found they did not have the usual “anticipatory socialization” (p. 312) of many occupational roles and experienced “considerable dissonance and role strain” (p. 313), leading to anger and anxiety. Tigchelaar, et al. (2008) found that second-career teachers wanted to transfer competencies acquired during their earlier careers to teaching and felt the greatest gains could be made through recognition of their backgrounds in teacher training.

Vocational Identity

Vocational identity was defined by Marcia (1980) as a clear identification with a particular occupation or vocation, based on commitment following active exploration of possible identities. Creating a vocational identity is a part of career development (Graves, 1989; Korthagen, 2004; Simpson, 1967) and of overall identity formation throughout life stages (Erikson, 1980); it is linked to the Aristotelian idea of eudemonia (Wheelwright, 1951) or happiness through use of one’s gifts, and to Maslow’s (1962) concept of self-actualization.

Vocational identity was explored within the survey by one question: Are you a tradesperson, a teacher, or both? If you met someone for the first time today, how would you describe yourself to this person? Respondents could choose one or more of three options: I’m a tradesperson (welder, electrician, etc.); I’m a teacher/instructor; and I’m a teacher/instructor in (welding, electrical, etc.). Respondents most often agreed with I’m a teacher/instructor in my trade; however, the other two statements were also agreed to in the majority of instances. Frequency counts are shown in Table 1 below.

Some variation in the results emerged through chi-square testing of the survey responses against demographic factors. Having another teacher within the immediate family was linked to
increased agreement (82.1%) with the statement *I'm a tradesperson*, ($\chi^2 (1, N = 123) = 3.997, p = .046$). Previous formal teacher training was linked to increased agreement (95%) with the statement *I’m a teacher/instructor* ($\chi^2 (1, N = 125) = 5.926, p = .015$). When compared by years of teaching experience, novice teachers identified most strongly with the statement *I’m a teacher/instructor*.

Table 1. Vocational Identity Frequency Counts and Missing Data for All Respondents.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
<th>Null</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’m a tradesperson</td>
<td>86</td>
<td>37</td>
<td>42</td>
<td>165</td>
</tr>
<tr>
<td>I’m a teacher/instructor</td>
<td>92</td>
<td>33</td>
<td>40</td>
<td>165</td>
</tr>
<tr>
<td>I’m a teacher/instructor in my trade</td>
<td>140</td>
<td>5</td>
<td>20</td>
<td>165</td>
</tr>
</tbody>
</table>

Interpretation panel participants expressed the view that they saw themselves as teachers while in trades practice as teaching is an integral being a tradesperson, and that this role led them to consider the move to full-time teaching for a long time prior to making the transition, based on enjoyment of working with apprentices. One participant suggested this previous practice of teaching apprentices may make the transition to full-time teaching easier for tradespeople than other vocational teachers:

You have to be a certain person. As tradespeople, we probably mentored somebody, so it’s another step. And some of us slide into the step a little easier. But for the electronics and technology [teachers], they don’t use that [teaching process].

Another participant, however, saw a more defined change in roles occurring over a teaching career, linked to the transition from the workplace culture of trades to college culture, saying “as an instructor, you are moving from blue [collar] to white. You are becoming part of
the white [collar world].” He suggested institutions should force the issue to some extent, using professional development sessions to “push forward this idea that you’re not a tradesman any more, you’re a teacher, and this is what we want from you. We want you to develop skills as a teacher, and your trade is secondary.”

**Previous research on vocational identity.** Vocational identity has been envisioned as three parts: technical knowledge; acceptance into the occupational role through learning and demonstrating skills; and, establishment of an internalized sense of belonging with the vocation that sets the newcomer apart from others as a member of the occupational group (Graves, 1989; Schulman, 2005; Simpson, 1967). Lave and Wenger (1991) theorized a centripetal process toward vocational identity within a community of practice and Korthagen (2004), in research on teacher identity, used a circular model of an onion to explain identity development, suggesting identity layers knowledge, skills, then attitudes and other traits. Finally, the layers create a vocational identity that becomes an integral part of the overall identity of the person, such that one will see oneself, and name oneself, by that vocation.

Research has suggested the first years of teaching, generally, are a time of negotiation of the role before settling into teaching as a career (Chang, 2009; Falk, 2012; Grissmer & Kirby, 1987; Skaalvik & Skaalvik, 2010). Research specific to trades teachers reported dissonance and anger as part of negotiating a new vocational identity for tradespeople as they first moved to a teaching role (Haycock & Kelly, 2009; Mealyea, 1988). Nze and Ginestie (2012) found that identity for vocational teachers was created over many years and was linked to the view of vocational education held by the teachers themselves, and by society around them.

Based on the current study, the transition from identifying as tradesperson to identifying as trades teacher appears different from the creation of a teacher identity envisioned by
Korthagen (2004) or other vocational socialization theorists (Graves, 1989; Schulman, 2005; Simpson, 1967), but rather more evolutionary and integrated. Tradespeople appear to come to teaching with a pre-existing identity as teacher, based on the journeyperson teaching apprentices.

**Dual identity.** Chappell and Johnston (2003) suggested a dual identity of both tradesperson and teacher is an important part of the overall identity for trades teachers, and what distinguishes these educators from school teachers or university lecturers whose initial careers are often in education, an idea that is supported by the findings of the current research where a clear sense of division between trades teachers and other teachers is apparent. Chappell (1999) theorized that for trades teachers, legitimacy and identity as a teacher is tied to industry expertise, as reflected in the views of students and the trade community. This concept was supported by Arreola (2007) as a part of teaching competencies in the larger post-secondary realm, labelled as a *scholarship of proficiency*. An ongoing tie to the trade becomes a part of the trades teachers’ sense of “who they are in the educational project” (Chappell, 1999, p. 218), leading to a need to self-identify as different from other teachers.

If a continued identification with the trade is psychologically necessary to provide a sense of legitimacy in teaching the trade, as Chappell and Johnston (2003) suggested and was reinforced by Haycock and Kelly (2009), then a dual or inclusive identity may be the best choice for a trades teacher. As described by study participants, there is a need to move beyond the trade, of “moving from blue [collar] to white” and to take on the work of embracing the professionalism and theory of teaching. Yet, rather than seeing a re-socialization and change to full identification as teacher as necessary for trades teachers (Andersson, Köpsén, Larson, & Milana, 2013; Mealyea, 1988), perhaps the “Janus-faced occupational identity” suggested by
Haycock and Kelly (2009, p. 4) is the best – if somewhat complicated – choice to support teaching in the trades.

**Satisfaction in the New Role**

The final section within the research asked about the satisfaction respondents felt as teachers, both currently and in comparison to their beginning days as a teacher. Factors were presented within the survey, one sources of satisfaction and dissatisfaction. Qualitative comments were gathered through the survey and the interpretation panel discussions.

Overall, respondents rated themselves as somewhat satisfied (34.5%) or highly satisfied (60%) with teaching. Most respondents said they were as satisfied with the role of teacher currently as when they began (45.5%), or were more satisfied currently (38.2%). From a list of factors that could lead to satisfaction, respondents most often agreed with the statement *I feel rewarded when students succeed* (99.4%). The statement *I feel my work is valued by my institution* received the least agreement (47.8%). Among factors that could lead to dissatisfaction with teaching, the strongest agreement was in reaction to *Not enough time to do the work* (54.5%).

Correlations were found between levels of expressed satisfaction and agreement with the factors listed. The level of satisfaction rose with the level of agreement to statements regarding contact with industry ($\chi^2 (3) = 5.573, p = .039$), feeling valued by a supervisor ($\chi^2 (3) = 20.607, p = .000$), feeling valued by the institution ($\chi^2 (3) = 21.192, p = .000$) and by the public ($\chi^2 (3) = 9.606, p = .022$), suggesting improvements in these particular aspects of the job could have the greatest effect on satisfaction levels.

Qualitative results supported these results. One participant said, “A weld has never said thanks. Students come up and say ‘thanks, you did a great job.’ Personal contact with the
students is my highest reward.’” “[Teachers] are here for those two things: they feel valued by their students and they like teaching to pass that information along,” said another participant.

In contrast, evidence of feeling their work is not valued or recognized by the institution was shown in comments such as:

The problem . . . is that there is a deep-seated and long-term historical bias against tradespeople that goes back centuries. It’s engrained pretty much top to bottom, and in particular, anybody in management, almost invariably, comes from a university background.

Another participant commented, “We’re not invited to the ivory tower. It’s like you’re the stepchild: ‘just get the work done – we’re [management] going to the ball, Cinderella’.”

**Previous research on teacher satisfaction.** Finding satisfaction in working with students is consistent with other studies of second-career teachers (Campbell, 2009; Sauder, 2001). Similarly, time pressure is commonly named as a source of dissatisfaction in studies of trade teacher job satisfaction (Kouri, 2009; Sauder, 2001). The sense of not being valued by the institution is also seen in teacher satisfaction research. Skaalvik and Skaalvik (2011) saw a sense of belonging, drawn from relationships with colleagues and supervisors as well as personal value consonance with the institution, linked to teachers feeling satisfied and likely to continue teaching. Van Maele and Van Houtte (2012) saw trust as key to job satisfaction for teachers, given the interdependent nature of the role. They regarded trust as a major component of social capital within educational institutions, and particularly important to novice teachers’ efficacy: “Because teachers usually do lack many extrinsic rewards – high salaries, promotional opportunities, and so forth – they mainly need to derive satisfaction from intrinsic sources, such
as their work and interactions with students and other adults in school” (Van Maele & Van Houtte, 2012, p. 881).

**Successful transition.** The high level of satisfaction (94.5%) reported by participants suggests that the career transition from tradesperson to trades teacher has been successful for this sample group. Suggested changes to increase satisfaction were provided in the survey, and respondents choose *more support for developing teaching skills and knowledge* most often. A Kruskal-Wallis test was used to test for differences in the stated agreement to satisfaction factors, when compared by level of satisfaction resulted in $\chi^2(3) = 9.405$, $p = .024$ for this suggested change. While on the surface this choice suggests more professional development opportunities, given the comments regarding the type of teacher training currently offered, and the expressed divisions between academics and trades teachers, *more support* may mean something more than just additional workshops; it may mean support in the sense of recognition of existing skills and building upon them in non-formal ways, such as mentoring.

**Discussion and Recommendations**

This research explored the career transition of tradespeople to trades teachers, looking at motivation for change, transfer of prior learning, means of learning additional skills and knowledge once in the new role, changes in vocational identity, and satisfaction with the new role. These findings relate specifically to trades teachers; however, they may also hold true with other groups moving from industry practice to a second career in teaching. Recommendations aimed at assisting in a successful transition to the second career of vocational post-secondary teacher have emerged from the analysis of the data. These recommendations include the following:
Recruitment efforts should focus on the motivational factor of *continuity*, both the opportunity to train the next generation and to continue within the first career in a new way within a new role. Recruitment should promote the improved work-life balance possible as a teacher. The opportunity for continued connection to the first career of trades, through sabbaticals or leave for industry practice, should be a part of the employment package. A continued connection to trades could support job satisfaction as a teacher, provide currency in subject matter to the benefit of students, and build on the personal sense of legitimacy as a teacher of one’s trade.

When providing teacher training programs, a focus on practical and non-formal processes is more likely to be accepted by trades teachers than academic methods. Practical training in the early days of teaching could be particularly useful in building confidence and skill among new teachers, with more theoretical training provided at a later time. Teacher training specifically designed for trades, building on the apprenticeship learning model, and utilizing practices of non-formal, tacit learning, could support the pre-existing identity of teacher while helping tradespeople move toward the full responsibilities of teaching. Opportunities for the recognition of prior learning in teaching knowledge and skills would also support this transition. Encouraging mentorship of novice teachers by experienced teachers, through a matching process and allocation of time for discussions, could be a very effective way to build teaching skills and knowledge in a non-formal and ongoing manner that would be more readily accepted as familiar from trades practice. Physically grouping teachers of the same subject or trade, through clusters of office space and classrooms, could foster mentoring and discussion.

Creating a sense of inclusion, through positive relationships with colleagues and with the institution, could help retain trades teachers. Considering this group when planning college
events, and encouraging informal interaction with other teachers via common meeting spaces, would help build a more-inclusive culture. Trades teachers want to see institutional management positively recognize their work and the contribution of trades programs to the institute. This recognition, whether in the form of a casual conversation, being featured in institutional advertising, through inclusion of journeypersons in the management ranks, or other means, would be welcomed and would encourage retention of teachers.

**Reflections of Blue and White**

Throughout the various topics within this study, the first career of trades was connected by respondents, in both positive and negative ways, to the second career of teaching. The research found that tradespeople moving to teaching are motivated primarily by pride in their trade and a desire to see the craft continue through their teaching. Tradespeople bring a strong sense of having already been a teacher, created through working with apprentices, to the role of teacher. They rate themselves highest in the general abilities and traits associated with teaching, but learn in the pedagogical knowledge and skills competencies to gain confidence in their overall teaching competency over time. In learning to teach, trades teachers prefer non-formal learning methods, similar to the apprenticeship learning model, including mentorship and discussions. They reject overly academic training as impractical and an expression of the lower status accorded to trades teaching within higher education.

The transition of identity from tradesperson to trades teacher is an evolution: it grows from the role of teacher embedded within being a tradesperson, and includes trades knowledge gained through their own apprenticeship and practice, becoming a new combined identity that makes one more than a teacher, more than a tradesperson, but rather a teacher of the trade. Trades teachers are generally satisfied with their work, suggesting a successful transition to the
new career, with satisfaction derived from interactions with students and relationships with colleagues. Dissatisfaction comes from time constraints and from a sense of trades work not being valued within the institution.

The connection between the first and second career was a positive factor in motivation to change careers and satisfaction with the new role, building on pride in trades work and teaching apprentices while in industry, and allowing a continued connection with trades through teaching a new generation in the classroom. The negative emerged in expressions of feeling undervalued by the institution, through the institutes’ training for teaching, in perceived divisions between trades programs versus academically-oriented programs, and versus the leadership of the employing institutes.

The idea of blue-collar and white-collar boundaries has been explored by sociologists (Lamont & Molnar, 2002), looking at divisions based on working class versus middle class and boundaries of profession, both of which may be in play in this situation. Lamont (2000) found distinct boundaries created by blue-collar men that set them apart from white-collar counterparts. Lubrano (2005) and Ryan and Sackrey (1995) have explored the sense of division between individuals with working-class roots and those of middle-class background in university settings. Mealyea (1988) and Chappell and Johnson (2003) saw evidence of a distinction created and sustained among trades teachers, separating them from other vocational and technical teachers. Within the current study, comments from participants suggest this distinction is not simply self-created, but is created or reinforced by the institution, as well. More research would be needed to understand the potential importance of these boundaries, how they arise, and the effect on career transitions from blue to white collar work.
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Advantages and Disadvantages of Distance Education in comparison to Traditional Education

Topic Area of Submission: Online Education

Presentation Format: Paper Presentation

2-3 Sentence Description: Online education has drastically changed as it has been developed to cater to the working population. It has given students the capacity to learn from home while earning a degree online. Overall, comparing distance education with traditional education will show us the pitfalls of learning in the online environment. In general, students have to decide which environment works best for them as it relates to their learning.

Hawaii International Conference on Education

Topic: Advantages and Disadvantages of Distance Education in comparison to Traditional Education

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Current distance education is often referred to as web-based education that uses the Internet and communication technologies (Tallent-Runnels et al., 2006). The Internet is also used to supplement instruction, as in the use of a website to communicate information to students who are in a face-to-face class (Tallent-Runnels et al., 2006). Distance Education has made learning more efficient as you can take classes from anywhere as long as there is a data connection. Today, most distance courses use digitized lectures, audio supplementation, discussion boards, and interactive software to incorporate the active use of writing, problem analysis, and collaborative learning (Navarro & Shoemaker, 1999). All of these elements are needed in order to make an online course more interactive. Pucel and Stertz (2005) found that “web-based delivery permits educational processes to be implemented at times and places that fit around a working student’s job and family responsibilities” (p. 8).

Proponents of distance learning stress that properly designed online courses can better accommodate different learning styles and provide more individualized instruction to each student than can the traditional classroom (Navarro & Shoemaker, 1999; Sosin, 1997). In online courses, an instructor can upload videos and lectures so that students can learn at their own pace. Harrison and Stephen (1996) argued that online education shares some fundamental characteristics with the face-to-face educational environment such as: interactive group communication, as students can interact with one another in such formats as dyads, seminars, group projects, and role plays, take part in online lectures, or contact the instructor, tutors, and subject experts online. All of these elements combined can assist students in the process of learning online. Offenholley (2006) found that online math courses built a sense of community, encouraged higher-order thinking, and provided opportunities for peer collaboration. Hostetter and Busch (2006) found that instructor immediacy behaviors and social presence among students can be enhanced in an online course, thus creating a learning community that facilitates educational excellence. Instructor immediacy is needed in order to continue the flow of the course over time.
In comparison with traditional face-to-face classroom learning that centers on instructors who have control over class content and learning process, online learning offers a learner-centered, self-paced learning environment (Hiltz & Turoff, 2002; Morales, Cory, & Bozell, 2001; Piccoli, Ahmad, & Ives, 2001). In online education, it places the student at the forefront of their learning and they have options on how they will participate and complete their assignments. Swan (2002) reported that students perceived online discussions as more equitable and more democratic than traditional classroom discussions.

English (2007) believes that discussions offer a forum for quiet students to develop and verbalize ideas, promote in-depth response and reflection, encourage peer affirmation, and provide opportunities for more student-instructor and student-student interaction. Often times, shy students are able to find their “voice” on the Discussion Board. The online threaded discussion group is a valuable way for instructors to give all students an opportunity to find their voices comfortably, whether writing in response to literature or someone else’s writing (English, 2007; Offenholley, 2006). In the online environment, other interactive activities can be planned such as: group projects, live chat, etc. Because students in a traditional classroom lecture can simultaneously observe a teaching process, listen to an instructor, and watch slides or transparencies (Zhang, Zhao, Zhou, & Nunamaker, 2004), they often feel a high level of connection with the instructor and that they truly are a part of the group (Hannay & Newvine, 2006).

While online systems may be useful platforms with which instructors and students can exchange ideas and can hold discussions, they are often insufficient for mathematical sciences courses to provide distance students the same learning possibilities that traditional face-to-face students are benefiting from (Fedele & Li, 2008). A possible alternative would be adding video lectures so that online students can see and experience the lecture in the same way that traditional students do. The need to provide
real time access for distance students to ongoing class discussions and lectures (Li, Uvah, Amin, & Hemasinha, 2009) has promoted both synchronous and asynchronous conferencing modes that actually generate more frank discussion among students than traditional classroom instruction (Sproull & Keisler, 1993). If a student prefers face-to-face interaction, then the synchronous model would be the best way to learn online. If a student prefers to work independently with very little interaction from the instructor, then the asynchronous model would be a great alternative. A mixed-mode university course combining online learning and face-to-face meetings can encourage students to formulate and express their own ideas more than would be the case in traditional classrooms (Breton et al., 2005). The hybrid is another way of bridging the gap for students who want the best of online and traditional education. What is best about the face-to-face and online formats can be combined to create a hybrid RST (reduced seat time) course, a fast-growing format for university courses, in which the students meet face-to-face with the instructor and students for classes during the week and operate online at other times (Dolan, 2008).

The major factor that negatively affects distance students is the need to feel they belong to the class and that they are not “distant” (Amin & Li, 2010). It is important to promote interaction in these types of setting so that students can feel engaged in the course. It is a fact that limiting the exchange of feedback to online learning postings and discussion forums may not provide distance students with the interactive learning experience and feeling of belonging to a class they usually would get in a traditional face-to-face class (Amin & Li, 2010). Distance students may feel less connected to the class as compared to face-to-face students (Li et al., 2009). But students can interact with other students inside and outside of the classroom. Overall, their online experience is a two-way street. One possible approach in helping distance students to stay enrolled is involving them in group work in the class (Amin & Li, 2010). Group work is one of the best ways to get students to involved so that they can learn from one another and the instructor in the course. Bielman, Putney, and Strudler (2000) noticed that simple emoticons, such as
smiley faces, in online communications with one another can often compensate for the missing visual and nonverbal communication cues. In terms of communication, it is a good idea to make phone calls to students so that they can place a voice with the picture of their instructor in the Instructor section of the course.

Gunawardena (1995) asserts that “the development of social presence and a sense of online community becomes key to promoting collaborative learning and knowledge building” (p. 164). It is important for the instructor to allow students to interact in the course and to find ways to build a successful community within the course. According to Rovai (2002), it is the method of teaching, not the environment for delivering the course that influences feelings of community. Lastly, Chao and Davis (2001) found that there are many facets to the online success of math courses such as paying attention to the design and utilization of effective online pedagogy, maintaining active communication between students and the instructor, encouraging interaction between students in the classroom, and using computer programs like Excel as a way to illustrate statistical concepts in the classroom. All of these items are important as it relates to building and facilitating a successful online course. Overall, it is important to look at all of the characteristics that are involved with taking online and traditional courses so that students can find the best way for them to learn. In each situation, students will have to adjust to the instructor, students in the course, and the overall course material. In time, students will find their preferred method of taking courses and this will help them to succeed as they proceed towards graduation.
References


Title: How do we establish social presence within online mathematics courses?

Topic Area of Submission: Mathematics Education

Presentation Format: Paper Presentation

2-3 Sentence Description: Social Presence is a concept that is very important with students in the online environment. In learning mathematics online, social presence is a crucial component of learning online. Rovai (2001) presents a model of community that suggests that social presence, student-instructor ratio, transactional distance, instructor immediacy, lurking, social equality, collaborative learning, group facilitation, and self-directed learning all have an impact on the sense of community within online environments. Overall, social presence can encourage students to interact in class, complete their course assignments, and to complete the course successfully.

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Social presence, simply put, are social relationships in online education (Hostetter & Busch, 2006). These relationships can be between student-student interaction and/or student-instructor interaction. It basically encompasses all possible relationships that can form within an online course. When instructors connect with others in new social situations, they create social presence or a degree of interpersonal contact (Gunawardena & Zittle, 1997). The instructor in an online mathematics course sets the tone on whether the course will be interactive or not. It is the instructor’s responsibility to allow students to work together on various projects, assignments, and on the Discussion Board.

However, in online mathematics courses, interaction is especially important so that students can make sure that they are on the right track with their learning in the online community. For Example: $3x + 5 = 17$ (below are the student’s steps)

\[
\begin{align*}
3x + 5 &= 17 \\
+5 &+5 \\
\hline
3x &= 22
\end{align*}
\]

The above problem illustrates that the student has a portion of the concept and needs a bit of assistance from the instructor or students in the online mathematics course. The student added five instead of subtracting five as the student should be trying to isolate the variable by moving 5 to the right hand side. Due to this error, the student’s answer will be wrong. So it will be up to the entire community of learners to step up and show this student how to effectively complete this problem. If the student subtracted 5 from both sides, then the next step would be $3x = 12$. Then dividing by 3 on both sides would result in a final answer of $x = 4$. The student could check their answer by substituting 4 into the original equation to make sure that they received the correct answer.

In instances like these, it is important for instructor to enter the online classroom and email at least 5 out of 7 days a week to facilitate all student questions. In order to generate social presence between students and the instructor, the instructor must take into account the isolation felt by students when online communication lags (Scollins-Mantha, 2008). In the online mathematics classroom, interaction must be consistent especially with “shy” students. These students must know that they can voice their opinions via email or the Discussion Board and they will receive a response. Shy students tend to sit in the back quietly because they do not want to talk in public. But in the online environment, they are able to talk freely amongst their peers and the instructor of the online mathematics course.

As mathematics educators become more comfortable with emerging technologies that offer enhanced teaching and learning opportunities, they are more receptive to administrative requests for additional online general studies mathematics courses such as College Algebra and Elementary Statistics (Hegeman, 2015). These technologies can include lecture videos, ScreenCast, PowerPoint
presentations, TeacherTube videos, etc. All of these technologies can be used in the online mathematics course so that students can feel more interactive online. Research indicates teaching presence in the online classroom, as defined by Anderson, Rourke, Garrison, and Archer (2001), plays an important role in the development of a class climate that provides students with a rewarding educational experience. Teaching presence can be established by lecture videos (in asynchronous classes) and real-time lectures (in synchronous classes). The class climate must be created in an intentional way so that students will feel like they are getting the same amount of instruction and interaction as they would in a traditional classroom. Each of these items increases social presence in the online mathematics course.

In a study of online student satisfaction, all three categories of teaching presence—design and organization, facilitating discourse, and direct instruction—were found to be highly correlated with course satisfaction and student perception of learning (Shea, Pickett, & Pelz, 2003). All online mathematics courses must be taught with the students in mind. The facilitation process must be seamless so that students can feel that they can ask a question and they will get an answer within a reasonable time frame (24 hours or less). Direct instruction has to be directed to the students so that students can use the lecture in a way that will help them to complete their coursework. The lecture must be detailed so that students have an overview on what will be discussed in the current Unit. Sample problems can be discussed so that students can see them illustrated so that they can practice them at home.

Rovai (2001) presents a model of community that suggests that social presence, student-instructor ratio, transactional distance, instructor immediacy, lurking, social equality, collaborative learning, group facilitation, and self-directed learning all have an impact on the sense of community within online environments. Other important characteristics of social presence in online mathematics courses are: posting an Instructor Profile and responding to the profiles of students in the course, holding online office hours, emailing students when their work is not submitted, and posting feedback to all submitted assignments.

All of the above characteristics are important to establishing social presence in online mathematics courses. An instructor can use some or all of these items in order to promote social presence between students and with students and the instructor. Overall, social presence is established by being “present” in the classroom and adding value to a student’s online experience. Ning Shen and Khalifa (2008) considered social presence as a major design principle in computer-mediated community and an important determinant of online community participation. It is important to establish community from the beginning of the course so that students will know what is expected of them as the course progress. Lastly, online
mathematics courses can be difficult but with the right amount of social presence and interaction, students can feel confident in completing the Units and the course successfully.

References


A Model of Interdisciplinary Training for Rehabilitation Counselors and Special Educators

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Abstract

Rehabilitation Counseling and Special Education transition services are needed to increase access to the primary labor market, community participation, and independent living for individuals with disabilities. This may be especially true during an individual’s stage of development known as transition and emerging adulthood, which is when this interdisciplinary training model may have the most impact. This paper is intended to address the specific personnel needs of Special Education teachers and of Rehabilitation Counselors to serve individuals with disabilities during the transition and emerging adulthood stage of development. A conceptual model of coursework and clinical experiences at the graduate level is offered.

Key words: Transition services; Rehabilitation Counseling; Special Education
A Model of Interdisciplinary Training for Rehabilitation Counselors and Special Educators

A shortage of qualified rehabilitation professionals continues in state vocational rehabilitation (VR) agencies. This trend will continue, primarily due to the expected retirement of many currently employed rehabilitation counselors, high turnover rates, and the inability of existing programs to produce enough graduates to meet the public sector’s replacement needs (Rehabilitation Services Administration, 2013). Likewise, a shortage of special educators continues to be a chronic problem in the field (Smith, Rob, West, & Tyler, 2010).

This innovative and interdisciplinary training model is timely as it addresses both national and state special education and rehabilitation counseling shortages. Presently, collaborative initiatives between schools and community agencies have been “segregated, isolating, fragmented, or incomplete” (Repie, 2005, p. 280). This oftentimes ambiguous and unregulated service is further complicated by an overrepresentation of significant challenges for youth and emerging adults with disabilities from diverse populations in special education programming (Artiles & Bal, 2008; Mandell, Davis, Bevans & Guvara, 2008). This unique model will address these national and state trends by introducing an innovative training opportunity that will result in professionals who have an interdisciplinary understanding and experiences to support the theory underpinning the model. Studies suggest that professionals who hold a master’s degree perform significantly better with consumers and students (Fleming, Del Valle, Kim, & Leahy, 2013; Smith et al., 2010). The intersection of services for youth and young adults with disabilities may occur during the mid to late teen years when transition services are offered and the stage of emerging adulthood (EA) is starting.

Transition for Youth with Disabilities

All youth experience both vertical (normative, predictive) and horizontal (individual specific) transitions in life (Wehmeyer & Webb, 2012). Vertical transitions are typical lifespan points in time such as becoming an adolescent. Horizontal transitions, such as getting married, are contingent upon abilities and/or interests of the person with regard to those events. Unfortunately, data suggest that youth with disabilities do not successfully achieve many of the horizontal and vertical transitions in life that a youth without a disability may accomplish. According to the National Longitudinal Transition Study 2 (NLTS2; 2006), approximately 63% of youth with disabilities complete school compared to 82% of youth without disabilities. Two years after graduation, youth with disabilities are less employed as compare to their peers.
without disabilities (46% to 59% respectively). Of those employed, the average number of hours worked per week was 29 with a median hourly rate of $7.30. Only 33% of these youth received job related benefits (e.g., insurance, leave, vacation, retirement). Similarly, only 33% of youth with disabilities were enrolled two years after graduation in some kind of postsecondary school education as compared to 68% of youth without disabilities. Furthermore, 3-5 years after graduation, only 37% are living independently compared to 60% of those without disabilities.

Regardless of what data are used, youth with disabilities are not meeting or achieving the same horizontal transitions in life as compared to their counterparts without disabilities. Given this information, it is important that secondary transition services be molded to provide those services that create the greatest impact in horizontal change for transitioning emerging adults. The interdisciplinary preparation of special education teachers and rehabilitation counselors who meet the secondary needs of students with disabilities should take into consideration the requirements identified in the Individuals with Disabilities Improvement Education Act (IDEA, 2004). The IDEA requires that transition services be provided to students with disabilities beginning no later than age 16 while services may be provided earlier as determined by the IEP team. Transition services include a coordinated set of activities for a child with a disability that focuses on results-oriented academic and functional outcomes that will positively affect the child’s movement from school to postsecondary settings. Activities that support this movement should consider “postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation ([34 CFR 300.43 (a)] [20 U.S.C. 1401(34)]).” Transition services should be written as measureable postsecondary goals that are based on age-appropriate transition assessments as “related to training, education, employment and, where appropriate, independent living skills ([34 CFR 300.320(b) and (c)] [20 U.S.C. 1414 (d)(1)(A)(i)(VIII)]).”

What transition services are taught can be categorized based on the level of evidence available for a given practice. Test, Mazzotti, Mustian, Fowler, Kortering, and Kohler (2009) conducted a systematic review of secondary transition correlational studies that identified 16 transition practices focused on improving the post-school outcomes of students with disabilities. Table 1 provides a summary of each practice and the level of evidence (i.e. effect size) for them. Outcome measures include post-school education, employment indicators, and independent living. The practices identified are those where evidence is available.
Contingent upon the needs of students with disabilities, practices with stronger levels of evidence should be used first with the understanding that not all the potential practices have been studied. Taking this into consideration, a model interdisciplinary training program for rehabilitation counselors and special educators focused on the secondary transition needs of students with disabilities should take into consideration identified practices with greater emphasis placed on those with more evidence. As transition continues, these young adults move into the emerging adulthood stage.

**Emerging Adulthood**

Emerging adulthood (EA) is a developmental period experienced by individuals ages 18 – 29, who live in industrialized nations (Arnett, 2000). Therefore, this lifespan time-period of emerging adulthood runs concurrently with transition services. EA however, specifically focuses on the developmental period and the changes that occur during this time-frame, lending new information about these individuals to service providers, such as special education teachers and rehabilitation counselors. According to Arnett (2000), in industrialized nations the transition to adulthood has become protracted to the extent that it warrants another developmental period, explaining this life-course time-period that is unlike adolescence or adulthood.

There are five characteristics describing emerging adults that include: (1) self-exploration (e.g., identity development); (2) uncertainty; (3) self-focus; (4) optimism; and (5) transition (Arnett, 2000). The first characteristic, self-exploration, provides time for, and facilitates one’s identity development. During self-exploration EA spend time learning about who they are and how they want to live their life. The second characteristic is uncertainty. During EA change is a constant theme that affects many aspects of life. During this time period an individual is expected to experience many changes in occupations, residential locations, and living arrangements, all contributing to feelings of uncertainty. The third characteristic of EA is self-focus, which ultimately translates into self-sufficiency. Spending time in reflection allows today’s young adults more time to pursue opportunities in interpersonal relationships, work, and education that promote self-knowledge, eventually leading to greater independence in this area. The fourth characteristic is optimism. EA is developmental period that is filled with uncertainty, change. Despite the flux, emerging adults are resilient and remain optimistic in their view of the
future. The last characteristic of the EA period is transition. Transition is the feeling of no longer being an adolescent, yet not quite feeling like an adult (Arnett, 2006). According to Arnett (2006) to feel like an adult one must: (a) be responsible for his or her actions, (b) make decisions independently, and (c) make independent financial decisions. According to Hinton and Meyer (2014) “emerging adulthood offers insight that can enhance the educational and rehabilitation services for young adults. Specifically, EA provides an understanding of the vast changes in the experiences and expectations young adults currently have in relationships, career choices and occupations, residential locations, and living arrangements that are very different from past generations” (p. 144).

It may be beneficial for rehabilitation counselors to understand the theory and trends of EA because a main goal of rehabilitation services is to support individuals with disabilities during this time-period to obtain meaningful employment and other community opportunities. This means helping employers and other related community-based service providers who are unaware of emerging adulthood in efforts to support consumers who are still maturing and transitioning to independence during the EA stage.

Applying the theory of EA to youth and young adults with disabilities provides a new framework for understanding individuals throughout the transition process. Equipping counselors in-training with a complete understanding of transition services, including the IEP process, in addition to a thorough understanding of emerging adulthood will provide counselors with a current and relevant understanding of the experiences and values held by today’s youth and emerging adults with disabilities in the context of evidence based practices.

**A Model for Interdisciplinary Training at the Graduate Level**

The authors present a model that embeds special education coursework into a Rehabilitation Counseling (RC) master’s degree; however, an alternate model could embed Rehabilitation Counseling coursework into a Special Education master’s degree. This training model emphasizes that RC’s will (a) increase their understanding of the transition and emerging adulthood phase of development, (b) increase clinical skills that address education-related transition and emerging adulthood challenges, and (c) collaborate with practitioners and school personnel. When trained effectively, professional RC’s can respond to youth and emerging adults with disabilities who experiences career development difficulties as a result of challenges in their academic, personal and socio-emotional development (Hinton & Meyer, 2014). The provision of
transition and emerging adulthood services can assist youth and emerging adults in navigating career exploration, career development, and other post school outcomes.

Equipping counselors in-training with a complete understanding of transition services, including the IEP process, in addition to a thorough understanding of emerging adulthood will provide counselors and educators with a current and relevant understanding of the experiences and values held by today’s youth and emerging adults with disabilities in the context of evidence based practices. The proposed curriculum encompasses a thorough review of the IEP process, an in-depth understanding of the theory and trends of Emerging Adulthood, and the cultural competence to understand, and work with this unique group of individuals.

To address these areas, the proposed 60 hour curricula includes an innovative and interdisciplinary certificate (18 semester hours) providing students with a depth of information in six specific areas to enhance related services for youth and emerging adults with disabilities including: (1) Transition from School (institution) to Community; (2) Curriculum and Teaching in Secondary Schools; (3) Emerging Adulthood; (4) Occupational, Career, and Placement Services; (5) Advanced Theories in Rehabilitation; and (6) Practicum/clinical experience in transition and emerging adulthood.

There are three objectives for the curricula: (1) Students will earn a master’s-degree in (Rehabilitation Counseling or Special Education); (2) Students will complete the Transition Specialist Certificate Program focused on transition and emerging adulthood; and (3) Students will have clinical experiences in transition services including youth and emerging adults with disabilities. Through the Transition Specialist certificate program, students will (1) develop an understanding of transition and emerging adulthood challenges for youth and emerging adults with disabilities to appropriately support these services consistent with Individualized Education Program federal mandates, (2) increase their knowledge of transition and emerging adulthood interventions that promote educational and post-school success, and (3) collaborate with institutional personnel and other related service providers. The project graduates will be highly prepared in interdisciplinary approaches to serve stakeholders in providing consistent and effective educational supports for a promising future.

The aim of this model is based on several foundational premises: (a) Belief in the full rights, privileges, opportunities, and accommodations for all people with disabilities; (b) Belief in the importance of rehabilitation counselors to assist people with disabilities in achieving their
personal, occupational, social, and economic goals; (c) Belief that theoretical, empirical, and evidence-based best practice knowledge is essential; (d) Belief that competitive employment in the most integrated setting significantly augments the quality of life for persons with disabilities and their families; (e) Belief that all qualified persons, regardless of race, religion, creed, gender, sexual orientation or disability should join in the mission to improve the quality of life for all people with disabilities, in particular, their employment in the primary labor market. The model has three primary goals including (a) supporting programs and youth/emerging adults with disabilities by educating and promoting interdisciplinary training, (b) providing opportunities for clinical experiences in the sites serving youth and emerging adults with disabilities, and (c) evaluating courses and materials to enhance and promote the effectiveness of the program to meet the goals of educating both special educators and rehabilitation counselors. The following table provides a proposed rotation of courses within a two-year master’s degree.

<Insert Table 2 Here>

The proposed model is a six-semester (24 month program), practice intensive, evidenced-based inclusive program for eligible students with the capacity to embrace diversity and collaboration, on multiple levels. Students will learn to work with individuals with congenital and acquired conditions to foster and promote individual goals and outcomes related to living, working, and socializing in the community. Faculty will impart this information through research and coursework by teaching evidence-based practices applicable to current rehabilitation, economic and employment trends.

Conclusions Future Research

Economic trends often dictate the employment landscape job seekers are required to navigate for successful employment. The “great recession” continues to impact local and national labor markets (Fogg, Harrington, & McMahon, 2010) for those with and without disability. Five economic trends affecting employment are a jobless recovery, conservative economic changes in many industries, technological advances, increases in diversity, and a general reduction in funding (Krepecio & Martin, 2012). These changes require improved understanding of employers’ needs; highly specialized and skilled workers; increased flexibility in work schedules; technology driving continuous changes in the marketplace; and declines in employment opportunities for emerging adults, to name a few (Krepecio & Martin, 2012). Unfortunately, higher unemployment rates have a disproportional effect on individuals with
disabilities, often mitigating the benefits of mediators such as greater experience and education. According to Fogg et al. (2010), in times of severe economic hardship factors such as increased education and experience do not facilitate employment for individuals with disabilities, especially youth and emerging adults.

In order to further enhance rehabilitation services for transitioning emerging adults, researchers need to examine best practices that provide optimal outcomes for this population. The Workforce Innovation and Opportunity Act (2014) is a gateway into this area as it specifically mandates that fifteen percent of all vocational rehabilitation agency funds be set aside for transition services for students with disabilities. This legislation also provides pre-employment services to all students with disabilities. This is an opportunity for researchers to implement systems change in rehabilitation services to utilize what we already know about emerging adults into the employment system that serves youth with disabilities. It is evident through the current research on transition and recent legislation, that serving youth with disabilities is important to support the notion of independence and self-sufficiency. Unfortunately, there has been a disconnect between rehabilitation counselors, special educators, and other supportive services such as supported employment providers. One of the issues that exist is the lack of clarity as it relates to which agency or system is responsible for aspects of service delivery and costs. It is now clearer and more defined through the Workforce Innovation and Opportunity Act. By enhancing rehabilitation counselors knowledge and skills in transition services and emerging adulthood we can further close the employment and education gaps that have hindered youth with disabilities in America for decades.

The ideal of living, working and socializing in the community of choice is, on the surface, very simple. For those individuals whose disability has become, for whatever reasons, the defining attribute of their existence, this ideal is often beyond their grasp or, at best, highly elusive (Martin, 2001). Rehabilitation counseling and special education can provide services that may be life-altering, in the sense that positive economic changes can be realized by developing an Individualized Transition Plan and an Individualized Plan for Employment that reflect realistic opportunities to capture the American Dream.
References


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<td>0.22 - 0.55</td>
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- Career awareness
- Education and employment
- Potential (0.27-0.23)

Note. A moderate evidence rating required having a predictor with two a priori studies with consistent significant predictor and outcome variable correlations and effect size data. A potential evidence rating required a having a predictor with one a priori study and/or two or more exploratory studies with significant predictor and outcome variable correlations. Potential indicates promise but insufficient data for a moderate rating. Table adapted from Test, Mazzotti, Mustian, Fowler, Kortering, and Kohler (2009).
Table 2. Model graduate program for interdisciplinary training

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<th>Summer (9 hrs.)</th>
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<tr>
<td>COUN 7320/6 Individual Counseling Theories</td>
<td>COUN 7350 Introduction to Counseling Practice</td>
<td>*REHB 6220/6 Occupational, Career, &amp; Placement Services</td>
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<td>*REHB 7010/6 Rehab Professions, Ethics &amp; Assistive Technology</td>
<td>COUN 7340/6 Group Counseling</td>
<td>COUN 7310/6 Counseling through the Lifespan</td>
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<td>REHB 6010/6 Medical, Psychosocial &amp; Vocational Aspects of disability</td>
<td>COUN 7250/6 Advanced Assessment and Diagnoses</td>
<td>*COUN 7910/6 Practicum in Rehabilitation Counseling</td>
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<td>COUN 7200/6 Introduction to Measurement and Assessment</td>
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<td>COUN 7920/6 Internship in Rehab Counseling (3 hours)</td>
<td>*REHB 7940/6 Advanced Theories in Rehab</td>
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<td>COUN 7330/6 Counseling Diverse Populations</td>
<td>*REHB 7950/6 Emerging Adulthood &amp; Transition in Rehabilitation</td>
<td>COUN 7920/6 Internship in Rehab Counseling (6 hours)</td>
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<td>*REHB 6170/6 Transition from School to Community</td>
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<td>COUN 7500/6 Crisis Intervention</td>
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*Transition Specialist Certificate course
Workshop for HICE 2016
Submission ID Number is 71

1. Title of the submission
Tribulations of a teacher in intercultural contexts: cultural and professional identities in motion

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6. Abstract :
This workshop would be an opportunity to share my reflexive work about my experiences as a teacher in Nunavik with the Inuit, in Asia and in British Columbia. I would like to discuss how reflexive practices can contribute to teachers' professional development when confronted to cultural complexity.
My study is a reflexive work on my teaching practice based on an autoethnography of my trajectory as an international student in Quebec, a teacher in Nunavik (with the Inuit), Asia and finally in a French International School in British Columbia, Canada. This journey explores my identities and my cultures which I see in intertwining dynamics, interweaving experiences, and in constant motion in time and space, as I meet cultures (mine, and others). I wonder how my reflection on my personal and professional life experiences in different cultural contexts allowed me to become the person and the teacher I am, and how reflexive practices can contribute to teachers' professional development when confronted to cultural complexity.
This paper presents findings from a qualitative dataset collected during a critical ethnography at one Ontario university in response to the question: How has the concept of transdisciplinarity facilitated or hindered development of research partnerships on a Canadian campus? Transdisciplinarity has been characterized as a global reform movement in higher education Nicolescu, 2002, 2008; Montuori, 2010; Morin, 2008; also Mitchell and Moore, 2012, 2015); and invitations to five of our University’s transdisciplinary hubs yielded a dataset comprised of academic, policy, and legal literature, fourteen face-to-face semi-structured, audio-taped and transcribed interviews with stakeholders and participants in these $1 million initiatives, and dozens of participant observations launching one such consortium. In late 2013, Canada’s national newspaper reported that the implementation of Ontario’s ‘differentiation policy framework’ was the province’s ‘boldest step yet to compel universities and colleges to make hard choices about how they spend their resources…a draft policy designed to stretch limited provincial dollars by narrowing some schools’ missions’ (Bradshaw, 2013, para. two). As part of this reform agenda, the Ministry of Training, Colleges and Universities required that each of its forty-four post-secondary educational (PSE) institutions submit a Strategic Mandate Agreement in response to a set of priority objectives outlined under this rubric of ‘differentiation’ aimed at avoiding duplication and waste of public resources (Government of Ontario, 2013; Brock University, 2013). This province’s objectives are similar to goals found in much of the current Organization of Economic Cooperation and Development’s educational reform research, particularly those of the United Kingdom and Australia, as governments throughout the world grapple with decreased revenues from the 2008 global economic downturn (Organization for Economic Cooperation and Development [OECD], 2014). Within our Agreement, the organizing principle was transdisciplinarity, a concept within our final iteration discussed in seven separate clauses (Brock University and Ontario Ministry of Training, College and Universities, 2014, p. 3). As child and youth scholars we anticipated the opportunities to work towards common ground for our human rights research aimed at opening up the entrenched ‘tower of babble’ (Moore and Mitchell, 2009, p. 30; Mitchell and Moore, 2015) we find in Canada where young people’s voices in research partnerships are most often silently absorbed.
Brain Based Phonetic Reading Approaches

Reading and the Brain examines research, content, and utilizes simulation activities focusing on reading. Participants understand how the brain relates to second language acquisition and learning difficulties. The presentation gives an overview that includes learning disabilities, dyslexia, and centers on difficulties in reading. New insights and research pinpoint best approach to reading instruction, therapies and assessment. This presentation is designed to integrate the latest research, individual activities, group discussion, and practical applications.
The purpose of this study was to assess the importance of diversity as perceived by primary school educators enrolled in a teacher educator program in the Caribbean and to provide recommendations to expand multicultural practices in curriculum development activities. This study was also used to assess the importance of diversity as a component of teacher preparation programs. The survey instrument used in this study has been implemented in the Caribbean Region for a transnational comparison.
Abstract:

The Caribbean is filled with a diverse population of individuals from a variety of culturally significant backgrounds. Teaching professionals within the region bring their own cultural flavor to the learning environment in which they teach, which allows their own personal cultural baggage to take center stage.

Escalating diversity within the nation’s schools provide both opportunities and challenges (Banks, 2004); the same holds true within the Caribbean. World migration and trans-national economic linkages are bringing people throughout the world into increased contact, cultural interaction, and conflict within borders (Banks, 2004).

All teachers bring to the clad their own biases and stereotypical points of view specific to their culture; it is hoped that educators are able to recognize the diversity in their own beliefs as well as grow to become more culturally sensitive.

According to Jenkins (1997), multiculturalism stresses the importance of positive contribution of minority groups and a balanced portrayal of a variety of cultures around the world. However, multicultural education as promoted in universities and schools of education seek to close young people off into identities already ascribed to them (Stotsky, 1999).

The purpose of this study was to access the importance of diversity as it is perceived by primary school educators enrolled in a teacher educator program and to provide recommendations to expand multicultural practices in program planning.

Keywords: Diversity, multicultural education, cultural interactions, teacher diversity, ethnicity
INTRODUCTION

The need to create a cadre of teachers that are culturally sensitive is of utmost importance in the Caribbean. The Caribbean is filled with a diverse population of individuals from a variety of culturally significant backgrounds. The teaching professionals within the region bring their own cultural flavor to the learning environment in which they teach, which allows their own personal cultural baggage to play out.

Issues of race, culture, language, class, and religious diversity have deepened within the United States as a consequence of worldwide population movements and the magnetic pull of earning a better life (Banks, 2004). These same consequences are currently experienced in the Caribbean. The need to create a teaching force that is culturally sensitive is undeniable (Harding, 2005). According to the National Council for Accreditation of Teacher Education (NCATE, 2002) Standards for Professional Development, Standard IV Diversity, teacher candidates must develop proficiencies for working with students from diverse backgrounds; dispositions that respect and value differences, and skills for working in diverse settings (Harding, 2005). Many teacher educators have little time outside of their own culture to develop these proficiencies in a timely manner. The Ministries of Education and other professional organizations play a pivotal role in providing the continued educational development and growth needed to supplement educators throughout the Caribbean. However, in recent social and economic challenging times, educational budgets are geared more towards pressing issues in education, such as, access to education, in terms of who can afford it now that governments cannot afford to provide complete financial assistance. All teachers bring to class their own biases and stereotypical points of view specific to their culture; it is hoped that educators are able to recognize the diversity in their beliefs and become aware of their own beliefs, as well as grow to become more culturally sensitive.

The escalating diversity within the nation’s schools provides both opportunities and challenges (Banks, 2004; Smith, 2009). Diverse classrooms and schools make it possible to teach students from many different cultures and groups how to live together cooperatively and productively (Banks, 2004). However, racial intolerance and inequity are challenges that arise when people of diverse groups come together. Teachers need to acquire the awareness and skills needed to maximize the opportunities and minimize the challenges that diversity offers (Banks, 2004). Teacher education programs and other professional organizations assist teachers to attain the knowledge and behaviors needed to work effectively with students from diverse groups, as well as to help students from mainstream groups develop cross-cultural knowledge, values, and competencies (Banks, 2004).

Diversity in the Caribbean is increasingly reflected in various public and private primary, secondary, and tertiary level institutions throughout the Region. Consequently, in the midst of a noticeable degree of assimilation and acculturation, and in spite of efforts to ignore, belittle, or eliminate some ethnic differences, many citizens have strong feelings of ethnic identity (Trouillot, 1992). Ethnic and cultural diversity continues to permeate life in the Caribbean.

World migration and transnational economic linkages are bringing people throughout the region and the world into increased contact, cultural interaction, and conflict within the nation’s borders. The cultural, racial, ethnic, and religious diversity within the Caribbean provides an excellent context for students to acquire the multicultural understandings and skills necessary to function effectively in their local communities, the nation, and the world (Barth, 1969).
MULTICULTURAL EDUCATION MOVEMENT

According to Banks (1994), educators support multicultural education by creating classrooms that encourage all students from ethnic and cultural groups to develop their talents to the fullest rather than just addressing literacy. The multicultural education movement was and is designed to restructure educational institutions so that all students will acquire the knowledge, skills, and attitudes needed to function effectively in a culturally and ethnically diverse nation and world (Banks, 1993). Furthermore, multicultural education is not an ethnic or gender-specific movement. It is a movement designed to empower all students to become knowledgeable, caring, and active citizens, in a deeply troubled and ethnically polarized nation and world (Montgomery & Diehl, 1983).

According to Jenkins (1997), multiculturalism stresses the importance of positive contribution of minority groups and a balanced portrayal of a variety of cultures around the world. However, multicultural education as promoted in universities and schools of education seek to close young people off into identities already ascribed to them (Stotsky, 1999).

Multicultural education incorporates the idea that all students, regardless of their language, race, ethnicity, religion, social class, cultural background, and gender and sexual orientation, should have an equal opportunity to achieve in school (Banks, 2004).

The Teacher

According to Delpit (1988), the role of the teacher is emphasized as critical in connecting students. The teacher is critical to achieving multicultural understanding in the ecology of the classroom, the teacher is identified as the primary change agent; the source of influence that operates to increase multicultural understanding and acceptance (Delpit, 1988). School is acknowledged as one of the places where different cultures meet and where cultural difference may be negotiated or ignored and/or rejected (Igoa, 1995; Liston & Zeichner, 1996). It is a place where children’s home culture intersects with the dominant culture – referred to as the common culture and is typically the first public audience before which children bring the artifacts and stories of their cultures of origin (Grumet, 1988).

This study addresses the perceptions of multiculturalism and diversity as perceived by teachers within the Caribbean region with the understanding that “diversity” is not a topic that can be suitably trained, but rather something that must be shared and/or experienced.

A similar study was conducted through the National Education Association Student Program (NEA-SP) in 2006. However, the previous study was centered on the preparation and development of pre-service student teachers at various levels of completing their teacher education program. The current survey focuses on teachers within the Caribbean Region, both trained and untrained, currently in their Bachelor of Science Program in Educational Leadership and Management, Literacy, and Math.

Research Questions

Research questions were formulated for the study as follows:

1. Do educators believe that students from low-economic areas have the same opportunity for academic success as student in higher income areas?
2. Should multicultural education be an essential component of all educational programs?
3. Should teacher preparation programs include training related to students with disabilities?
4. Do educators believe that training regarding students' gender and sexual orientation biases have a significant effect on student learning outcomes?
5. Do educators believe that information regarding different religious beliefs have a significant effect on a successful teaching environment?
6. Do educators believe that learning about the second language acquisition have a significant effect on successful teaching?

METHOD

The Research Method

This research study used a descriptive design to collect data to answer specific research questions. Descriptive research depicts present-day conditions, settings, and events, and describes the current status of the topic of study (Charles, 1998; McMillan & Schumacher, 1997). This study also used action research that employed practical procedures to determine the extent of perceptions of multicultural education.

There were four key elements that were addressed in the design of the study: (1) the questions to investigate, (2) what data are relevant, (3) what data needs to be gathered, and (4) how best to analyze the results (Yin, 1994).

Survey Participants

In this study, the sample population consisted of 1,748 students enrolled in the Bachelor of Science Program in Educational Leadership and Management, Literacy, and Math. An introduction letter and survey link was sent to the university sponsored email accounts of students that were enrolled in courses offered in the Educational Leadership, Literacy, and Math programs offered in Semester I.

Instrumentation

The survey questionnaire was administered to 1,748 students. The instrument consisted of measures designed to assess the perceptions of multicultural education as perceived by teachers in the Caribbean. Gall, Borg, and Gall (1996) maintain that questionnaires allow the researcher to collect information that is not directly observable, including feelings, motivations, attitudes, accomplishments, and experiences of the participants. In addition, a well-designed questionnaire can be extremely useful in the collection of data from both closed and open-ended information from a population sample (Glesne, 1993).

Data Collection

Survey data was collected via SurveyMonkey®. All data analysis consisted of descriptive information and conservative statistical testing appropriate in meeting the level of measurement requirements. The survey was comprised of both nominal and ordinal level questions that documented the participant’s perceptions of multicultural education.
There were 12 nominal level questions that asked respondents their specific perceptions of diversity. There were also three (3) ordinal level questions that asked respondents if they considered themselves a minority and their understanding of diversity as it relates to the changing classroom environment. Forty (40) participants located throughout the Caribbean received an identical email informing them of the purpose of the survey and a link provided via SurveyMonkey® where the survey data was collected.

SURVEY RESULTS

In this study, data analysis is based on the 40 respondents. 90.0% were female and 30.0% between the ages of 25 through 30. In response to survey questions, 50.0% strongly believed that student in schools from low-income neighborhoods have the same ability to succeed as those in moderate to high-income neighborhoods. In regards to the belief that educators should learn strategies to deal with the effects of poverty on a child’s ability to succeed in the classroom, 92.5% strongly agree, while 71.8% believed that educators should recognize and understand the cultural values of students that they work with. 57.5% of the respondents strongly believed that educators should promote tolerance of different religious beliefs in their curriculum. However, when respondents were asked if educators should provide a multicultural curriculum for all students, 61.5% strongly believed and 12.8% somewhat disagreed. When asked if educators should promote gender equity in the curriculum and school environment, 80% strongly believed while 10% somewhat disagreed. When Educators were asked if they believe that educators should create a safe and unbiased learning environment for students of different sexual orientations, 64.1% strongly agreed and 7.7% strongly disagreed, while 2.6% had no opinion. An overwhelmingly 90% strongly believed that educators should learn strategies to make accommodations for students with mild to moderate disabilities, while 10% somewhat believed. When respondents were asked if educators should learn strategies to better work with English language learners, 75% strongly believed, while 25% somewhat believed. Respondents were asked if they believed that the teaching population of their country should reflect the demographics of the student population; 52.6% strongly believed and 2.6% strongly disagreed, as indicated in Table 1 (Appendix).

Of the 40 respondents, 97.4% indicated that the term "diversity" was more closely related to "ethnicity", as indicated in Table 2 (Appendix).

When respondents were asked if they believed that their studies prepared them to work with specific populations of students, an overwhelming 69.4% indicated they were prepared to work with multicultural, racially, and/or ethnically diverse student, as indicated in Table 3 (Appendix).

When asked if issues of Diversity should be addressed in all university programs, 67.6% agreed, while 2.5% strongly disagreed, as indicated in Table 4 (Appendix).

When respondents asked in which country they lived, the majority indicated they were from Trinidad and Tobago, as indicated in Table 5 (Appendix).

When asked about their current occupation, 45% indicated "other" while 30% indicated their occupation was that of a teacher, as indicated in Table 6 (Appendix).

Respondents were asked in opened-ended form, what the term “diversity” meant to them. The majority of respondents indicated that diversity means "difference" and includes interactions with persons from different backgrounds, religion, sexual orientation, cultural practice, gender,
and having to co-exist within a community or space of different culture, backgrounds, and ethnicities, free of discrimination or prejudice (See responses below).

- “Diversity means 'variety', which makes everything so appealing to a lot of individuals who have different preferences. This is why there should be variety in everything; because we live with different people whose way of life is always a unique way. This is why I think that this course should have been arranged for the needs of both full-time and part-time students. Instead, it is only meeting the needs of the full-time students.”

- “Diversity to me means 'difference'. Whatever makes each one of us different should be embraced by our education system.”

- “Diversity' is a term used to describe several differences existing within a particular place, topic, etc.”

- “It means an interaction with people of different socio-economic background, ethnicity, cultural practice, sexual orientation, gender, abilities, and religious beliefs, having to coexist in the same communities and work environment.”

- “It is about understanding and accepting that every individual is unique whether by race, religion, etc., and respecting those differences.”

- “People of all different race, class, and creed”

- “It means people of different culture, background, and ethnicity lives and unites as one without any discrimination or prejudice.”

- “Variance in nationalities and cultures”

Respondents were asked if they considered themselves a minority and if their status would impact their ability to teach all children. The majority of persons responded that they had no biases and were well-rounded enough to teach persons from various cultural backgrounds. Some of their responses are listed below:

- “I have no bias when it comes to education.”

- “I do not see myself as a minority because I am Black but perhaps because of my religion: Christian. However, I believe that I am well-rounded and read so I am able to reach children from various cultures and backgrounds.”

- “No; I believe this because I do not look at status when I am teaching as this is not an issue to me.”

- “I do consider myself a minority; this is so because there are others who think that just because they are teachers they are over-educated. However, my status will impact my ability to teach all children as I am a very positive and outgoing person. Also, I am very dedicated to my course of Early Childhood Development & Family Studies. Also, I love teaching children because it is my passion to teach pre-school children.”

- “No; I don't consider myself to be a minority because I believe that I possess certain ways, attitudes and attributes that others can look to as an example.”

- “I will use the word 'minority' to describe who I am. However, there are challenges and sometimes you would feel intimidated when it comes to the children because all you want to do is your best.”

- “I do not consider myself to be in the minority, but there are students who are. This means that I have to develop.”

- “Definitely not”
SUMMARY OF FINDINGS

Research Question #1

Research question #1 asked “Do educators believe that students in low-economic areas have the same opportunity for academic success as students in higher income areas?” The results of the survey tend to support the assertion purported in research question #1 as 50% of those surveyed strongly believed that students in low-economic areas have the same opportunity for academic success as students in higher income areas as opposed to 7.5% of those surveyed who strongly disagreed with this statement.

Research Question #2

Research question #2 asked “Do you believe that diversity issues should be addressed in all university programs?” The results of survey question #2 tend to support the assertion purported in research question #2 as 67.5% of respondents believe that diversity issues should be addressed in all university programs. This belief was affirmed.

Research Question #3

Research question #3 asked “Should teacher preparation programs include trainings related to students with disabilities?” The results of survey question #3 tend to support the assertion purported in research question #3 as 72% of respondents believe that all university programs should include trainings related to students with disabilities. This belief was affirmed.

Research Question #4

Research question #4 “Do educators believe that training regarding a student’s gender and sexual orientation biases have a significant effect on student learning outcomes?” The results of survey question #4 indicates that 64.1% of participants strongly supported the belief that training regarding a student’s gender and sexual orientation has a significant effect on student learning outcomes. It is important to note the 7.7% strongly disagreed while 2.6% had no opinion.

Research Question #5

Research question #5 asked "Do educators believe that information regarding different religious beliefs have a significant effect on a successful teaching environment?” The results of survey question #5 supports the belief that information regarding different religious beliefs have significant effect on a successful teaching environment as 57.7% strongly believed. This belief was affirmed.

Research Question #6

Research question #6 asked “Do educators believe that learning about the second language acquisition have a significant effect on successful teaching?” The results of survey
question #6 supports the belief as 75.0% of survey participants strongly believed that learning about the second language acquisition has a significant effect on successful teaching. This belief was affirmed.

CONCLUSION

Considering that the Caribbean is made up of many different countries and cultures, this survey focused specifically on the countries serviced by The University of the West Indies Open Campus, such as Antigua, Bahamas, Barbados, Belize, British Virgin Islands, Caymans, Dominica, Grenada, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent, Trinidad & Tobago, and Turks & Caicos.

The survey revealed that 45.0% of survey participants indicated that they were in occupations other than education. The survey also revealed that respondents strongly believe that students in low-income neighborhoods have the same ability to succeed as their counterparts in high-income neighborhoods. Respondents believe that educators should learn strategies to make accommodations for students with mild/moderate disabilities and to deal with the effects of poverty on a child’s ability to succeed in the classroom. Based on the overall responses, there is a strong belief that the topic of diversity should be included in all programs offered through the University. The topic of diversity is not something that can be taught; it is something that must be experienced.

RECOMMENDATIONS

To further investigate the perceptions of multicultural education of the participants, the study can be further developed by incorporating face-to-face interviews where participants may feel more comfortable in responding. There is a need to expand the study for further research into the true impact that diversity has on the educational system. Based on the finding of this study, it is recommended that multicultural education be embedded into curriculum of all programs.

REFERENCES


MERITS AND DEMERITS OF EMERGING TRENDS IN POSTGRADUATE SUPERVISION IN UGANDA’S HIGHER EDUCATION SECTOR

By

James Nkata\(^1\) and Gerald Kagambirwe Karyeija\(^2\)

Uganda Management Institute

The paper seeks to examine the merits and demerits of emerging trends in postgraduate supervision in Uganda’s Higher Education Institutions (HEIs). The paper relies heavily on qualitative methodologies; including a review of various reports, interviews with staff from the regulator, National Council for Higher Education (NCHE), interviews from supervisors, external examiners, postgraduate students and coordinators of research in HIE. The results are at two levels, first, we map out the emerging trends of supervision of graduate education in Uganda. The trends include intense usage of internet based supervision, team supervision, collective supervision, overloaded supervision, unqualified supervisors, uncommitted supervisors. Based on these typologies or emerging trends, we further investigated the merits and demerits of these supervisions trends. We got mixed results; some of these supervision trends are responding to the current situation of massification inclusion of marginal and technological innovation which upholds the essence of higher education research and supervision. On the other hand, we find that the trends are leading to bogus degrees, lukewarm graduates and the ultimate prize is wrinkled scholarship. The study concludes that there is need for a supervision revolution in HEI in order to come back to the first principles of crafting scholars and promoting critical and analytical thinkers.

Key words: Supervision, Postgraduate, Higher Education Institutions, Uganda

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1 Director General, Uganda Management Institute  
2 Associate Professor, Uganda Management Institute
I. INTRODUCTION

Higher Education Institutions (HEIs) in Uganda are very concerned about how to attract postgraduate students and how to ensure that they graduate in time with good degrees. The terrain of higher education is dynamic and a number of issues are affecting the supervision aspects, including, massive numbers, working class students, limited scholarships, increased pressure for outputs on lecturers, and too much workload. The quality of supervision is dependent on how both the supervisor and the supervisee appreciate their roles. Yet, postgraduate supervision is considered, by many, a very critical component of higher education, because of the major output, the research report.

Several scholars have explored this area of supervision. They have looked at issues of challenges of quality; the unique issues that are faced by distance learning students in supervision (Koffi Boku Quan-Baffour, 2008); experiences of doctoral students (Muriisa, 2015); co-supervision; and the prevailing approaches to supervision and supervision development among others (Elly.S.Grossman, 2015) (Lessing, 2002) (S Taylor, 2005); how doctoral students are supervised (Lee, 2008). This demonstrates that a lot has been done on studying postgraduate supervision. However, not much has been done on Uganda and the teaching and learning through postgraduate supervision is still not fully understood. But more importantly, there are some trends which have emerged in recent past, that need to be further understood and explained.

This paper therefore explores the experiences of students and the practices of supervisors in supervision. It highlights the emerging trends in supervision as seen by the students and the supervisors. The trends include intense usage of internet based supervision, team supervision, collective supervision, overloaded supervision, unqualified supervisors, uncommitted supervisors. Based on these emerging trends, we further investigated the merits and demerits of these supervisions trends. Conclusions are made, with a view of informing HEIs practices and policies that guide the supervision of graduate students.
II. LITERATURE REVIEW

A number of scholars have come up with what is considered good or effective supervision. It has been noted by Heath (2002), that the main objective is to ensure that candidates receive considerable and desirable support to successfully complete their thesis or dissertation. The other skills that have been identified include communication skills, supportive skills, general skills, specialist skills, empathy, genuineness, honesty, non-sexist and non-authoritarian attitudes and ability to adapt to individual supervisees (Aziz, 2014) (Gitte Wichmann-Hansen, July 2015) (Lessing, 2002) (Koffi Boku Quan-Baffour, 2008).

The task of the supervisor has furthermore been seen as ensuring that: the topic on which a candidate embarks does indeed present a problem; the candidate has a clear understanding of the field in which the problem occurs and of the problem itself; the candidate uses the correct methods to solve the problem and does an extended literature study of appropriate sources; and the problem is solved according to the requirements of the methods employed (Deist, 1990).

The practice of supervision does not significantly differ from what has been mentioned above. In a study on students' perceptions of their postgraduate supervision in the Faculty of Education, University of South Africa, it was noted that postgraduate students' expectations are not entirely met regarding some aspects of supervision (Lessing, 2002). Lessing and Schulz further determined that most students, especially at master's level, desire that supervisors refer them to other students or informed people in their research fields and to contact them frequently to alleviate feelings of isolation. However, doctoral students want the freedom of working relatively independently. Although according to (Spear, 2000), to supervise research students is a great privilege, providing inter alia a considerable effervescence to the academic environment of their host departments, and lifelong friendships between supervisors and supervisees, sometimes it is a source of conflict and frustration (Watts, 2010). So for supervisors to be successful, the findings of Ezebilo (2012:53) become helpful even for masters supervisors though they are for PhD supervisors. These include the notion that Supervisors should make themselves relatively accessible to students especially at the early stages of programme; Supervisors should be more transparent to students and should carry them along throughout the research; design and data collection as well as monitor the activities of the students to avoid them deviating from the research project plan; Supervisors should not serve as supervisor for many students at the same time to enable she
or he have considerable time for students; they should be aware that students differ. Some may need more guidance in their research project while others may need less; and they should be interested in the subject of the research.

The state of Higher Education in Uganda report of 2015 by the NCHE indicates that only 6 percent of young people in sub-Saharan Africa are enrolled in higher education institutions compared to the global average of 26 percent. The promising news is that universities in many African countries are experiencing a surge in their enrollment. Between 2000 and 2010, higher education enrollment more than doubled, increasing from 2.3 million to 5.2 million. The report also states that on average there are 50 percent more students per professor at African universities compared to the global average. The report further reveals that Private higher education is one of the fastest growing education sectors in Africa. In 2009, there were around 200 public universities and 468 private higher education institutions on the African continent. Comparatively, there are 1700 public universities and nearly 2500 private universities (4- and 2-year universities) in the U.S. alone. The report also reveals that in terms of academic staff, Uganda has PhD holders (251 Females and 845 males) and masters holders (1094 females and 2699 males); who are responsible for supervision of postgraduate students in the whole country. The worrying part is not the growth in student numbers enrolling for postgraduate studies but the disproportionate output of successful postgraduate students (Ganqa, 2012).

In order for this to happen, supervision has been done in a very traditional and predictable way. What is considered traditional have been largely doing face to face supervision, mostly by reading the hard copy of the dissertation, having one supervisor and few supervisees at a time, there were no postgraduate benchmarks in Uganda until 2015, it was considered a privilege, and not a resource allocation issue to supervise students. In sum, traditional graduate student supervision tended to be based on ‘charismatic authority’ where supervisors were selected by research students on the basis of their charisma as expert scholar-researcher. The traditional model of supervision can no longer work in the current context of a mass higher education system (Yeatman, 1995). Instead, a more systemic and managed approach to graduate supervision pedagogy is necessary (Sze, undated). But are the emerging trends a systematic and managed approach to graduate supervision? This is the question to answer. Very little has been written about the ways in which the emerging trends for supervision in Uganda have manifested themselves and the consequences therein. This paper seeks to cover that gap. The next section deals with the methodology used in this study.
III. METHODOLOGY

The research was undertaken based on interviews conducted amongst 18 postgraduate students from five HEIs, notably Uganda Management Institute, Islamic University in Uganda, Kampala International University, Makerere University Business School and Makerere University. Additionally, we also conducted interviews with ten supervisors, two from each of the mentioned HEI. A number of documents were also reviewed, including external examiners’ reports, minutes of viva voce examinations, and some departmental reports. Participation in some supervision meetings, viva voce and proposal defence also provided invaluable insights into the phenomena under investigation. The study was premised on a descriptive phenomenology perspective, whereby the researchers did not only rely on the experiential descriptions from interviews, literature and observations, but also from own personal experiences as students and supervisors. As such, data sources such as notes, reflective journals memos and informal interviews were visited in line with recommendations by (Groenewald, 2004).

IV. FINDINGS AND DISCUSSION

E – Supervision

Much as we in the era of the internet, there are many supervisors in the studied institutions who have not yet embraced the use of internet based supervision for a number of reasons. Interviews indicated that supervisors prefer to have hard copies because they are easy to read and have comments put in text, it encourages them to meet the students, and it helps them navigate the text by reading back and forth, allows to check for structural issues in the text, is healthier to the eyes and eases documentation of work done. However, as indicated by (Aziz, 2014) most of the graduate students believe that the online supervision should be used in the research because it enables them to ‘meet’ their supervisors.

In this study, one of the students who has been supervised online indicated that it worked for him well. He works with Gulu District Local Government, which is in the northern part of the country, over 350 Km away. His supervisor is based in Kampala. He had this to say:
“I have been getting comments from my supervisor. He replies within two weeks and in case you do not get a reply, he advises that you send him a reminder either by phone or by email. I have found it suitable for me who is far and cannot be able to do it face to face all the time. Having said that, I still get feedback on time, in some cases almost instantly; after about an hour. It saves time and money. It has forced me to learn other computer skills such as using track changes.”

The account above presents a number of issues, most of which are shared by the other respondents. First is the importance of feedback – there is the view that feedback is fast in some cases, second, it helps the students access the supervisors because with an email, you are almost certain that the document is with the recipient unlike when you drop it with the secretary or at the gate and hope that the supervisors will find it later. Third, the students also get to learn how to use the computer. It is not good for the students alone, even the supervisors intimated that they like it too. One of the participants to this study observed that given the numbers, the soft copy becomes easy to handle …”I can even respond to it when I have travelled or attending a boring Workshop…” This resonated with another who noted that “I use Skype and it makes me meet my students at the time of my convenience; even after working hours, during holidays and weekends. My colleagues would find it irregular for me to meet students during those times and in those spaces.” Meaning that the trend is catching on to use internet based modes like blogs, Skype, and email amongst others.

Other advantages given by the supervisors include, but are not limited to; having a clear record of the previous comments, and dates of receipt and reply; avoiding meeting students who may take a lot of their time; having a clear record of unattended to work - by marking the mails unread. All these point to the view that there are a number of merits to the e-supervision which is catching up in many circles, including helping remote supervisors to become effective. Remote supervisors here refer to those who are either part time or are in one way or another attached to the respective institutions, but are not full time faculty.

However, e-supervision is not fully embraced and we received mixed reactions from the respondents. Some of the respondents argue that this mode of supervision is increasing, and that although it has a number of positive aspects that the graduate students liked others felt that it dehumanises supervision. It denies the actors – supervisor and supervisee - facial expression, gestures, counselling and opportunity to get unambiguous feedback. In fact, one
of the supervisees said that in case she does not understand the comments, then it becomes disastrous because many supervisors will not allow you to ask on phone and instead will refer you to the comments and insist that they are actually very busy. As a consequence, students end up running to fellow students or sympathetic intellectuals for interpretation of the comments from the supervisor.

Another challenge that comes with e-supervision according to the respondents is that at times there is limited feedback. It was highlighted that some of the students in the interview were concerned about the lack of feedback from the instructors. The students expected to get immediate feedback but when they remind the supervisors, sometimes they get rude feedback. For instance, one of the doctoral students said:

“When I call my supervisor to remind him about feedback, he rudely tells me that he is aware that the work is supposed to be read. He goes on to remind me that I should know that he is also busy hustling with teaching and doing consultancy work. If you feel that I am not working well with you, please inform the coordinator to appoint another supervisor.”

Such description shows that supervisees consider the online supervision as a way of avoidance from the supervisors. It also demonstrates that supervision is loathed by some supervisors. They take it as a burden, which they would rather do away with, but incidentally cannot because it is a core aspect of their work. Thus, online supervisor is providing creative ways of postponing or avoiding doing work as and when it is desired.

Team Supervision

Team or group supervision here is in two categories. The first category is where a student is given a team of supervisors. It is referred to as team supervisor, co-supervision, joint supervision, supervision committee and many other names. It happens when it is a policy of the HEIs to ensure that the supervision of research degree students should involve at least two people. Usually one of the supervisors is an expert in the area, and preferably has been or is currently handling research projects in the field of study of interest to the supervisee. The second category is where a supervisors invites a group of students and meets them together or at once, especially on the early days of developing their proposals. The groups are said to be between two to ten students, depending on the supervisor, meeting place and the time.
We found out that team supervision is also loved and loathed almost in equal measure, especially by the students. Looking at the first category, the impression got from the supervisors is that it is a worthy idea, and helps fill the gaps when a colleague is less versed in the discipline, has travelled or even dies - described by Delamont et al (2004: 84) as ‘intellectual bereavement’. The student does not have to suffer and progress is easier than when one is dealing with one supervisor. The prospects for greater attention to accountability within academia has also been enhanced (Waghid, 2006). A seasoned supervisor who has graduated four PhDs and two hundred master’s students in a span of ten years opined that “I find team supervision so helpful because it diminishes the menace of ineffectiveness amongst supervisors. When that happens, the chance of having students graduate in time and with quality dissertations is high”. This view was shared by most of the respondents. However, the students cautioned that it can only work well when there is appropriate frequency of supervision and clear delineation of supervisors’ duties and responsibilities within the team (Watts, 2010).

The other common issue that was found is the synergy and energy that comes from cross and inter disciplinary support. Quite often students have topics that cut across disciplines, and having two supervisors or more with varying academic backgrounds. An example we encountered was where a supervisor whose academic background is in the social sciences, has been given MBA students to supervise. She found it very useful to be paired with MBA graduates as co-supervisors. Her experience illustrated that she has benefited a lot by having her colleague take the student through the conceptualisation of the key variables of the study especially in areas that are of a financial and business nature, while she leads the conceptualisation of topics and constructs dealing with human resources and behaviour. The outcome, in her view has been a better dissertation and minimal confliction and conflict.

Interestingly, the experience of the ‘social sciences supervisor’ discussed above, turns out to be the challenge of some other supervisors. A recent graduate fulminated thus after her viva voce:

“I have been torn apart by my supervisors. They rarely agree and as I try to please both, I ended up pleasing none. No wonder it took the proposal defence for me to get direction. Thanks to proposal defence, I would have not been able to get this far. How can two PhD holders fail to agree on
A number of questions thus confront us. First, whether critical thinking can be generated by the differing opinions of supervisors? Second, whether the candidate can survive the ‘ego war’ of the supervisors or may end up being a victim of the same? Third, whether hierarchy differentials in the supervisors, e.g. senior lecturer and lecturer, translates into hierarchy differentials in the quality of supervision. Several answers can be provided to these questions given differing experiences but what seems to be clear from the respondents is the idea that team supervision is also riddled with some demerits.

Moving on to the second category of group supervision which is a more recent trend, the students find it satisfying. A masters student narrated “we have to meet the supervisors when we are about five of us. I am shy and in the initial stages, most of my questions were asked by others or pre-empted by the supervisor. I found it so enriching.” The other advantage was mentioned by students from another institution. They were of the view that research methods classes were inadequate to enable students grasp research and be able to conduct a study successfully. Supervisors found it time saving, convenient, a replacement of tutorials which are long gone.

The downside of supervising many students at a time according to the insider’s views is that it was a theatre where they would have their ego bashed. They would look forward to the supervision meeting with “My supervisor would want me to discuss with the masters students and yet I am a PhD candidate. I felt that it was diminishing my ego which I did not like. He met us together and insisted that research is research.” Supervisors also noted that this kind of supervision may have challenges such as inability to enable critical thinking since you deny students the space to engage, challenge, argue and debate with the supervisor; it also enhances power distance where the supervisor is the guru and the students are attending another class; and the shy ones fail to get opportunity to discuss. Some supervisors are not flexible to welcome independent intellectual thought, while others provide insufficient criticism of work submitted and they lack interest in the theme of the research, ending up imposing a research methodology which is inappropriate for the research undertaken. These ideas are partially in line with the findings of (Gitte Wichmann-Hansen, July 2015), who found three major challenges experienced by the supervisors: (1) facilitating equal
participation within heterogeneous student groups, (2) balancing between providing answers and involving students, (3) identifying and developing the students’ analytical skills.

It is worth noting that these trends have now replaced the traditional supervision of one-on-one and face-to-face supervision. There is need to pay attention to the individual needs and group dynamics in order to have fruitful and useful supervision.

*Overloaded supervision*

The National Council for Higher Education of Uganda which regulates the higher education sector has clear guidelines in the postgraduate benchmarks on the workload for supervisors. It is stipulated that in order or one to supervise a masters students, amongst others, a supervisor shall be allocated no more than eight Master’s Degree students, and where the supervisor also has PhD students, the following alternatives shall apply

(1)No more than 8 Masters Degree students at any one time,

(2) No more than three doctoral students and two Masters Degree students at any one time,

(3) No more than two doctoral students and four Masters Degree students at any one time,

(4) No more than one doctoral student and six Masters Degree students at any one time.

It further stipulates that PhD supervisor shall be allocated no more than four doctoral students at any one time. Where the supervisor also has Master’s Degree students, the following alternatives shall apply:

(1) No more than three doctoral students and two Master’s Degree students at any one time,

(2) No more than two doctoral students and four Master’s Degree students at any one time,

(3) No more than one doctoral student and six Masters degree students at any one time,

(4) No more than 8 Master’s degree students at any one time (NCHE, 2015).

Conversely, the reality on the ground appears different. A number of post graduate supervisors in the visited institutions seem to be overloaded, and in many cases they also feel underpaid at the same time. Incidentally, the overload is also used as an explanation for supervisor frustration. A senior supervisor said that “The amount of work I have to do is immense. I have academic work – teaching, research, third mission. On top of that, I have to do consultancy work because it is a major output for me. I am head of department which weighs me down with administrative work. Leave alone my personal business.” Pressed further that most academics face the same, this particular supervisor said that
“Okay, leave the duties I have said aside. I have been allocated 60 students this year. I have graduated 200 students in four years I have been here. I teach work life balance, but I do not practice it. I am beginning to wonder whether I am in the right place and profession. I am asking God to give me clear answer. Doing this job is a very frustrating experience. But for now, I will stick in here because we are paid good money for supervision.”

It is not only the supervisors who feel the weight of the supervision. The students feel it too. Sometimes improper guidance is given to postgraduate participants which is manifested in, especially time delays, too little guidance and harsh criticism. This challenge is fuelled by supervisors’ study leaves, long leaves, going overseas, late return of chapters submitted a factor caused by overwhelming numbers of supervised students in relation to the supervisor. What was particular singled out was that the supervisors do not pay attention to conceptualisation, measurement of variables, appropriateness of methods and the interpretation of the statics (statistics?) were described by one of the respondents as ‘terrible’. This state of affairs foments a time bomb in the sector. If it is not arrested, a disaster is looming. The very essence of higher education will be negated.

Unqualified supervisors

According to (Muriisa, 2015), in Mbarara University of Science and Technology the few academic staff with PhDs do not have the required research skills to supervise the PhD. He argues that some of them are hardly experienced in research methodologies; they were trained in the same system with poor supervision and therefore may not adequately supervise a PhD to its completion. He adds that there is a misconception in the academia that when one has a PhD may supervise a PhD, but this is not the case. Some do not even have the skills to supervise a master’s degree anyway. The same applies to masters holders. There are many lecturers with masters’ degrees who are considered capable to supervise a master’s degree, but cannot.

Although the NCHE benchmarks suggest that only lecturers with relevant doctorates are expected to supervise Master’s Degree students, it was found out that it is common place to find supervisors who have irrelevant doctorates supervising students. In one of the institutions, a supervisor who had done history has been supervising MBA students. Her colleague had this to say:
“I always notice that he focuses on the structure of the dissertation. The numbering of pages, the English, the number of pages and other such technical issues but adds almost nothing to scholarship. Much as I do not have a PhD, I think that I make a better contribution to the students’ work. I have an MBA from one of the American Ivy league universities, Brown University”.

Whether Ivy league or not may not matter much, but supervising in an area where you have no expertise at all undermines scholarship. Some institutions try to mitigate this by pairing supervisors whereby one of them is a subject expert. Other than the relevant discipline, due to shortage of PhDs in the country, there are a number of master’s lectures supervising master’s dissertations as well. Postgraduate candidates are challenged with statistical data analysis packages (qualitative and quantitative) during data analysis and interpretation. This is attributed to the limited knowledge acquired from supervisors / lecturers. Due to the limited applicability of these skills, majority delay to finish their projects on time, while others hire experts at a high cost.

The other aspect that is often over-looked is national necessity that a supervisor shall not be a relative of the candidate or have any conflict of interest that might affect the quality of supervision. None of the respondents seemed to know that this was in the benchmarks and none of them has seen adherence to this requirement in their institution. So what happens when a supervisor is handling a relative? An enemy? A client in other business? A pastor of his church? A supplier of consultancy services? Conflicts of interest can be as obvious as the ones mentioned here. But they can as well be imperceptible; and if unrecognised and dealt with, they can easily damage the credibility and reputation of postgraduate supervision and its outputs. This calls for enhanced research supervision competencies that supervisors can gain, strengthen, and be measured as noted by Hyatt and Williams (2011 : 58-60).

V. CONCLUSIONS AND RECOMMENDATIONS

The paper has observed that supervisors and students seem to suggest that these trends are on the increase and are affecting the nature and quality of supervision. These trends may not be new globally, but the intensity and rapid adaptation in the study area, together with their popularity raises interest to interrogate into them. This paper has shown that the most
dominant emerging trends are E supervision, team supervision, overloaded supervision, and unqualified supervision. E supervision is all about using ICT to enhance the interaction between the supervisors and the supervisees. Team supervision relates to the team or group being either the supervisors or the supervisees, it can also be either formal or informal. Overloaded supervision concerns the volume of work and unqualified largely refers to non-adherence to best practices and national postgraduate benchmarks. Given this situation, we recommend thus;

With regard to E – supervision, it is suggested that in order to have this rend translate into quality dissertations and a fruitful supervision experience, graduate schools should come up with policies to guide online supervision. There is need to promote the idea of dynamic facilitation as propounded by (Koffi Boku Quan-Baffour, 2008). It suggests that supervisors create optimum conditions for research; allow students generate new forms of knowledge that can confirm but more importantly, interrogate existing perspectives; students to tolerate alternative perspectives from their peers and have good learning infrastructure such as libraries and regular modes of access to their e-resources. E –supervision can also be made more structured and clear provisions be provided for feedback management.

Team supervision can also be bettered at two levels. In the first case of having more than one supervisors superintending over one student. This should be promoted because it leads to better supervision in most cases. To begin with, there is need to have a feedback strategy from the supervisors and a conflict resolution mechanism. Roles and responsibilities between the main supervisors and the co-supervisor should be well spelt out. As much as possible, it is useful to have one of the supervisors as a subject expert, and have the team gender mainstreamed as well. Lastly, the supervisors should always create time to meet as supervisors and also to meet the student together in order to minimise divergences but promote synergies and convergences. These learning communities will be helpful to both the supervisors and the supervisees. On the other hand, where we have a collection of students being supervised by one person, should ensure that the supervisors provide space for full participation by the supervisees, engaging students, and developing the students’ analytical skills.

Concerning overloaded supervision, the main idea is to follow the protocols of NCHE, ensure that the supervisors were not overloaded. Come up with a ratio to determine the optimal distribution of work, and minimise overloads. Then as far as unqualified supervision is
concerned, it is the most dangerous aspect because it undermines the core of supervision. We suggest that the national benchmarks of NCHE are followed and the heads of postgraduate and research schools should ensure that as they allocate supervisors, they take care to ask whether there is a conflict of interest, establish if the supervisors – or at least one of the supervisors, if more than one – has the expertise in the discipline, and take all supervisors for training in postgraduate supervision pedagogy before allowing them to supervise. Thus, these findings will provide a basis for those in charge of managing the supervision process to enhance quality of postgraduate supervision.
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Illusions of Inclusion: University Policies that Perpetuate Exclusion of Students of Color

Topic area: Higher Education
Presentation format: Paper Session
Description: This Paper Session will include a discussion about the mechanism of diversity and inclusion policies that create climates of exclusion within higher education institutions. Analyzing the policies, practices and procedures of inclusion across three universities in the San Francisco Bay Area, the authors created a rubric to measure inclusion based on a three point set of criteria: equity, sustainability, and mission-alignment. The findings have implications for the interconnections of race and higher education policy.

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Abstract

The purpose of this paper is to explore the policies, practices and procedures of inclusion across three universities in the San Francisco Bay Area: Stanford University, the University of San Francisco, and the University of California at Berkeley. Using a rubric measuring inclusion based on a three point set of criteria (equity, sustainability, and mission-alignment), the authors analyzed four common statements in which inclusion policies for traditionally marginalized students and students of color are contained: university mission statement, diversity program mission statement, diversity statement, and values/goals statements. The analysis revealed that although the values/goals statements align with the missions of the three institutions analyzed, there is often incongruence between the diversity program mission and diversity statements and the missions of the universities. This tension reflects the practice of institutions of higher education to draft policies that reflect inclusion language for diverse populations without making the necessary structural changes that impact values, attitudes, and practices.
International Conference in Education

Title: Deconstructing the Tower of Babel - The Healing Power of Creating an Integrated Therapeutic World in Special Education Through Play and Music

Area: Special Education

Type of Presentation: Poster Session –Submission 101

Description: This presentation will highlight the neurodevelopmental benefits of utilizing collaborative interdisciplinary assessment and therapeutic intervention strategies through play and music for children in special education. It will propose the importance of revolutionizing clinical terminology across disciplines, keeping the integrity of each discipline, while piecing together the diagnostic puzzle in identifying children with special needs and proposing goals and objectives that can be implemented by the whole team.

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ABSTRACT:

Close your eyes.... if you were to take yourself on a journey into the future, could you envision a clinical setting where a child’s behavior, as well as his/her cognitive, language, and sensory motor abilities are all being evaluated by clinicians from different disciplines while the child is engaged in a variety of play activities? Could you imagine each clinician observing the child from their disciplinary lens and identifying therapeutic objectives using sophisticated yet common terminology understood and utilized by all, exemplified by, “One Language under WHO”. Could you view these clinicians who, in the past, were like the story, ”The blind men and an elephant”, now putting the pieces of a puzzle together to make a complete and accurate diagnosis with open and empathetic eyes, looking at the gestalt, all at the same time. Can all of this become a reality? Are special education professionals from a wide-range of disciplines ready for a paradigm shift, willing to work together, free from the undue fear of feeling professionally threatened by each other’s disciplines?

This presentation serves to highlight the benefits of interdisciplinary collaboration in special education in the areas of assessment and therapeutic intervention strategies through play. It will propose the importance of preserving the integrity of each discipline in special education, and functioning as a vital means to piece
together the diagnostic puzzle. Furthermore, in order to allow families to better understand and embrace their child, it will address the critical need to consider the child’s ecosystem. Additionally, by providing stimulating activities that promote maintenance and generalization of acquired skills through the healing power of naturalistic environments, successful intervention is indubitable. Lastly, in a collaborative effort to bring this visionary concept to life, The Autism Tree Project Foundation and the New Children’s Museum in San Diego, California and the Magical Bridge Playground in Palo Alto, California will be presented as realistic and plausible examples of potential sites for turning this introspective abstraction into expanding clinical methods in special education practices. Are you ready to explore this vision and embark on a conceivably incredible journey? If so, welcome to this clinically metamorphic expedition. The future may be closer than you think!
1. **Title of the submission**

   The Impact of Student Engagement, Institutional Environment, College Preparation, and Financial Support on the Persistence of Underrepresented Minority Students in Engineering at a Predominately White Institution: A Perspective from Students

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6. **Abstract**

   The persistence and attrition of underrepresented minority (URM) students in science, technology, engineering and mathematics (STEM) continues to remain a steadfast problem in education and the workforce. Research has shown that educators, administrators, and policy makers all play a vital role in shaping the future generation of STEM education, programs and the workforce, however, much of the research is deficient in providing URM student perceptions on how key factors such as student engagement, financial support, higher education preparation and institutional environment all impact their persistence in the STEM pipeline. This study employs qualitative research methods, semi-structured interviews and casual conversations to gain insight on common trends for the persistence of four (2 males, 2 females) URM students that were enrolled in a 2012 Summer Bridge Program at Mississippi State University (MSU), a predominately large white institution (PWI). Within this study, emphasis will be placed on the engineering branch of STEM. The research found that small diverse organizations such as National Society of Black Engineering (NSBE) and Increasing Minority Access to Graduate Education (IMAGE) along with financial support in the form of scholarships and alumni waivers, and pre-freshmen summer engineering programs such as Summer Bridge played a major role in URM student persistence in engineering disciplines.
The Impact of Student Engagement, Institutional Environment, College Preparation, and Financial Support on the Persistence of Underrepresented Minority Students in Engineering at a Predominately White Institution: A Perspective from Students

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Abstract

The persistence and attrition of underrepresented minority (URM) students in science, technology, engineering and mathematics (STEM) continues to remain a steadfast problem in education and the workforce. Research has shown that educators, administrators, and policy makers all play a vital role in shaping the future generation of STEM education, programs and the workforce, however, much of the research is deficient in providing URM student perceptions on how key factors such as student engagement, financial support, higher education preparation and institutional environment all impact their persistence in the STEM pipeline. This study employs qualitative research methods, semi-structured interviews and casual conversations to gain insight on common trends for the persistence of four (2 males, 2 females) URM students that were enrolled in a 2012 Summer Bridge Program at Mississippi State University (MSU), a predominately large white institution (PWI). Within this study, emphasis will be placed on the engineering branch of STEM. The research found that small diverse organizations such as National Society of Black Engineering (NSBE) and Increasing Minority Access to Graduate Education (IMAGE) along with financial support in the form of scholarships and alumni waivers, and pre-freshmen summer engineering programs such as Summer Bridge played a major role in URM student persistence in engineering disciplines.
Introduction

Many URM students in science, technology, engineering, and mathematics (STEM) majors are either dropping out of institutions of higher education or changing their majors by their sophomore year due to constraints such as rigorous course loads, institutional and academic barriers, as well as environmental factors. Such constraints induce an attrition of URM students at predominately white institutions (PWIs) in STEM. This phenomenon is quite overwhelming and frightening to minority students seeking to gain STEM degrees from PWIs post their secondary studies. Studies conducted on URM student populations in STEM disciplines at PWIs have consistently established that males dominate the interwoven fields in comparison to their female counterparts, and that URM student groups account for a minute percentage of all the students majoring in STEM disciplines at PWIs when quantifying retention. The National Science Foundation (NSF) has shown that minorities continue to remain stagnant in attaining degrees in general compared to the overall population as shown in Figure 1 and 2. In examining Figure 2 a little closer, many Black students are not obtaining degrees in engineering. For the U.S.’s economy to remain globally competitive, policy makers must make it imperative to expand the nation’s scientific, engineering, and technical workforce (Winston, et al., 2008).
Figure 1. Racial/ethnic distribution of S&E bachelor’s degrees: 2000 – 12. Obtained from the National Science Foundation’s Science Education Database.

Notes: S&E = Science and Engineering.
Figure 2. Racial/ethnic distribution of S&E bachelor’s degree recipients, by field: 2012. Obtained from National Science Foundation’s Science Education Database.

Upon transitioning from high school to college settings, underrepresented minority student groups in general have developed a lack of self-efficacy when it comes to selecting and persisting in engineering disciplines. This alarming transition is a direct result of challenging first year coursework, inadequate academic preparation, time management, study skills and personal accountability, which all affect the persistence of students in engineering disciplines at PWIs. Many PWI’s are currently trying to find methods to improve and enhance their engineering
pipelines in order to lessen the attrition rates of URM students seeking to pursue engineering degrees.

URM student groups are usually challenged by their white counterparts to constantly prove themselves, whether it is in the classroom or working collaboratively on a project. Research indicates that there is a lack of representation in engineering for URM student groups due to the fact that members of the affiliated group can foresee career barriers, while their counterparts foresee career opportunities (Winston et al., 2008). Foreseeing such barriers pose emotional and educational barriers to URM STEM groups. Although URM student groups are faced with many challenges, federal projections indicate that an increase in retention and graduation rates of STEM degrees for URM student groups will lead to a positive impact in the nation’s labor force demand for qualified workers (Winston et al., 2008). The ability to overcome many of the challenges and barriers depends upon the improvement of STEM “self-efficacy” within URM students.

This study provides a rich, detailed description of URM students and the factors that stimulated their interests in pursuing an engineering degree from a PWI. More specifically, this study will examine retention and identify key factors that have motivated and aided an URM student population that participated in a 2012 Summer Bridge Program at Mississippi State University with a population of approximately twenty thousand students.

**Background on Key Factors Identified within the literature**

**Student Engagement**

Present research on URM student groups has focused mainly on student retention and student involvement. Vincent Tinto’s (1993) theoretical base model and Alexander Astin’s Theory of Involvement will be used in this study in relation to student engagement. Tinto’s
theoretical concept of student retention is a model that identifies factors that influence students to either persist in or depart from a discipline. In this model, Tinto discuss three major sources of why students may not persist in a discipline: academic difficulties, the inability of individuals to resolve their educational and occupational goals, and their failure to become or remain incorporated in the intellectual and social life of the institution (Tinto, 1993).

According to Myers et al. (2012), “Astin’s Theory of Involvement highlights that students who engage in campus clubs, organizations, and dorm activities are more likely to persist at higher statistical rates when compared to students who are not engaged in such campus-based activities” (p.1). Several authors such as Museus & Liverman (2010), Tinto & Pusser (2006) have found that educators and administrators who set fostering and engaging environments for students usually observe high persistence rates. The authors also state that URM student groups in engineering are highly encouraged to interact more closely with faculty, peers, mentors and organizations both inside and outside of the minority arena to experience success. Student engagement plays a vital role in how well students continue through the engineering curriculum.

Tinto’s and Astin’s models are highly effective in fostering student retention across many disciplines. For the purpose of this study, both models will be used in relation to URM student groups, particularly, African Americans majoring in engineering at a PWI.

**Financial Support**

Students make decisions whether to continue their education beyond a high school diploma by considering the costs and benefits of obtaining a degree in engineering. If students believe that pursuing a bachelor’s degree in engineering will be beneficial in five to six years from now, they more likely will be motivated to persist throughout their studies in engineering.
When financial resources become the underlying factor in choosing to pursue an engineering degree, students must identify what is more important to them and their future. Hurtado et al. (2007, as cited in Slovacek et al., 2011) found that, “underrepresented minority students are frequently impacted by financial and family pressures, and are more likely to become concerned with the ability to finance their college education” (p. 6). In a large PWI in northern Mississippi, scholarships for first year URM students are awarded based upon students’ performance on ACT and/or SAT test scores and high school GPA’s.

Inadequate financial support is one of the most outstanding factors for URM students. Of course this plays a major role in whether a student will persist from year to year in engineering and other STEM related disciplines. With increasing tuition cost, cost of attendance, and student loan financial aid packages, it is unlikely that threats to URM student groups’ ability to pay will decrease (ASHE, 2011).

**Institutional Environment**

In addition to funding opportunities, researchers note the importance of the institutional environmental factors and programs that are geared toward retaining students. When URM student groups step outside of their comfort zone and are placed in a dissimilar environment, relating to the new environment can pose a challenge, especially when coming from a predominately Black high school and transitioning to a PWI. The environment and culture of PWI’s as well as the many engineering departments create challenges for URM students. One aspect of the environment that can affect URM student groups negatively is the individualistic and competitive environment of classes (ASHE, 2011). Courses such as general physics, general chemistry, and calculus eliminate unprepared students from persisting in engineering disciplines (ASHE, 2011).
Pre-College Preparation

One relevant factor that hinders URM students’ success in Engineering is their inadequate levels of academic preparation during their primary and secondary educational years. Success in engineering is based on adequate academic preparation for college level work within the discipline, more specifically mathematics and science courses, which are deemed most important in Engineering. According to ASHE (2011), eight factors in K–12 contribute to the inadequate academic preparation of URM students in Engineering. The factors are: “(1) school district funding disparities, (2) trailing into remedial courses, (3) underrepresentation in Advanced Placement courses, (4) unqualified teachers, (5) low teacher expectations, (6) stereotype threat, (7) oppositional culture, and (8) premature departure from high school” (p. 29).

Upon entering college, many students often choose to pursue STEM disciplines, however, a large portion of URM students leave the field before the duration of the second year (Griffith, 2010). This is perplexing, because student interest is present, but the commitment for URM student groups to persist is not; therefore, the trend of underrepresentation continues. Previous research suggests that college preparation and other educational experiences affect these decisions (Griffith, 2010). It is important to identify what these experiences are so that measures can be taken to replicate success for URM student groups in engineering. College experiences, college environments and family background characteristics in regards to persistence, all play a significant role in the ambitions of a student to persist in engineering. The idea of support for URM students is a driving mechanism for pertaining students in engineering.

Nowadays, to get early preparation for college, many URM senior high school students who are seeking to obtain an engineering degree from a PWI, usually participate in a Summer Bridge program experience before entering into their freshmen semester. The Summer Bridge
program is designed to help incoming minority freshman students become more acclimated with the institutional culture as well as expose them to courses within STEM disciplines hosted by university faculty, staff, graduate and undergraduate students. In an article, Slovacek et al. (2011) stated, “The Summer Bridge component for incoming freshman was found to have substantial impact on a student’s academic performance” (p.27).

**Methodology**

The purpose of this study was to identify factors that influence URM student groups to persist in engineering discipline at a large PWI in Mississippi. This study used a qualitative approach to identify key factors attributed to URM groups’ persistence in engineering. Three research questions were used to guide the interview discussions done within this study:

1. What factors influenced the URM students to persist in an engineering discipline at large PWI in Mississippi?
2. How did academic preparation, financial assistance, and support groups influence URM student groups decisions to remain in engineering at a large PWI in Mississippi?
3. What academic and social factors were attributed to the retention of URM students in engineering at a large PWI in Mississippi?

Transcripts made from the audiotape interviews were checked for accuracy against the original recordings.

**Participants**

The four participants selected for this study were all African Americans, two males and two females. All participants were students in the 2012 Summer Bridge incoming freshmen group. Summer Bridge exposed the URM students to the institutional environment and gave
them the opportunity to take real college course work such as general physics, chemistry and computer programming. Each participant was given an alias to protect their identity. For the purpose of this study, the participants are referred to as “Debra”, “Patsy”, “Aaron”, and “Cade.”

Debra, Patsy, and Aaron went to large high schools located in the city while Cade went to a very small school located in rural Mississippi. Mississippi State University is a large research institution in the southeastern region of Mississippi; it is a PWI with a total population of approximately 20,000 students enrolled. Demographics and attributes of the URM student participants are listed in Table 1.

Table 1. URM student demographics and attributes.

<table>
<thead>
<tr>
<th>URM Student</th>
<th>Gender</th>
<th>Major</th>
<th>High School</th>
<th>College Preparation/Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debra</td>
<td>Female</td>
<td>Aerospace Engineering</td>
<td>Attended 6A (2100+ students) high school located in South East Mississippi. ACT score</td>
<td>Excelled in academics and athletics.</td>
</tr>
<tr>
<td>Patsy</td>
<td>Female</td>
<td>Industrial Engineering</td>
<td>Attended 5A (1060 – 2099 students) high school located in South Georgia. ACT score</td>
<td>Possessed a strong background in mathematics.</td>
</tr>
<tr>
<td>Aaron</td>
<td>Male</td>
<td>Aerospace Engineering</td>
<td>Attended 5A high school located in south Georgia. ACT score</td>
<td>Teachers were great and mentors sparked an interest in him to pursue an engineering degree.</td>
</tr>
<tr>
<td>Cade</td>
<td>Male</td>
<td>Mechanical Engineering</td>
<td>Attended 1A high school located in North Mississippi. ACT score</td>
<td>Excelled in athletics and academics.</td>
</tr>
</tbody>
</table>

**Parental Influence**

Making the transition from high school to college can be overwhelming for students that rely on their parents to make their decisions. Each participant had a parent or grandparent that influenced his or her decision to attend Mississippi State University and major in engineering. Neither one of Debra or Cade’s parents or grandparents attended college, however, they strongly urged Debra and Cade to pursue engineering for it would provide them with a lucrative career.
path. Cade stated, “Both of my grandparents were very influential and played a major role in my high school and college decisions” Cade grandparents allowed him to participant in preview days hosted by the university. Cade also participated in an honors study abroad program during his senior year in high school. Debra parents were very engaged during her junior year of high school they allowed her to participant in a Science and Engineering Summer Bridge Program at a local university near their home. Patsy and Aaron, both had parents that were college graduates. Their parents were also influential and made a major impact on their collegiate decisions. Both of Aaron’s parents earned their accounting degrees from the same institution. Patsy father attended law school and would often take her to mock trails.

**Institutional programs and environment**

At Mississippi State University, student organizations are very popular. Each engineering discipline has an affiliated engineering organizations at the local, regional and national levels. For example, aerospace engineering is affiliated with the American Institute of Aeronautics and Astronautics (AIAA), and Mechanical Engineering is affiliated with the American Society of Mechanical Engineers (ASME). However, at Mississippi State University there are also other student organizations that are geared toward assisting underrepresented student populations. The interviewees all mentioned NSBE and IMAGE, two local student organizations at Mississippi State University that assist URM student groups throughout their engineering studies.

All of the students stated that NSBE and IMAGE provided them with upper class mentors, which made navigating the engineering curricula less frustrating. For instance, Debra stated that having a mentor has been crucial to her success in engineering. Her mentor has provided her with tips on what classes to take, what teachers to avoid, and how to be successful in the field as an African American female in aerospace engineering. Free tutoring provided
through the NSBE and IMAGE organizations by other URM students in various STEM subjects has also played a major role in helping the URM students in this study to persist in engineering. Several students have stated that without the tutoring program in place, they would not have progressed engineering. The students also mentioned that the talks and panels provided by NSBE and IMAGE from engineering faculty, researchers and engineers within and outside of Mississippi State University has helped them to find purpose in seeking an engineering degree. Aside from exposure to several academic and industry leaders, the students mentioned the multiple opportunities they were given to apply for co-ops and internships just from being involved in the organizations.

The impact of academic preparation, financial assistance, and support groups on URM persistence at a PWI

Academic Preparation

For some participants, choosing to major in engineering was a challenge within itself. While in high school, Aaron did not have to study or take notes. He could easily sit in class and retain information. However, Debra, Patsy and Cade took notes, perhaps Debra would re-write her notes in outline form, while Patsy and Cade would re-read their notes several times until they felt comfortable with the information. Each participant had their own unique approach to studying. Even though Debra, Patsy, and Cade took notes they were all over night crammers. Several similarities were found among each participant when asked about their study habits. Debra stated, “Beforehand it was not a habit. I would study when I absolutely needed too or when I did not know the material from the lecture at all.” Likewise Patsy stated, “I find myself doing more memorization versus studying.” It was found that many students mentioned memorization as a common theme throughout each of their interviews.
Financial Assistance

Preparing for college can be a burden for both parents and students. While in middle and high school some students’ dream of becoming doctors, lawyers, engineers, or even professors; however, without obtaining a college education these things are impossible. The most challenging question parents and students are faced with are “How much will college costs?” and “Can we afford those costs?” The participants noted the importance of receiving scholarships and application waivers. Patsy was a little overwhelmed because she did not receive any scholarships to offset the cost of tuition. Patsy had to take out student loans and her parents were left to pay the remainder of her tuition so that she could attend Mississippi State University.

When Patsy was asked how financial support influenced her decision to attend Mississippi State University she stated, “At first it hindered my decision to attend Mississippi State University because I did not want my parents paying any money, but I recalled when I was little, my dad had always told me that if you don’t get a scholarship and it is a school you really want to go to, I will pay your way in order for you to be a success and achieve your dreams and goals.”

Debra, Aaron, and Cade admitted that scholarship opportunities influenced their decisions profoundly, both to attend and major in engineering at Mississippi State University. While Patsy had chosen Mississippi State University because it was an institution out of the state of Georgia but close enough to make it back home in a reasonable time-frame during academic breaks and that the school was part of the South Eastern Conference. Patsy also mentioned that she wanted to graduate from a large state institution with a good engineering program post her high school studies.

Due to Debra’s outstanding achievement in high school, she received several full scholarships to other institutions in the state of Mississippi, however, most of the schools did not
have the aerospace engineering major she was seeking. Cade also received other scholarship offers, however, he was attracted more to Mississippi State University because of the environment, football games, and the dorms. Aaron on the other hand received the alumni waiver to assist in covering the cost of his tuition. Having financial stability and support played a pivotal role in the four participant’s choice of attending Mississippi State University and majoring in engineering.

Support Groups

From this study, several similarities between all four participants were revealed. Each participant stated that having support groups consisting of parents, mentors, and peers has had a positive impact on their persistence in engineering. Engineers usually collaborate with one another when working on projects and when trying to solve problems. Patsy noted that her parents and her NSBE, IMAGE and study support groups are her major sources of motivation to continue on persisting in engineering. In response to having support groups, the four participants believed that being involved in support groups has helped to enhance their self-efficacies, study habits, and networking opportunities. Debra stated, “It’s a great bond between the 2012 Summer Bridge cohorts and no one wants to be that student that got left behind or did not make it in engineering.” Having a strong and solid support system along with being actively involved in the learning process can make the difference in whether a student regardless of race or socioeconomic status complete the engineering degree program or not.

Summer Bridge

All four participants in this study participated in the 2012 Mississippi State University Summer Bridge Program. The interviewees were similar in that they all mentioned that the program improved their study skills, time management abilities, and provided them with insights
on how to be successful in engineering. In high school, three out of the four participants did not have to study or have a routine for preparing for classes. Summer Bridge not only exposed students to the institutional environment, campus courses, faculty and researchers but required URM students to attend a three hour mandatory structured study hall Sunday through Thursday during the summer of 2012. For Aaron, the summer bridge requirements were a new concept for him due to his lack of taking notes and studying while in high school. Aaron stated, “Summer Bridge was a great experience. I was able to work alongside my cohorts, learn new ideas, theories and concepts, and most of all, how to be a success in engineering. I gained study tips, and developed better study habits.” Summer Bridge provided the four participants lifelong learning skills. Patsy reported that the Summer Bridge Program had a positive influence on her and that it taught her how to manage her time effectively. She noted that, “Summer Bridge helps shape and mold you into becoming a better and more productive student upon entering college your freshmen year. It helps you to gain a better insight and outlook of what is going on around you.”

**Student Engagement**

After examining how the four participants were engaged during their high school years, it was noted that Debra and Cade were highly engaged in academic programs during the full academic year including the summer. Debra stated that being a part of Mu Alpha Theta, a math club that competed in math and science competitions at local universities made her feel more comfortable with mathematics. She also participated in a Summer Bridge Program at during her junior year of high school. Cade reported his use of computer engineering techniques to develop a web page for his local community, while attending high school. In addition, to creating this web site he participated in a study abroad research program in Australia. He also participated in a
summer engineering camp at North University. In contrast, Patsy and Aaron did not participate in any summer programs or any engineering programs throughout their high school years. One unique characteristic of all four participants was their involvement in athletics and leadership positions held during high school.

During Debra’s collegiate years, she participated in NASA’s student competition as an intern in Washington DC, studied abroad during her sophomore year, and served in leadership roles for both IMAGE and NSBE. Patsy’s collegiate experience has been very challenging due to introductory courses such as physics, calculus, and chemistry. Although Patsy continues to face challenges within engineering curricula, she is still persisting as a junior. Aaron is still persisting as a junior in engineering, however, he has noted that the classes are quite challenging and overwhelming. Cade has been very active on campus. He currently holds leadership roles in several student organizations such as the Men of Excellence, NSBE, and IMAGE. Cade also noted that the engineering curriculum is quite overwhelming at times and that he wishes instructors do a better job of instructing the course material.

**Student Interest**

Each participant expressed an interest in math. Debra reported an interest in applied math and science because of its relevance to engineering. All engineering students must complete Calculus I-IV, Chemistry I, Chemistry II as well as Physics I & II. A strong mathematical background is key to completing most engineering prerequisite courses. A students’ passion for a subject can vary depending on a number of factors. In this case the data revealed that the four participant’s high school math teachers influenced them in some way. Cade reported that his math teachers in high school were challenging and made learning math very interesting to him. His teachers used different forms of technology that allowed for interaction among the students.
Cade mentioned that his math teachers made the all of the students compete with other schools using the promethean board. When Aaron was in middle school, he stated that math seemed very easy to him, and mentioned as the years went by, math became more and more complex. Despite the complexity, he mentioned that his love for math continued to grow. Aaron also mentioned that having great math teachers that explained different math concepts in depth, made learning math more meaningful. Patsy stated that math “gets her brain going” because it allows her to keep busy mentally. Her least favorite subjects were reading and English.

Having a career in engineering can lead to a financially stable lifestyle. Each participant expressed a profound interest in the starting salary for engineers. When searching for a career, Debra browsed the internet for jobs, where she found Engineering to be among the top 10 growing job fields and offered a very competitive starting salary. She stated, “I want to live comfortable. I wanting something interesting and money did play a major factor in my final decision.”

**Student preparation and college readiness**

Elementary, middle, and high schools each have curriculums that they are required to follow. The curriculum varies from state to state; however, some high schools do offer advance courses also known as AP (advanced placement) or IB (international baccalaureate) courses. The notion behind advance courses is that they prepare students for college as well as provide for a more challenging lectures, lesson plans, homework and tests.

Each participant took AP/IB courses during their high school years. More specifically, this study revealed that even though the students took these AP/IB courses, they felt somewhat underprepared before they entered college. Debra reported that her school IB program was very challenging and the courses were rigorous. She took eight IB courses her senior year and yet she
felt unprepared for college. Among the eight courses she was mostly interested in the math and science courses, Debra took a mathematical statistics course which was not a preparatory class for the Calculus class she took in college. Although she scored high enough on the ACT to be placed in Calculus I, she stated that the Summer Bridge Program prepped her more than the IB math course taken in high school. When asked “How well did you do in your Calculus I class,” she explained how grateful she was for attending Summer Bridge and taking Pre-Calculus. Debra reported that over the summer she was able to learn different trigonometry functions that were used in Calculus I. Patsy and Cade took AP Algebra and AP Trigonometry while in high school, however when asked how well did they do in their college Trigonometry course, their responses were “good”. They both said that the College Algebra class they had taken in Summer Bridge played a tremendous role in their preparation for Trigonometry.

None of the four participants took Chemistry or Physics courses while in high school. Aaron reported that by not taking these classes in high school was a huge disadvantage for him since he had decided to major in aerospace engineering. Debra took AP Biology, Patsy took AP Environmental Science while Cade had taken General Science in high school. Although each participant took an AP/IB course, they felt no different than the students who had not taken AP/IB courses in high school.

Conclusions and Implications

This study examined four URM engineering students who participated in Mississippi State University 2012 Summer Bridge Program. The study revealed that the Summer Bridge Program served as a positive stimulus for preparing students for their first year of college. More specifically, these findings provide empirical data support to Vincent Tinto’s theory of student retention. The
Summer Bridge Program helped participants improve their study skills, time management, and improved their abilities to become well-rounded engineering students.

The value of financial support, student engagement, and mentorship were all major factors identified within this study that attributed to student interest and persistence in engineering at a large PWI. In addition, small diversity organizations such as NSBE and IMAGE provided URM students with mentorship, tutoring, networking and potential co-op and internships. A concept map of the factors are shown in Figure 3. It was also revealed that AP/IB high school courses did not have an impact on students to persist in engineering. This study provides insight to university administrators and STEM researchers on URM student group persistence from primary sources.

This study was limited to only African American students who participated in the 2012 Summer Bridge Program; however, future research should include representation of other underrepresented students groups (Latinos/Hispanics, and Native Americans etc.). Expanding the range of ethnic groups will give more insight to understand if findings are consistent with other underrepresented groups. This study should also be expanded to understand what factors influence URM students to pursue a degree in engineering and the factors that impacted their departure from the discipline.
Figure 3. Concept map of factors explored in this study.
References


The Comments We Make, the Feedback They Take

Balkun Abstract

Students need to trust their classroom teachers and advisers in order to maximize learning and communication. Wise criticism (Yeager et al, 2011) tells us that minority students do not trust comments written on papers and trust must be established. Additional research reminds us that when trust comes first, learning and better relationships follow. Changing both our feedback on written work coupled with specific best practices in the classroom and in the advisor/advisee meeting help to establish rich connections. This workshop will provide hands-on practice with “commenting,” as well as sound research on trust.

Valerie A. Balkun

Johnson & Wales University
This study aims to develop DVD teaching material for clinical nursing English conversation and investigate its effect.

Though the world is becoming more and more internationalized, there are a large number of Japanese people who find it hard to speak English. Also in medical facilities, there are a lot of nurses who have difficulty in speaking English to patients from abroad.

The author is developing DVD teaching material for clinical nursing English conversation for Japanese nursing students in university in order for future nurses to communicate successfully with the growing number of foreigners entering Japan. DVD teaching material focuses on improving students’ ability of English conversation and providing students with knowledge regarding technical terms.

The author uses DVD teaching material in the English class and investigates its effect. Two different groups are examined: one group is with DVD teaching material and the other is without it. The results show that DVD teaching material helps the students to recognize the necessity of clinical nursing English conversation and non-verbal communication tools. Moreover, it is found that it contributes to enhance their interest and eagerness to learn clinical nursing English conversation.

Therefore, DVD teaching material for clinical nursing English conversation can be said to be effective in improving English education for nursing students in Japan.
Abstract

This study examines the experiences of two Black South African women within educational sectors beyond the classroom capacity during my time spent in South Africa as a temporary student during the summer of 2014 exploring education and social reform South Africa under the instruction of Dr. Teboho Moja, New York University. This case study lifted the voices of both Black South African women as they made sense of bell hooks' concept "talking back" the liberated voice (hooks, Talking back: thinking feminist, thinking black). However, this study utilizes hooks' framework on feminism and Blackness to frame how Black women can rightfully claim their voices in predominantly white sectors. In predominantly white sectors, Black women can create their own spaces and position themselves to "talk back". The results of this study demonstrate how these women conceptualize using their voice to create platforms for transformative education and social justice for themselves and students and offer ways to help subjects of the study to break free in tangible ways from the social, psychological and academic sources of their victimology or oppression.

Introduction

South Africa in comparison to America’s many black reform movements also sought and struggled to seek a better delivery system for students of color, particularly, black students. However, one must remember during apartheid the the struggle was not for domination, but for justice within various systems created by non POC. Post apartheid moving into the new democracy established in South Africa has greatly presented many South Africans with the
opportunity to be more effective in the context of revolutionary reform. Though, a struggle still persisting is evident. Historically, in America education and social reform seemed to be introduced by esteemed African Americans who believed in African American children wholeheartedly. As time progressed we began to see many influential black leaders such as WEB DuBois and Booker T. Washington begin to create spaces, where, they too, in a sense practiced bell hooks act, talking back--the liberated voice. These spaces were inclusive and a bit much of a structure male domination. Which silenced the Black woman voice to intervene actively and effectively bring about education and social reform for students of color. Education and social reform in the black community (African Diaspora) give those a part of the movement to be innovative and resilience. However, as a black woman, black professional educator, I have observed the experiences and challenges of Black women who work within educational institutions who can create spaces where their voices can be amplified as evidence of what it means to "talk back--the liberated" voice. All in which prompted me to examine how Black South African women might do the same; ultimately, promoting self awareness.

**Research Question**

Past research questions:

What are practices and conditions amongst Black women within educational spaces that will enable them to practice bell hooks act *talking back* in order to effectively bring education and social reform for students of color in Oakland?

What are the practices and conditions amongst Black South African women (teachers, administrators, professors, artist, etc) positioning themselves to enact bell hooks concept, “talking back” within educational sectors to create platforms for transformative education and social justice for Black South African students?
Present Research Question:

What are the practices and conditions amongst Black women of the African Diaspora within educational sectors and beyond practicing bell hooks notion, talking back to create transformative education and social justice for Black students and Black women?

Terms and Definitions

This research reflectively explores how Black South African women might create spaces within places not constructed to serve them to practice bell hooks act, talking back- the liberated voice, bringing about education and social transformation for students in South Africa. However, one must consider, because this research project was conducted in South Africa for a short period of time, the terms I have decided to use to shape this research was not broadly familiar in comparison to how African American women in the United States make importance of it. Therefore, language played a major role in defining terms in light of Black South African women who are professionals amongst the elite.

The term “talking back” is defined as follows: talking back, is the expression of the Black woman movement from object to subject--the liberated voice (hooks, talking back). An act of freedom which ultimately give lead way to Black women to rightfully claim her voice in predominantly white institutions etc. We all know space, “physically,” is what one may define as a place of dwelling (i.e. home, school, or office building, etc). Though, it also acts as an emotional or psychological state of mind which produces the notion of a sense of belonging. The concept of space used in this case study reflects the experiences of Black women in educational institutions associated with a shared community or support system specifically serving Black women physical, mental, and emotional wants and sense of belonging. Space by definition, correlated, to the research is best defined by Professor Karen Sereferu notion space dictating
meaning; “space dictates meaning. What enters into that space is dictated by the space or can change the meaning of the space.” Space in educational institutions in regards to the Black women is her physical, mental, and emotional components that defines her space.

Description of Research

I decided to conduct a small case study (case method approach) in the period of a month to learn the everyday meanings and sources of agency of Black South African women. I followed two Black South African women working in South African education institutions. My fieldwork consisted of interviewing, volunteering/participant observation within spaces at the University of Pretoria. Each woman was selected because of their credibility. Prior to contacting each woman I was connected to them through a visit to the department Student Affairs at the University of Pretoria.

A case study (case method) was the best approach because it allowed me to explore beyond the four walls of the institution. This approach opened the door for me to gain insight into the lives of each woman personally. By conducting this research as a case study I was able to collect an array of data ultimately serve as data to inform forthcoming research.

Argument

The conditions within South Africa’s educational institutions that suggest Black women are not fully supported are made apparent through Black South African women past and present narratives. These suggestions stem from South Africa’s historical and deficit narrative of Black women in educational institutions deeply rooted in South Africa and previous followings and studies highlighting Black South African women's narratives in South Africa educational and social spaces.

Findings - Conditions and Practices
We are actively committed to struggling against racial, sexual, heterosexual, and class oppression, and see as our particular task the development of integrated analysis and practice based upon the fact that the major systems of oppression are interlocking (Betsch and Guy-Sheftall, Gender Talk). The major systems within educational settings encompasses what Black women (women of the African diaspora) for the past forty plus years has been struggling against. In Oakland Public Schools and Oakland educational settings, Black women who are ranked or amongst the elite deal with overt racism, microaggressions, and the challenge of having to illustrate to their predominantly white students, the relation of whiteness to her blackness as a woman in her respected space of teaching or working. While in South Africa, Black South African women who are amongst the elite deal with covert and overt racism, sexism, and conformity (assimilation verse association). And while the notion of bell hooks act, talking back serves as the premises to this research; each woman I spoke with introduced a new phenomenon called, “talking in” because most expressed each space they were in was not a place to establish platforms utilizing bell hooks notion, talking back - the liberated voice. This new phenomenon reflects the conditions and practices of the women tracked.

**General Conditions and Practices of Black South African Women**

The discourse of leadership in South Africa educationally and socially is a phenomenon in the black feminist context. I say this because education in South Africa has been going through a transition for the past 15 years (The National Report on Development of Education). This transition facing serious objective difficulties which have presented great challenges to meeting the high expectations of the population - especially of the poor and disadvantaged (The National Report on Development of Education). One of the main observations I made while a participant observant visiting the many education and social sites where the dynamics of
leadership; is distributed, who is in leadership, and how it ultimately plays a vital role in creating platforms of transformation where the inclusivity of women, Black South African women is represented. These dynamics of leadership intersects how South Africa is striving towards an inclusive education system. *The National Report on Development of Education* stresses, how inclusivity is one of the basic principles of South African education system. And how it’s approach is needed in order to meet the requirements of the constitution by eliminating injustices within the system. Leadership in terms of Black South African women within educational and (social) institutions is prevalent, however, leadership is dependent upon her stance. Her - the woman stance is usually driven by the people - male ruling (domination) and influence. Therefore, diminishing her voice within a space of enablement. -- Illustrating the lack of inclusivity within education and social spaces. An inclusive education for all is the main principle. However, not strongly demonstrated amongst the elite equally.

**Dr. Nkatha Murguni Conditions and Practices**

During my time as a participant observant in a Human Rights seminar (course) at the University of Pretoria - Dr. Nkatha Murguni an Ethiopian woman, advocate for human rights, specifically child rights, experienced law researcher, and currently a professor at Addis Ababa University stance as a woman in leadership shined a light upon Patricia Hill Collins, *In Fighting Words: Black Women and The Search for Justice* which challenges her audience to think radically about historical and contemporary knowledges produced by black women who have lived and live today. To think about the social circumstances black women often face. As this book is a manual I use to follow black women in educational leadership in my current research, is it fitting I also used this black feminist context as a manual.
The conditions of Dr. Murguni space during her time of instruction (seminar lecture) varied. At the University of Pretoria where her lecture was predominantly male, yet ethnically diverse, she knew herself enough to bring power in her space (lecture). Her space was open for conversations about, making child rights work for children through her personal extensive law background. Her space was also defined by the iconography used. Media and art influenced, and videos in contrast was a huge depiction of previous lectures on Human Right campaigns.

Because the classroom was racially and ethnically diverse; engaged conversation, accustomed norms, and language was selectively used. Within this education setting the challenge of having to illustrate to male students, particularly, African males when you are an African woman their masculinity in relation to you in society often times created a defensive dialogue where students seem uncomfortable. However, Dr. Murguni response to male domination thrown at her in terms of statements made, questions posed, and overall arrogance shown was not to bash them because of their privileged stance or implications, but, more so, to respond with support. What bell hooks defines as, self actualization.

Patricia Hill Collins sense of preparing an intellectual and political space for Black women who will confront the future, reconfigure injustices (Collins, Fighting Words: Black Women and the Search for Justice) - Dr. Murguni created a space her personal meaning dictated based upon her practice and conditions of her space. An intellectual and political space driven by law and rights of a people. There she was able to practice bell hooks act, talking back -- the liberated voice by amplifying her voice within the meaning of her space dictated to based upon the conditions of her practice. I was able to examine the challenges, barriers, and ways African women who are not ethnically South African dictate the meaning of space to bring about reform (transformation) while “talking in” about it.
Dr. Matete Madiba Conditions and Practices

Dr. Madiba is a South African native, educator, administrator, womens leader, and currently director of Student Affairs at the University of Pretoria. She was formerly a High School teacher at an all black and colored high school in the township she is from. During her time as a teacher she explained how poverty was present and the high school facility was inadequate to deliver lessons properly. Though she remain and decided to matriculate and further her college. She registered for college. And during her time/year of registration the college of education was specifically for blacks only. 1994 government was involved with the system during the time she registered for college. And with it there were challenges presented.

While in conversation with Dr. Madiba in comparison to the African American women I interviewed in the United States she explained her experience uniquely different. Her conditions of the various spaces she worked in and currently work in are as defined in *Gender Talk*, struggles against racial, sexual, hetersexual, and class oppression - struggles were made apparent through her experiences. After she completed her college she went into the realm of curriculum design at a predominantly black university (Bush University). Curriculum design afforded her the opportunity to excel in places where there were not many who looked like her. And because of the racial dynamics during the time when apartheid was dying down, racism was still complex in ways. As the acting director at Tech University she experienced struggles not only from non POC, but from her fellow South Africans. In the same way Professor Karen Seneferu (African American Professor) experienced as she defined, “white politics” and the lack of support from other African Americans. White politics in light of Dr. Maiba would be her white counterparts having a hidden agenda, while some having good intentions. I learned
through her experiences this is a sad reality of both African American women and Black South African women.

**Emerging Themes**

Patricia Hill Collins argues: All African American women share the common experience of being Black women in a society that denigrates women of African descent. This commonality of experiences suggests that certain characteristics themes will be prominent in a Black women's standpoint (Collins, Black Feminist Thought). My findings - conditions and practices of each woman I followed all shared commonalities which was illustrated and expressed uniquely. The themes emerged: gender issues, support system (accountability and support in unusual places), lack of respect and loyalty from colleagues, and under-representation, and the a new phenomenon, “talking in.”

**Gender Issues**

Conditions illustrated through women interviewed were spaces where they experienced sexist behaviors. Spaces predominantly driven by their male counterparts. More so, their white male counterparts. During the interview sexist behaviors would later be spoke about in light of gender issues. Highlighting how gender plays a major role in their practices within their respected space.

The concept of “support from unusual places” arose. And the intersection of race, class, and gender. These women spaces reflects South Africa’s past historical foundation - a foundation built on white male domination, which is going through transformation. As expressed, “systems of support sometimes not offered.” Support offered from the women interviewed as a sense of enjoying support not necessarily returned.
Support from unusual places was the network of support from Afrikaans (white men) at times, usually men who acted as mentors. This was simply to gain support and a way of assimilating/associating to be accepted in their respected spaces. This gesture of support aligns with the under-representation or lack of representation and how accountability plays a major role in making up for it. However, I learned of the complexities of the lack of support when I interviewed Dr. Madiba. She stated she typically, “offers support to enjoy support” shined a light on the dynamics of leaderships; how leadership is distributed, who is in leadership, and how this ultimately plays a vital role in creating platforms of transformation as a Black South African woman practicing bell hooks act, talking back - the liberated voice.

Moving Forward

There are spaces Black South African women have created as a representation of their truths they personally hold to be self evident as an entire body. Truths that speak to heal the Black South African woman. Therefore, giving the black woman or in my case the two women I examined a sense of belonging; an open door to act as healing. A creation of a holistic space. As Professor Karen Seneferu defined space - space dictates meaning. What enters into that space is dictated by the space or transform the meaning of space.

Moving forward - In order to create spaces where Black South African women can practice bell hooks act, talking back - the liberated voice. Black South African women will need to collectively come together to collaborate with each other discussing ways they can go through a process of healing, which will ultimately lead to self actualization. Which is an attempt to “talking in.” While, accepting the meaning of truth, trust, and loyalty amongst each other as a body. Once they are able to come to a consensus with each other to establish an authoritative language challenging the status quo serves as a tool to create the oppositional discourse, the
liberatory voice (hooks, talking back). Black South African women can then work towards acts of togetherness that can transform the consciousness of Black South African women, their very being to move towards effectively bringing educational and social reform for students of color in South Africa - in the sense that will be empower black women subjects to research themselves, as people who themselves are subjects and agents as a function of their own participation in the research which will inform how they can implement transformation utilizing bell hooks act, talking back - the liberated voice. While, in the end themes can be "applied" in the sense that it will be seeking ways to help subjects of the study to break free in tangible ways from the social, psychological and academic sources of their victimology or oppression. Again, going back to claiming the essence of bell hooks act, talking back - the liberated voice.
Bibliography


Using Clinical Supervision to Improve Interprofessional Collaboration

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Using Clinical Supervision to Improve Interprofessional Collaboration

Abstract

**Purpose:** The purpose of the presentation is to introduce a novel method of incorporating interprofessional education (IPE) in higher education. Health care is ever-evolving. In addition, recent legislative initiatives, like the Affordable Care Act and the Social Work Reinvestment Act, represent opportunities for academia to explore innovative approaches towards the preparation of future healthcare providers. Interprofessional collaboration (IPC) has been noted as being important to the future of the healthcare system in that IPC is part of the solution for promoting better healthcare outcomes (IOM, 2014; WHO, 2010). Marshall (2011) notes that “interprofessional collaborative practice promotes team identity, conserves energy by a unity in direction, and invites harmony of efforts” (p. 158). The skills need to engage in IPC can be cultivated through interprofessional education (IPE) (Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013). Currently, at Northern Michigan University (NMU), there are limited opportunities included in the program curriculums of nursing students and social work students to promote the skills needed to engage in IPE. The curriculums are designed as silos, but that does not reflect the expectations of graduates when they join the workforce.

**Methods:** This project provided opportunities for senior level nursing and social work students to use clinical supervision groups to explore their clinical experiences during one academic semester. Data was gathered pre and post the clinical supervision groups to identify outcomes related to the intervention using the Interprofessional Socialization and Valuing Scale (ISVS) and qualitative data. The data was then compared to a quasi-experimental group of nursing and social work students.

**Results:** Based on the literature review, clinical supervision, as an intervention, has not been fully explored as a methodology for IPE. Qualitative findings suggest that students valued the experience and quantitative data provides insight into the outcomes of interprofessional clinical supervision groups. Findings from this project regarding the experience of students in interprofessional clinical supervision groups could inform future efforts to promote IPE at NMU and other universities.

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Preparing Teachers for School Tragedy: Reading, Writing, and Lockdown

Jane C. Perkins

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Abstract

Since the Sandy Hook incident, 17 school-associated violent deaths have been reported between December 15, 2012, and November 14, 2013 (Nicoletti, 2012). Five of the seven deadliest school massacres have occurred in the last 15 years (Nicoletti, 2012).

This mixed method explanatory, sequential design began with a quantitative online questionnaire and assessed the perceptions of crisis preparedness of 307 Rhode Island teachers. Survey data were enhanced using qualitative data gathered from focus groups. Three research questions guided the study: 1) To what extent do RI teachers feel prepared for a major school crisis? 2) Is there a significant relationship between teachers’ preparation for a school crisis and the following demographic variables: grade level taught, years of teaching experience, and urbanicity? 3) What are the teachers’ perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis?

Perceptions of school crisis preparedness were examined using survey data. Patterns and themes in the perceptions of emergency preparedness emerged Barriers affecting teachers’ confidence in current safety plans were also identified.

Implications for collaborative efforts that include school and community involvement could result in a coherent plan development. Strategies to improve communication, plan development, and confidence are discussed.
I. INTRODUCTION

The families of Newtown, Connecticut never suspected that when they sent their children to Sandy Hook Elementary School on Friday, December 14, 2012, they might not be returning home. On that December day, 20 children and six adult staff members at that elementary school were shot and killed before their assailant committed suicide by shooting himself. This terrifying event is considered one of the deadliest mass shootings at a high school or grade school in U.S. history. The Sandy Hook Elementary School shooting is only one of many deadly school massacres in American history (Nicoletti, 2012).

Educators have a responsibility to provide students with rigorous curriculum in a safe learning environment. Since Thomas Jefferson founded public education, schools have been charged with a duty to protect. A review of school shootings since 1996 raises many questions about the safety of our children. If children are dying in our schools, why aren’t active shooter drills treated like fire drills?

According to the United States Government Accountability Office, or USGAO (2007), there are no federal laws requiring school districts to have emergency management plan. However, 32 of 50 states reported having their own laws or policies that made them a requirement (2007). The United States Department of Education (USDOE) and the Federal Emergency Management Agency (FEMA) do provide guidelines that support the creation and implementation of emergency management procedures (Allen, Lorek, & Mensia-Joseph, 2008). One of the selected practices that the GAO (2007) recommended districts implement was practicing of their emergency
management plans with first responders on a regular (annual) basis. These drills afford school districts the opportunity to examine their capacity to respond to an emergency, as well as allowing rescue personnel to become familiar with the school system and its personnel (Allen et al., 2008).

Since Newtown, the FBI, along with the Department of Homeland Security and other federal, state, local, tribal and campus law enforcement agencies, has hosted hundreds of meetings, exercises, and presentations with citizen groups, private industry and educational groups. These events have focused on best practices and lessons learned from the school shooting in Newtown, Connecticut, the theater shooting in Aurora, Colorado, and the Sikh Temple shooting in Oak Creek, Wisconsin, as well as the response to the Boston Marathon bombing (Blair & Martindale, 2012).

**Research Questions**

The first two research questions addressed the quantitative portion of this mixed methods study. The third question was designed to obtain qualitative data.

1. To what extent do RI teachers feel prepared for a major school crisis?
2. Is there a significant relationship between teachers' preparation for a school crisis and the following demographic variables: grade level taught, years of teaching experience, and type of community where the school is located?
3. What are the teachers' perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis?
Problem Statement

Alba (2011) explored the perceptions of school crisis preparedness with respect to those in key leadership positions responsible for planning, training, and implementation of these efforts in Rhode Island schools. According to his research, there were differences noted among urbanicity and grade level principal groups, as well as among district leadership and first responder personnel. Maintaining a steady state of preparedness is necessary for an emergency response plan to be effective in schools (Alba, 2011; Graham, Shirm, Liggin, Aitken, & Dick, 2006; Kano & Bourque, 2007). The ability to be prepared even in times of no crisis is possible if school administrators collaborate and train with local first responders. Alba’s (2011) research identified potential barriers to implementing training scenarios with regard to administrators working with first responders. His study does not explore and correlate the perceptions of teachers with regard to self-efficacy in school crisis situations, including the differences in perceptions based on: type of school (i.e., urbanicity), grade level taught, and years of teaching experience.

By exploring the perceptions of crisis preparedness at the teachers’ level, the findings from this research could be used to develop strategies that school leaders could implement to raise self-efficacy of teachers, the true first responders. The FBI reports that the average active-shooter incident lasts twelve minutes, and 37% percent of them less than five minutes (Nicoletti, 2012). For 43% of the time, the crime is over before police arrive. In 57% of the shootings, an officer arrives while the shooting is still underway (Blair &
Martaindale, 2013). This means that teachers are responsible for much more than just teaching reading and writing.

II. METHODOLOGY

The study utilized an explanatory, sequential, mixed method design beginning with a quantitative online questionnaire followed by focus groups. The qualitative data were used to further understand the quantitative data. The rationale for using this strategy was “to use qualitative data to provide more detail about the quantitative results and to select participants that can best provide this detail” (Creswell & Plano Clark, 2007, p.122). Since the intent of the study was “not to merge or compare the data”, the sample size of the qualitative data collection was much smaller than the quantitative data collection (Creswell & Plano Clark, 2007, p.122).

Research Questions

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Research Methodology
The invited sample consisted of $N=682$ teachers from three different school districts in Rhode Island. In the quantitative component of the study, demographic data were collected on teachers in the three Rhode Island school districts and their perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis. Qualitative data were collected from $N=5$ volunteers from the rural and suburban districts and $N=9$ urban school volunteers using focus groups to explore the perception of the effectiveness of school emergency drills to enhance preparedness for a school crisis. (Creswell, 2009; Patton, 2002).

**Instrumentation**

Quantitative data were gathered through the use of a cross-sectional, self-administered, internet-based questionnaire using SurveyMonkey. This method was used for ease of delivery, participant response, and data collection (Green & Salkind, 2008). Data were downloaded to Statistical Software for Social Sciences 21.0 (SPSS) for statistical analysis (2008).

The survey instrument measured the perceptions of teacher preparedness for a school crisis. The survey questionnaire, entitled *Teachers’ Perceptions of School Safety and Preparedness Survey (TPSSPS)*, was a modification of Alba’s *Principals’ Perceptions of School Safety and Preparedness Survey (PPSSPS)*. Questions that were targeted toward administrators and first responders were deleted from Alba’s instrument. The modified instrument contained 42 items within seven dimensions. Content validity of the survey instrument was based on support from the literature on crisis preparedness and included the
recommendations of \( N=5 \) content experts on school safety survey development. In addition, an Internet version of the survey instrument using SurveyMonkey was piloted by \( N=8 \) RI teachers, who examined the instrument directions, item content, and rating format for readability and ease of understanding. Revisions to the survey were made based on the feedback from the pilot administration.

**Data Collection**

Approval to survey the teachers in the three Rhode Island districts was sought by personally meeting with the superintendents to inform them of the purpose of the study. After approval from the superintendents of the three Rhode Island public school districts, an email was sent to those three districts’ principals and invited them to preview the survey, and encouraged their teachers to complete it. To increase response rate (Huck, 2012), respondents were invited to enter a raffle at the completion of the survey for a $100 Visa Gift Card.

**Data Analysis**

For Research Questions 1-2, descriptive statistics (i.e., frequencies, percents, means and standard deviations) were calculated for the data from the survey items (Huck, 2012). Data analysis for Question 3 was presented utilizing the framework developed by Creswell (2009) and Krueger and Casey (2011). Data were reduced, inductively coded, and cross-case analyzed according to themes and patterns that emerged and were present in narrative text (Krueger & Casey, 2011). The use of exact detail to describe a phenomenon allowed for conclusions to be drawn and transferred to other settings of “proximal similarity” (Trochim, 2006).
Summary

The purpose of this study was to utilize an explanatory, sequential, mixed method design beginning with a quantitative online questionnaire assessing the six domains of crisis preparedness. The survey data were enhanced using qualitative data gathered using focus groups. The survey participants were \( N = 683 \) elementary, middle, and high school teachers from an urban school district, a rural district, and a suburban district. The focus group members participated in the first phase of the study and reflected on the six domains of crisis preparedness. Data analyses included descriptive statistics, ANOVAs and thematic analysis.

By exploring the perceptions of crisis preparedness at the teachers’ level, the findings from this research can be used to develop strategies that school leaders could implement to raise self-efficacy of teachers, the true first responders.

III. RESULTS

The purpose of this research study was to explore the perceptions of Rhode Island teachers with regard to crisis preparedness within their schools. The results of the study may be utilized to create a context for addressing perceived barriers in addition to validating the need to develop future collaborative training efforts. The implications of this study could also outline steps to improve the organizational development and science of crisis management within schools.

Summary of the Results: Quantitative

The Teachers’ Perceptions of School Safety & Preparedness Survey (TPSSPS) contained 42 items within six sections that assessed school
demographics, building access and identification, internal security measures, safety preparedness development, safety preparedness activities with regard to students, safety preparedness activities with regard to teachers’ perceptions of levels of preparedness, and influences on school safety and security. The perceptions of Rhode Island teachers were explored using RQ1: To what extent do RI teachers feel prepared for a major school crisis?

Notable, were descriptive data across dimension means for Access and Identification. A total of 72% of the teachers reported always to Visitors report to the main office ($M = 4.67$, $SD = .57$), and 71% responded always to All Use a buzzer to gain access ($M = 4.37$, $SD = 1.25$). Students and staff in a recent study reported an increased feeling of safety when certain physical features were in place (Bosworth et al., 2011). They cited features such as cameras, visitor passes, fences, monitors, and the physical location of the school as important (2011).

The descriptive data across the Safety Preparedness Development dimension indicated that 43% of respondents annually (and 22% bi-annually) refine their school crisis plans using USDOE guidance. The data mean for Crisis preparedness training (self or staff), was 2.05, but review of the percentages across the Likert-type scale noted 63% of teachers reported never or rarely (> 2 years) engage in Crisis preparedness training. Data for Overall preparation was $M = 2.73$ ($SD = 0.96$), with 40% of teachers responding neutrally. This response is consistent with Response training (41%) and Having a disaster plan (38%). Additionally, 46% of respondents indicated either 1 or 2 (1 = not at all prepared).
Contrary to those findings, TPSSPS data showed that 66% of participants reported a 4 or 5 (5 = extremely well prepared) to Conduct drills and exercises. Based on those findings, teachers might only consider fire drills when they answered the survey question Conduct drills and exercises.

Review of the data specific to crisis events for which schools conducted drills indicated differences between those conducted with students versus those with that are not. A majority of teachers responded Constantly (>4 times annually) or Often (2-4 times annually) for Fire (90%, $M = 4.51$, $SD = 0.99$) drills with students. Additional review of the percentages across the Likert-type scale show 52% of teachers reported that bomb incident drills were drilled with students Occasionally (annually) or Often (2-4 times annually), yet 45% responded Not in plan or In plan, never drilled. Similarly, while the mean for conducting drills with regard to incidents of a hostage situation was 2.02, 27% of participants responded it was In plan, never drilled, however 40% of teachers reported this activity was Not in plan.

A majority of participants reported that the following drills were either Not in plan or In plan, never drilled: Hostages (67%, $M = 2.02$, $SD = 1.11$), Natural disasters (75%, $M = 1.94$, $SD = 1.00$), Chemical/Radiological incident (85%, $M = 1.70$, $SD = .85$), Suicide (86%, $M = 1.72$, $SD = .78$), Terrorist Attack (94%, $M = 1.63$, $SD = 1.01$), and Pandemic flu (94%, $M = 1.39$, $SD = .64$). The data also indicated that teachers responded similarly to Bomb across the Likert-type responses for In plan, never drilled (26%), Occasionally (28%), and Often (24%).
These data are consistent with the 2007 Government Accountability Office National Report: *Emergency Management*, which found that while 95% of districts in the United States had written crisis plans; “more than 25% of districts have never trained, and over 66% do not train at least annually with community partners on how to implement their school plans” (GAO, 2007, p. 21).

**Urbanicity**

The perceptions of Rhode Island school teachers were further explored utilizing the following research question:

RQ2: Is there a significant relationship between teachers’ preparation for a school crisis and the following demographic variables: urbanicity, grade level taught, and years of teaching experience?

One-way analyses of variance were conducted to evaluate the relationship between urbanicity groups and five dimension means of the TPSSPS. Significant differences were indicated for the *Access and Identification* dimension mean such that suburban schools had a greater extent ($\eta^2 = 0.14$, large effect size) of implementing external building security measures than schools in urban and rural school districts (S, $M = 4.13$; R, $M = 3.45$; U, $M = 3.28$). At the item level, differences among urbanicity groups were found for all items in the *Access and Identification* dimension. Teachers from suburban and rural districts indicated a greater extent of having *Visitors report to the main office*, *keeping External doors locked*, using a *Buzzer system*, and using *Visitor badges* than urban districts. Teachers from suburban districts indicated a greater extent of using *External cameras* than urban and rural districts (S, $M = 4.02$; U, $M = 3.47$; R, $M = 3.16$). However, urban schools had a greater extent of using *Student
badges (U, M = 1.22), compared to suburban (S, M = 1.05) and rural (R, M = 1.15) districts.

The NCES survey (2013) reported that 88% of public schools installed locks or put in place a system to monitor doors during school hours in an effort to control access to school buildings. The same survey reported that more than 60% of public schools reported using security cameras to monitor school access (2013).

Although not significantly different, examination of the TPSSPS data show suburban school teachers had a greater extent of perceiving they were prepared with regards to having a disaster plan than those in both rural and urban districts (S, M = 2.88; R, M = 2.84; U, M = 2.70). A similar trend was noted for Response training (S, M = 2.87; R, M = 2.72; U, M = 2.85), and Overall preparedness (S, M = 2.80; R, M = 2.75; U, M = 2.68). Data reviewed for Safety Preparedness Activities: Students and Safety Preparedness Activities: Levels of Preparedness dimensions noted that urban teachers indicated that they are slightly more prepared than their peers to conducting a variety of drills annually students (S, M = 3.87; R, M = 3.98; U, M = 3.61), specifically fire drills (R, M = 4.39).

These data could support the idea that urban locations experience different levels and different types of crime than rural and suburban locations. The urban district in this study consisted of one newly constructed elementary school, in which policies and procedures were newly written and implemented to meet the newly identified safety needs of students and staff. Perhaps, the participants in
this district had a heightened awareness of planning, compared with the other school districts at the time of the study.

Grade Level

One-way analyses of variance were conducted to evaluate the relationship between the grade level groups and five dimension means of the TPSSPS. Inspection of the ANOVA findings indicated significant differences among grade level groups Access & Identification ($p = .001$). Elementary schools had a greater extent ($\eta^2 = .100$, large effect size) of implementing building access and identification security measures than high schools.

Visitors report directly to the main office, Locking external doors, Buzzer system, and Student badges were implemented at a higher rate at the Elementary and middle school level, compared with the rate of high school implementation. Yet, all grade level groups reported high levels of implementation for Visitors report directly to the main office. Ninety-five percent of teachers responded often and always to Visitors report directly to the main office.

No statistically significant differences were found among the grade level groups for Service personnel badges, however, elementary teachers (E, $M = 3.61$) tended to report asking service personnel to wear badges at a higher rate than middle school teachers (M, $M = 3.35$) and high school teachers (H, $M = 2.68$). Elementary teachers reported asking visitors to wear badges while in the building at higher levels of implementation than high school teachers (E, $M =$
4.52; H, \( M = 3.80 \)). However, with regards to faculty and staff wearing IDs, less than half of the respondents (47\%) reported *always* implemented.

These differences could indicate that elementary teachers may perceive the need to more aggressively implement the identification of adult visitors within the building due to the fact that their student populations (ages five through 12) are more vulnerable to harm imposed by intruders.

The post hoc analyses in the *Internal Security* domain showed that the statistically significant group differences were between high and elementary schools for *Perform sweeps*, *Require clear, or ban, book bags*, *Provide support staff with interior keys*, *Provide substitute teachers with interior keys*, *Universally coded interior keys*, *Full-time Student Resource Officer (SRO)*, and *Full-time nurse*. Middle and high school teachers indicated a greater extent of performing random sweeps for contraband (H, \( M = 2.13 \); M, \( M = 1.80 \)), requiring that students use a clear book bag, or banning book bags (H, \( M = 1.04 \); M, \( M = 2.40 \)), and having a full-time Student Relations Officer (H, \( M = 3.64 \); M, \( M = 3.32 \)), than at the elementary level for all three items.

*Providing substitute teachers with interior keys* (E, \( M = 2.05 \); H, \( M = 1.83 \)), and having a *Full time nurse* (E, \( M = 4.83 \); M, \( H = 4.49 \)) were the only two items with a significant difference in implementation where elementary teachers reported a higher implementation rate than high school teachers. *Provide teachers with interior keys* (\( M = 4.55 \)) was reported at a high rate of implementation across all grade levels, with 91\% of ratings approaching *often* and *constantly*. 
Internal security differences between high and elementary school teachers could indicate that teachers’ perceive students ages 15 -18 have a higher likelihood of committing acts of crime, including violence, than those of elementary schools. This is also reflected in the data from the 2008-09 report *Indicators of School Crime and Safety: 2009* (Dinkes et al., 2010), in which it was found that nearly 75% of high schools reported to police violent crimes by students compared to only 20% of elementary schools. These statistics could be the result of high schools and middle schools having more students who are more likely to be challenging authority compared to their elementary school peers.

The Scheffé post hoc indicated that the statistically significant group differences were between high (H) and elementary (E) schools, such that elementary school teachers reported a greater extent ($\eta^2 = 0.152$, large effect size) of crisis preparedness training for themselves or staff members (E, $M = 2.28$; H, $M = 1.78$). Drills to prepare for *Natural disasters*, *Chemical/Radiological incident*, and *Terrorist attack (Level Red)* were reported implemented at a higher rate at the elementary level than at the middle and high school levels, with middle school teachers reporting the lowest rate of implementation. However, all grade level groups reported low levels of implementing drills with response rates approximating *Not in plan or In plan, never drilled* for the following drill types those same items: *Natural disasters* (75%), *Chemical/Radiological Threat* (85%), *Suicide* (86%), *Terrorist attack (DHS Level Red)* (94%), and *Pandemic flu* (94%).
These findings are consistent with those of the SSOCS (2009) in which principals surveyed reported conducting specific student drills at lower rates across all these areas: a natural disaster (83.1%), a bomb (58.4%), a shooting (52.5%), or a hostage situation (38.5%). While a majority of the 2,560 public schools principals surveyed reported that they had written plans for a specific crisis situation, such as a natural disaster (95.8%), a bombing (93.8%), a shooting (83.0%) or a hostage-taking (71.3%), only 40.0% of them had plans for a threat on national security (SSOCS, 2009). Similarly, 36.1% had a plan for an incident of the pandemic flu. The findings from these studies could be an indication that those involved with writing plans might have more knowledge of what drills are in the plan, as compared with teachers, who rely on administration to communicate the procedures and details for conducting the drills in the emergency plan.

**Teaching Experience**

While no statistically significant differences were found among years of teaching experience groups, a trend was noted. For all four items in *Safety Preparedness Development*, teachers with 7-9 years of experience (C) indicated the lowest rate of implementation in all four items. Teachers with 4-6 years of experience (B) tended to indicate the highest level of implementation than their peers. Teachers with the least amount of experience (1-3 years, A) followed the slightly more veteran first group, and teachers with the most experience (10 or more years, D) followed them. Teachers with 7-9 years of experience indicated the lowest rate of implementation in all four items.
Notable was that teachers with 1-3 years of experience indicated a higher level of implementation of drills for Hostages ($M = 2.45$), Chemical/Radiological incident ($M = 1.79$), and Terrorist attack (Level Red) ($M = 1.47$). It is possible that recent worldwide events and school tragedies are on the newest teachers’ minds, or that new teachers are reviewing policy and procedures more carefully than teachers who are more veteran than them. Teachers in all experience groups reported similarly to the implementation of pandemic flu drills (A, $M = 1.40$; B, $M = 1.42$; C, $M = 1.40$; D, $M = 1.39$). The descriptive analysis indicated that 66% of all teaching experience groups reported high levels of Conducting drills and exercises by selecting 4 or 5 (5 = Extremely well prepared). However, Having a disaster plan, Overall preparedness, and Response training approximated less than moderate levels of preparedness (38%, 40%, and 41%, respectively). Sheltering students indicated that 60% of respondents are selected 1 and 2 on the Likert-type scale (1 = Not at all prepared).

At the item level, significant differences among teaching experience groups were found only for using a Buzzer system. Teachers with 10 or more years of teaching experience indicated a greater extent of using a Buzzer system than teachers with 1-3 years, 4-6 years, or 7-9 years.

It is possible that since the Newtown, Connecticut school shooting, the safety awareness of all educators has been heightened by the FBI, the Department of Homeland Security, and other federal, state, local, tribal and campus law enforcement agencies. These organizations have offered hundreds of meetings, exercises, and presentations with citizen groups, private industry and educational
groups, and provided teachers with opportunities to learn about school safety and best practices to keep themselves and their students safe, regardless of teaching experience.

**Summary of the Results: Qualitative**

To explore teachers’ perceptions of crisis preparedness, qualitative focus groups were conducted within each type of school district. Purposefully selected teachers were selected for the focus groups to address Research Question 3: What are the teachers’ perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis?

**Procedural Coherence**

As policy and procedures were discussed, there were frequent references to a need for consistency, both across grade levels and through the district. As indicated in the research, “perhaps one of the most important elements of developing district policies in ensuring they are effective and draw on best practices in the field” (Hutton & Bailey, 2007, p. 25). Varying degrees of implementation at the building level was a reoccurring theme within each focus group. Participants agreed that while grade appropriate considerations should be made, some elements of the policies should look the same throughout the district.

Accountability looks different across grade levels and within districts. Teachers in the focus groups expressed a great deal of concern over the fact that they were careful to “take attendance” or “do a head count” once evacuated, but were unclear as to how to document “missing students.” Confusion also
existed at all levels when discussing the most efficient way to line up outside. When there is no designated spot for students and teachers to go, teachers can't model quiet voices for their students because they are trying to direct and collect all their students. There was also noted concern about other teachers not taking drills seriously, as evidenced by the unruly manner in which students waited outside and reentered the building after drills. It was noted that teachers, particularly at the high school level, weren't making any attempts to record student attendance.

Perhaps high school teachers feel that the increased independence of older students lessens the need for them to be monitored, even in an emergency. At the elementary level, on the other hand, participants reported that their students learn best when the teachers model in voice and action exactly what they expect students to do.

Other procedural inconsistencies concerned the members of the focus groups. In one district, elementary teachers were instructed to keep the classroom key in a pocket on the wall next to the door, but the other teachers reported not ever hearing that. Similar comments were made about “cold weather drills”. While some teachers in one district have participated in evacuations on cold days, others commented, “I've never heard of a cold weather drill.” Teachers would feel more confident in their actions and decision-making if they knew that the procedures in place were consistent across grade levels.

Argenti (2002) stated that “employees will know what to do in a crisis only if they have been absorbing the company’s guiding principles all along” (p. 108). A
lack of guidance, support, and accountability from the district level may be a reason for inconsistency in school implementation. Again, drawing from organizational crisis theory, evidenced was the need for structural flexibility and responsibility within integrated response systems under an overarching strategy critical to adaptation and survival during crisis situations (Boin & Hart, 2003; Kapucu, 2006; Rusaw & Rusaw, 2008; Von Clausewitz, 2007; Wang, 2008).

**Clear and Continuous Communication**

The need for continuous communication between district leadership teams and teachers was a common theme in the focus groups. Teachers across all urbanicities and grade levels reported that they “don’t know what the other schools [in their district] are doing”. These concerns arose when talking about fire drill procedures, lockdowns, and other evacuation drills. One teacher even referred to their procedure as “the unspoken rule, or the unspoken ‘do this’ thing”. If “unspoken rules” are guiding staff, it is no wonder that communication is lost and consistency is not present within buildings of the same district, never mind across a district. A frustrated participant asked of her colleague, “Are we doing it or not? What is the protocol?” Her colleague replied by shrugging her shoulders, as if to say she didn’t know.

There were several suggestions for improved communication in the open ended response question about influences on safety. Like the focus group dialogue, analysis of these comments indicated that teachers expressed a need for clarity in written plans, consistent procedures within the district, as well as the timeliness and frequency of the delivery of the content of the plans.
There was also some concern about communication systems that are in different buildings. Teachers with phones in their classrooms felt very confident that they could get help if they needed it because they would just “pick up the phone”. This is consistent with the findings of Bosworth et al. (2011). Staff and students in their study identified certain physical features (cameras, phones, fences) that provided a heightened sense of security simply because they existed (2011). One high school teacher in the suburban focus group was excited to share that there were “even phones on the quad between our two buildings.” She added, “Our campus is very safe.”

Teachers from all urbanicities reported that there were buzzer systems in the schools in their districts. Contrary to this, however, it was reported that buzzers were not installed in each school in the district. The teachers who had the buzzer systems felt like they were taking the appropriate measures to ensure safety by asking that visitors identify themselves before entering the building. These teachers also credited the office staff for “knowing” the adults who frequent the buildings and “getting good at recognizing parents.” The high school teachers in the focus groups were less concerned about that procedure. Perhaps, having two buildings on a campus and more mobile students are factors that support that idea. Even the high school that had buzzers, had doors that remain unlocked for 6 minutes between classes.

A final concern about communication was with the frequency of the review of the plans and the comprehensiveness of that review. Focus group respondents indicated that plans may be reviewed in August in one school, but every three
months in another school in the same district. Another district reported that every drill or evacuation prompted a debrief with immediate changes, while across the town colleagues reported that there is “no communication about crisis planning.” Still other thoughts about communication are that the plan was handed to teachers and they are posted in each classrooms, and it is the teacher’s responsibility to be familiar with the plans.

Some comments made in the open-ended responses indicated that plans were “never” reviewed, or that besides fire drills and “lockdowns”, plans did not exist. There are so many discrepancies about what is in the plan and how to execute the components of the plan. Teachers can’t confidently communicate to their students and prepare them for safety drills because those details are not clearly communicated to teachers.

**Crisis Preparedness Training**

Participants across all urbanicities cited value in multi-agency trainings in order to feel better prepared for a crisis, yet varying degrees of school preparedness professional development existed within districts. Police and fire presence during nonemergency times would be beneficial to the teachers, the students, and the police. One teacher commented that, “The police don’t know who we are and they don’t know what our building looks like on the inside.”

There are many benefits for first responders if they are familiar with the schools in their jurisdiction. Pre-planning for emergencies and disasters should involve an understanding of the physical school and its grounds, as well as scene size-up during the school day, when it is most populated. Common thoughts
around this idea were that the police would be familiar with staff and the layout of the schools if they frequented them during non-crisis times. The middle school and high school teachers in all districts reported that they have a full time Student Resource Officer. This is something that the elementary school felt like they were missing. They only see the police when something is wrong, as noted by one participant, “We are naturally alarmed when see the police walking in our halls.” Making school crisis training a community concern would engage other stakeholders and result in plan coherence, as well.

**Authentic Drills**

Another theme that emerged through the focus groups was the need for a sense of realism when conducting crisis drills at school level. As previously indicated, perceived benefits from collaboratively conducting drills was cited in all the districts. A high school teacher in the suburban district echoed the need for drills at “inconvenient times”. She reflected on a drill that took place at the end of the day, “I loved being thrown off guard like that, because it made me really go into serious mode, even though I was by myself.” Participants thought that more authentic drills at a variety of times would be a better way to prepare for an emergency than the way they are done now.

In an effort to prepare teachers who are reportedly “physically and mentally not capable of protecting their students”, bringing in the experts in the field to conduct and evaluate drills might boost the confidence levels of teachers with regard to implementation. Teachers also recognize, as indicated in the open ended response items of the TPSSPS, that there are many other drills that
should be taken into consideration in order to ensure a safe learning environment for students. The data from the TPSSPS also indicate that teachers attested that they effectively implement fire drills several times a year. This suggests that with authentic practice, the other types of disaster preparation can also evoke feelings of preparedness.

Bandura (1997) explains, “when people are acquiring skills, behavior competencies and adaptational patterns they are very much aware of what they are thinking and doing” (p.341). He further explains that eventually people make their habits of thought and action routine in nature (Bandura,1997). Like any skill, good decision-making comes with practice. Higgins and Freedman (2013) studied how human propensities reduce decision-making capabilities, particularly in times of crisis.

These findings are consistent with the comments made in the open-ended response items to assess Influences on Safety and Security. Respondents indicated that a variety of training is needed, including “scenario-based” multi-agency drills, “more frequent review of the current plans”, “workshops on other drills besides fire, active shooter, and evacuations”. There were multiple comments about the need for a “comprehensive plan” that includes practicing at “all times of the day” and for all situations that are threatening. The importance of realistic drills was also supported by the research of Allen et al, (2008). These researchers suggest that multi-agency drills should take place in order for school personnel and emergency responders to organize their efforts before a crisis takes place (2008).
According to Bandura (1993), mastery experiences allow individuals to link real-life situations to future expectations. A perception of failure on a task can lead to lowered self-efficacy and future expectations of failure. Based on these findings, teacher self-efficacy with regard to protecting students during school tragedies may be higher for teachers who have experienced success in a similar situation. School crises are often not perceived as having positive outcomes. Keeping this in mind, equipping teachers with a high sense of efficacy, may allow them to persist through the challenges encountered during a school crisis.

**Plan Development**

“Who writes the plan? Is there someone overseeing the plan? What is their job? Is that person responsible for communicating the plan to us?” Focus group conversation and comments in the TPSSPS indicated that there was much confusion about whether or not schools had a “safety team” and what the specifics of that job were. It seems that the teachers in this study understand the need for careful planning, clear communication, and evaluation of the plan and its components.

According to organizational crisis theory researchers, the most critical aspect of crisis communication occurs in the preparation phase, in which the organization identifies and addresses potential incidents, and develops basic structural plans (Penrose, 2000; Seeger et al., 2001). Seeger et al. (2001) reported that a distinct component of the planning phase includes development of a crisis management team. This team should consist of coordinated both internal and external emergency response expertise and the members of this
team should meet regularly to not only evaluate plans based on recently identified potential crisis, but also to develop rapport, alleviating unfamiliarity when an incident occurs (Seeger et al., 2001).

Teachers want to be “informed of planning sessions” if not asked to be a part of them. In the suburban and rural school districts, members shared the feeling that they are expected to “carry out the plan” but not “create it”. One participant said that she is a member of the school Crisis Emergency Response Team (CERT), but she didn’t help with plan development, and she didn’t know who wrote the plan. If teachers are “in the trenches”, should they be giving feedback about planning? However, teachers reported that it isn’t just the opportunity to provide input for which they are looking. They also want to be taken seriously. Sometimes leadership teams give teachers a plan to review, but feedback is not well-received, probably due to effort that went into writing the plan. There is also the idea that if the current plan is just “tweaked” then enough modifications have been made until the next review. One participant expressed her hope for “new thinking and a collaborative process” for plan development. If teachers, parents, community members are included in the plan development, then conversation about the plan would not be limited to only those who “wrote” it.

**Influences on Safety and Security**

Comments in the open-ended response item indicated a desire for the district to “properly train a ‘trainer’ who is very knowledgeable in the plan and can teach/review clearly and concisely to all staff and be able to answer all questions.” Similar comments include, “clear communication of the plans and
protocols in place”. This idea is consistent with the research of Gainey (2010) Hull (2010) and Nickerson et al (2006). These researchers also cited challenges such as a lack of equipment and training for staff in addition to lack of personnel with expertise in the area of emergency planning as obstacles to implementing recommended practices. Teachers also noted in the survey that they did not know what they need for equipment, so they don’t know if they are “prepared or not prepared well at all”.

A sense of security would be obtained if some changes were made to the physical structures or school environment. Modifications, like universal keys, doors that lock and unlock from the inside, a vestibule, or a window where visitors could be staged until fully identified would address the barriers suggested by the focus groups and increase teachers’ confidence about the decisions they are making during a crisis. Teachers acknowledged that these were financial issues for the district and would probably not be resolved.

Teachers attitudes and confidence were referenced several times in one of the focus groups. The participants who shared that their colleagues didn’t take the drill seriously considered that acting like a role model was the best way that they could influence their less confident or less willing peers. An idea shared in this open-ended question was, “If teachers are involved in the planning, we might have a better understanding of the districts’ vision and we might be able to better explain the seriousness of it to our colleagues.”
IV. DISCUSSION

The purpose of this two-phased, mixed-methods study, which utilized the sequential strategy, was to explore the perceptions of school crisis preparedness among Rhode Island public school teachers. This chapter detailed the findings, conclusions, and recommendations for addressing policy and practice, as well as those for future research.

Educators have a responsibility to provide students with rigorous curriculum in a safe learning environment. A review of school shootings since 1996 raises many questions about the safety of our children. If children are dying in our schools, why aren’t active shooter drills treated like fire drills?

While there are no federal laws requiring school districts to have an emergency management plan, 32 of 50 states reported having their own laws or policies that required emergency management plans (USGAO, 2007). The United States Department of Education (USDOE) and the Federal Emergency Management Agency (FEMA) do provide guidelines that support the creation and implementation of emergency management procedures (Allen, Lorek, & Mensia-Joseph, 2008).

This study explored teachers’ perceptions of crisis preparedness. Notable in the quantitative data were these findings: Suburban schools had a greater extent of implementing external building security measures than schools in urban and rural school districts. Elementary schools had a greater extent of implementing building access and identification security measures than high schools. Teachers from suburban and rural districts indicated a greater extent of
implementing the access and identification measures. Visitors report to the main office, keeping External doors locked, using a Buzzer system, and using Visitor badges than urban districts. All urbanicities, grade levels, and years of teaching experience groups reported less than moderate levels (40%) of Overall preparedness. Also in the data, all grade level groups and years of teaching groups reported high levels of preparedness regarding Conducting drills (66% was reported for each group).

National research on school emergency preparedness indicated that a majority of school districts across the United States had written emergency management plans, but the drills outlined in plans were not all implemented at the same rate. This lack of fidelity with regard to implementation could have negative repercussions, including reduced response effectiveness during an actual school emergency. The research further indicated the need to identify the barriers that prevented the implementation of safety measures (GAO, 2007).

Patterns and themes emerged when the qualitative focus group data were analyzed. Themes regarding the perceptions of emergency preparedness, and the barriers to teachers confidence in implementing school safety plan were: a desire for coherence among procedures throughout a district, a need for improved communication to provide clarity, a desire for a collaborative and an inclusive process for plan development, that included input from teachers, and can be communicated clearly and concisely to staff, and the need for more frequent training on all areas of crisis preparedness are needed in order for staff to feel confident implementing a crisis plan.
The results of this study may be utilized to create a context for addressing perceived barriers in addition to validating the need to provide comprehensive plan development, review and training for school employees.

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to evaluate disaster and emergency preparedness, response, and recovery in schools. *New Directions for Evaluation, 126*, 51–64.
Better Results in Less Time: Practical Rehearsal Techniques for Improving Your Orchestra

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Abstract

This paper presents effective and practical orchestral rehearsal techniques that can be adapted to ensembles ranging from advanced middle school orchestras through advanced collegiate orchestras. Rehearsal topics covered in this paper include: style, musicality, tone quality, intonation, ensemble issues, rhythmic accuracy, conducting, and general rehearsal advice. As rehearsal time is always limited, it is essential to achieve musical results quickly and effectively while addressing the educational needs of the students. This paper aims to help current and future teachers hone their rehearsal skills by discussing specific examples which address common rehearsal problems in each
of the musical areas listed above. This paper includes techniques for all stages of rehearsals: how to help students learn to play the notes, how to practice, and how to polish a piece for performance.

In order to discover the most effective orchestral rehearsal techniques, I interviewed twenty musicians who play eleven different orchestral instruments, reviewed current published research, and drew on my experience from eighteen years of conducting orchestral rehearsals. The results of this study are varied and broad in scope. They can be applied to orchestras and other instrumental ensembles of different levels.
Owning “Murse”: Professional Role Development in Male Nursing Students

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Owning “Murse”: Professional Role Development in Male Nursing Students

Abstract

Purpose: The purpose of this presentation is to both explain the longitudinal research process of this unique study and to provide qualitative research findings associated with what it is like to be a male nursing student. Historically, the profession of nursing has been dominated by females yet most recently males have increasingly enrolled in United States nursing schools. In 2014 9.1% of registered nurses in the U.S are men. Currently at Northern Michigan University, 15-20% of incoming nursing cohorts are male. Research suggests that male students may experience sexism from floor nurses, faculty, and patients and are more likely to drop out of nursing school. This tiered longitudinal qualitative study explored the experience of being a male nursing student through multiple means. IRB approval was granted at each step of this extended research process.

Methods: Initially, admitted nursing students who were male were asked to participate in a research study in which they submitted journal entries describing what it was like to be a nursing student and what it was like to be a male nursing student during each of their 5 semesters in the nursing program. A total of 8 participants were enrolled in this initial longitudinal inquiry. Content from their journals was analyzed to create a list of precise focus group questions which were then directed to different male nursing students using two focus groups. For example: a student journaled that he felt most women in his Pediatric/Obstetric nursing semester had an advantage with this content because they are female. This was his perception, and to better explore this view of gender-based curricular advantage a focus group question targeting gender advantages was crafted and presented to male nursing students not involved in the journaling phase of the research.

Results: Overall focus group data revealed both thematic similarities and differences when compared to the journal entry analysis of what it is like to be a male nursing student. Findings from all data suggested small relatively easy changes to our nursing program (like changing the color of the pink BSN applications) as well as more involved concerns.

Conclusion: This data increases the understanding of the educational journey for this unique population thereby potentially increasing their level of retention and male recruitment into the program ultimately producing a more diversified nursing workforce.

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Reflections on ubiquitous learning and MOOCs

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Reflections on ubiquitous learning and MOOCs

Anthony Cripps and Sean O’Connell

Abstract

Many university students in Japan are unaware of Massive Open Online Courses (MOOCs) and their potential for learning. This paper examines students’ reflections on their exploration of MOOCs and the concept of ubiquitous learning. Three groups of students (n=36) taking a ‘Teaching with Technology’ course at Nanzan University in Japan were encouraged to explore online courses provided by platforms such as Coursera, edX, and FutureLearn, as part of a semester-long research project. The aim of the project was to broaden the students’ knowledge of this growing field and they were given free rein to navigate the MOOC terrain in any way they wished. The students were also encouraged to consider the concept of ubiquitous learning and how it affects both teachers and students. Throughout the project each student kept a diary in which they logged both their MOOC use, and their opinions of the courses. Interviews, diaries, focus groups, reports, and questionnaires all provided rich data. The authors outline the design of the project, before discussing in detail the students’ experiences of mapping the MOOC terrain and their thoughts on ubiquitous learning.
Title

Meeting the needs of English teachers in Japan through intensive teacher-training workshops

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Meeting the needs of English teachers in Japan through intensive
teacher-training workshops

Anthony Cripps, Sean O’Connell and Richard Miles

Abstract

This paper examines the issue of providing support for English teachers in Japan. The presenters explicate how they are crafting a series of intensive teacher-training workshops which are designed to help improve in-service teacher training. In-depth interviews were conducted with in-service English teachers at junior high schools and senior high schools in Japan to ascertain their specific needs. The presenters outline their plans to provide pedagogical support for Japanese teachers of English in three ways; Creating practical lectures and workshops which will address the teachers’ pedagogical needs; Making an online teacher support center (TSC) which will house teaching videos, audio files, word files, and other support material for teachers to freely access whenever and wherever they like; Publishing practical handbooks based on the lectures and workshops.
1. English Usage Among Japanese Junior High School Teachers: Student Perceptions

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6. Abstract

   In Japanese public junior high schools, head English teachers are Japanese, and both their willingness and ability to teach English in English varies greatly. The advantages of using the target language to teach the target language have been well documented (Mart, 2013; Watanabe, 2008). This research analyzes the responses of 1000 third-year junior high school students from 10 schools in one school district in one Japanese city and offers a glimpse into how students interpret the use of English in the classroom. It specifically looks at the perception of three factors: the percentage of English vs. Japanese used within a class period; the amount of English interaction in the classroom; and the methods employed by the JTE to introduce new concepts or vocabulary. In Japanese junior high schools, pressure on teachers to teach for testing with time limitations, as well as textbooks written with translations may work against fully implementing a direct method style of teaching on a full-time basis. In a setting where for many of the students the classroom is their only contact point with English the data revealed that a majority of the participants perceived their JTE’s to have used English less than half of the time they taught.
Title of Submission:
“Packing Heat” Would I Work Where Teachers Carry Guns?

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In virtually every community of our country as well as places abroad people have been horrified by school shootings in recent decades. Questions are asked to which there are seemingly no rational answers for such senseless acts of violence. Shootings, bullying, acts of violence by mentally ill perpetrators, fractured and fragile people – no complete answer exists to explain it or stop it – nothing to take away the pain suffered in families, schools and communities that have been brought to their knees by these senseless acts.
In an effort to control the uncontrollable, we react with possible answers to this heinous scenario. While one community hires more school resource officers, another suggests arming undercover people on campus, installing metal detectors, visitor checkpoints, perimeter fencing – the list goes on. We must be vigilant. Lockdown drills are mandated along with fire drills – the entire safety gamut is implemented in an attempt to somehow “be ready” in case the unthinkable happens. We debate the basic issue of how to maintain a safe environment for our students, staff and communities, including malls, churches, concerts, and mass transit areas.

School shootings in this country date back as far as 1764 with the Pontiac School Rebellion. The deadliest school rampage occurred at Michigan Bath School in 1927. College campus shootings include, but are not limited to, the University of Texas (1966), CSU Fullerton (1976), and Virginia Tech (2007). With today’s instant media coverage, who can forget the horrible images of Columbine (1999)? The unthinkable has now become ever more present in our thoughts. We can no longer stay in a world of denial that ‘it won’t happen here’.

What have researchers learned specific to these school tragedies? In one Secret Service study, the Safe Schools Initiative Dec 1974 - May 2002, a common factor was found in the case of every shooter: before one shot is fired, they dream, draw, write, discuss, twitter, plan, gather, purchase, steal, construct, case, practice, dress, pack, load, transport and approach. The Secret Service study also found 93% of attackers engaged in some behavior prior to the attack that caused others to be concerned. These findings were further delineated into five stages of active shooters: (1) Fantasy Stage, (2) Planning Stage, (3) Preparation Stage, (4) Approach Stage, and (5) Implementation Stage (Marcou 2006).

One critical component of ‘readiness’ against the unthinkable lies in the realm of the citizenry themselves. Police officers on every street corner would still not be enough ‘protection’. Without alert eyes and ears of responsible citizens in a free society of government by the people, for the people and of the people, we will consistently fall short of enough ‘protection.’ When we specifically examine school environments, there is irrefutable evidence that school connectedness “was found to be the strongest protective factor for boys and girls to decrease substance abuse, school absenteeism, early sexual initiation, school dropouts, violence, and risk of unintentional injury...” (Center for Disease Control and Prevention 2009).

Given the remarkable Secret Service findings that 93% of attackers engaged in behavior that caused others to be concerned but not speak up, we must create and maintain environments of trust and safety where students and others feel safe to voice their concerns. While addressing issues such as bullying can be prudent, it addresses only one aspect of negative behavior. In a recent study of 7000 students across 50 states, data illustrated anti-bullying programs can have the opposite effect - some programs inadvertently teach students how to ‘bully without leaving evidence behind’ (Jeong & Lee 2013).
How about an approach on the flip side – the positive social skills which serve as an antidote to multiple negative behaviors? This type of approach requires developing a school climate and culture of trust, which does not happen by accident. It requires sound leadership and a plan of action that creates systemic change. Creating and maintaining a safe and trusting environment is intentional, deliberate and requires work with the entire staff. An atmosphere of teamwork from maintenance to transportation to the office staff and beyond is critical. Leadership is about modeling greatness and coaching others to be great – staff and students alike.

In schools in the Shasta Union High School District, as in other districts across 44 states and 7 countries, the EXCEL™ process (trademark of The Flippen Group) is utilized to develop, enhance and model leadership at the administrative, staff and student levels. This leadership training is not only utilized in the field of education but yields success in Fortune 500 companies, professional sports, the military and government entities as well. Identifying constraints within leadership teams in these private sectors directly affects the bottom line – a testament to how critical connectedness is. Leadership in its truest form is about serving others and helping them be successful. Relational capacity is the connectedness every school and team needs to create optimum trust and safety for highest performance.

Further conclusions drawn from the Secret Service found that schools were placing false hope in physical security, when they should be paying more attention to the pre-attack behaviors of students. Zero-tolerance policies and metal detectors "are unlikely to be helpful," the Secret Service study found. The researchers focused on questions concerning the reliance on SWAT teams when most attacks are over before police arrive [and the] profiling of students who show warning signs in the absence of a definitive profile..... Some final guidelines shared:

- Speak up, encourage others to vocalize concerns and take concerns and behaviors seriously.
- Know your students and look for patterns of behavior or changes in behavior indicative of violence.
- Foster an environment of respect and acceptance.

(Redding Police Department 2013)

Through strong leadership and relational capacity we can provide respect, safety and trust for the most optimum chance of learning and performance for all. Schools still need to be vigilant about safety plans and drills. They must include a solid foundation of relational capacity for the best chance of responsible citizenry of, by and for our students.

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Strategies and Techniques that Facilitate Transformational Learning
In Study Abroad Participants

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Abstract
This paper examines the Study Abroad experiences and transformative learning of students who participated in Sub-Saharan African program. Two education professors led Study Abroad Programs to Sub-Saharan Africa for fifteen years that were developed to challenge Western perspectives and encourage the examination of Western practices in an attempt to foster transformative learning. This paper identifies the transformational learning stages that occurred most commonly across the student experiences.

Introduction
As the need for a globally sophisticated citizenry and workforce grows, the demand for Study Abroad programs has emerged as one of the nine top trends in higher education (Dennis, 2003; Lane, 2003; Mapp, 2012). Consequently, there has been a 250% increase in the number of United States students completing Study Abroad Programs in the last ten years (Institute of International Education [IIE], 2005; Krisantas, 2005). Study Abroad Programs are defined as all educational programs that take place outside of the geographical boundaries of the country of origin (Kitsantas, 2004). Most Study Abroad Programs typically involve a combination of course work, demonstrations, experiential activities, and tours. Students may choose to participate in programs sponsored by a U.S. college/university, a non-educational organization, or directly in a foreign university; these programs may vary in length from a full year to a semester, or even a mini-semester. However, some reports indicate that students are increasingly interested in short-term (less than 8 weeks) program models (Arenson, 2003; IIE, 2005; Lewis & Niesenbaum, 2005). Students from both public and private institutions are participating in short-term and long-term Study Abroad Programs.

Background on Participating Universities
The University of Georgia was founded in 1785 and is one of the nation’s oldest state-chartered land and sea-grant institutions in America. With an enrollment of over 32,000 students, the university is ranked among the nation’s top public research universities. As the state’s flagship university, UGA has a critical role in preparing the next generation of leaders for global competence. To meet these challenges, UGA is committed to offering international Study Abroad experiences. The University of Georgia offers its students over 100 faculty-led Study Abroad group programs in addition to exchange programs. UGA is also a member of various consortia and is affiliated with organizations that offer many additional programs. However, students are not limited to these opportunities, and can select from many of thousands of programs offered by American universities or directly enroll in a foreign university for a semester, academic year, or summer. With more than 1,400 students participating in Study Abroad Programs each year, UGA ranks eighth in the nation among public university’s sending students abroad (IIE, 2004).

The Southern Africa Study Abroad Program is a short-term, three credit hour Adult Education course that is open to graduate students enrolled at the University. In years past, the program has accepted cohort groups from other universities, including North Carolina State, University of Arkansas, and Texas A&M. Established in 2000, the Adult Education Program continues to work in partnership with the University of Botswana and its faculty to sponsor educational conferences during the two-week duration as part of the scholarly exchange. The two-week intensive Study Abroad Program averages 10 to 20 students each year and has been offered eight of the past ten years. South Africa and Botswana are visited each time, with visits to the University of Botswana, University of Witswaterand, University of the Western Cape, as regular stopovers. Each year, other countries in Southern Africa are added in rotation to the tour and these have included Zimbabwe, Zambia, Lesotho, and Namibia.

The second university, Texas A&M University, founded in 1876 was Texas’ first public institution of higher learning. It is a land-grant, sea-grant and space-grant institution with an enrollment of more than 48,000 students on its main campus. It ranks as the nation’s fifth largest university with nine branch campuses throughout the state. It also operates branch campuses
globally in Qatar, Mexico City, Mexico, and Castiglion Fiorentino, Italy. It is one of two flagship universities in Texas and boasts a presidential library and an endowment of more than $5 billion.

At Texas A&M University, there are three types of Study Abroad Programs. The first type is a *Faculty-Led Program* that involves studying at a host institution with a Texas A&M professor and a group of students. The second type is a *Reciprocal Exchange program* where you enroll at a foreign university and earn A&M credit. The third type is a *Transfer Credit Program* in which students Study Abroad with an affiliated or non-affiliated program provider. These programs allow students hundreds of Study Abroad opportunities each year.

The Sub-Saharan Africa Study Abroad Program based at Texas A&M is a graduate only program where participants earned six credit hours in Urban Education. The two-week intensive program has featured six educational conferences in Soweto and Johannesburg, South Africa; Livingstone, Zambia; Banjul, Gambia; Dakar, Senegal; and Dar es Salaam, Tanzania. The conferences feature research presentations by professors from the participating African universities, selected student participants, and the program faculty leaders.

**Relevant Literature**

As colleges and universities in the U.S. invest heavily in Study Abroad Programs as a major initiative to internationalize their campuses, their emphasis has been on undergraduate education only (Salisbury, Umback, Paulsen, & Pascarella, 2009). While the infrastructures are elaborate and costly, the return is unknown (Rowan-Kenyon, & Niehaus, 2011; Tarrant, Rubin, & Stoner, 2014). The Institute for the International Education of Students (IES), an international consortium of study abroad schools, developed an IES Model assessment Practice, reports that there are 4 major areas that must be covered and routinely assessed by a Study Abroad Program: the student learning environment, student learning and development of intercultural competence, resources for academic and student support, and program administration and development (Black & Duhon, 2006). Of the four areas, the second, student learning and development of intercultural development is directly related to encouraging learning that transforms the way students think and look at the Study Abroad Programs.
Most Study Abroad Programs are designed for traditional college students. This means that students are restricted in their engagement and therefore their possible return benefits, since most decisions were pre-determined. The top four countries visited by U.S. students for Study Abroad Programs are the United Kingdom, Italy, Spain, and France, drawing 43% of the over 220,000 students who studied abroad in 2005. The destinations that are increasing most in popularity as study locations are China and Argentina, with South Africa ranking 18th in destinations for U.S. students. However, with the growth of service learning as a new focus for Study Abroad, developing nations are experiencing a rapid growth (Fuller, 2007; McMurtie, 2007; Salisbury, Umback, Paulsen, & Pascarella, 2009; Williams, 2008).

Higher education institutions are expecting that Study Abroad Programs will promote intercultural sensitivity (Fuller, 2007) as well as assist in diversifying their curriculum (Salisbury, Umback, Paulsen, & Pascarella, 2009). Additionally, workplace recruiters and prospective employers are placing importance on a job candidates’ international experience in the belief that such experiences provide students with a broad understanding of the emerging global workplace (Gardner, Steglitz, & Gross, 2009). The employers hold the position that employees with international knowledge will positively influence the company’s ability to compete in the global market and that the Study Aboard directly connects to the participants ability to work independently, undertake unfamiliar and risky tasks, identify new problems, and work effectively with others (Gardner, Stieglitz, & Gross, 2009).

Facilitating Transformative Learning in Study Abroad Programs

It is conjectured that Study Abroad Programs will increase social capital and civic engagement. In direct response to these facts, the practitioners designed their Study Abroad African Programs to encourage adults to contribute and connect to the disenfranchised learners they will be connecting to as part of their travels. It is of particular note that only one African country, South Africa, falls in the top twenty Study Abroad destinations. Of equal significance is that U.S. minorities, African Americans and Hispanics, are not represented proportionately in Study Abroad Programs. The importance of the programs being discussed at the workshop is that not only do they feature African countries that are not part of conventional African Study Abroad Programs, but also that the participants are non-traditional learners and minority students.
Since 2000 the adult educators who are facilitating this roundtable discussion have conducted 21 Study Abroad tours and have found that eight of the 10 phases of transformational learning that were set forth by Mezirow (1991) have been particularly pertinent to their students transformational experiences. The phases that have been identified as significant to Study Abroad Programs being discussed were: 1) disorienting dilemma, 2) critical assessment of assumptions, 3) recognition of shared transformative experience with other group members, 4) exploring options for new roles, 5) planning a course of action, 6) acquiring new knowledge and skills for new plans, 7) trying out new roles, and 8) integrating new assumptions based on new perspective.

Of the eight phases recognized by the Study Abroad facilitators as being present among the participant experiences, the most data were generated relative to the disorienting dilemma and using new knowledge to explore options for new roles. These two phases will be explored herein and the other six that were seen in the data will be discussed during the workshop.

While the overall Study Abroad experience is generally seen as a disorienting experience for participants, the adult educators that developed these programs discovered in working with other Study Abroad Programs, as both students and faculty, that the transformative learning experiences were varied and often short lived. The adult educators who are facilitating this workshop attempted to create a Study Abroad experience that would lead to global engagement and have a long-term impact on students. The phases of Transformative Learning seen in the participants have been routinely manifested by the participants in several different ways. The students, who are required to keep video and paper journals, were open in reporting their biases and fears regarding visiting the Dark Continent. One student, a twenty-nine year old Black male wrote: “I have several misconceptions about Africa. Africa is a continent, not a country, but somehow it is always imagined as one big country. When I picture Africa I see the hungry children with flies around them.” Other disclosures that revealed the students uninformed attitudes concerning modern African society included discussions on their fear of wild animal attacks, questions regarding what kinds of exotic and/or substandard foods they would be forced to consume, and speculations on what kinds of huts would serve as their housing. Using film and
readings, the participants discussed their commonly shared negative beliefs and toxic attitudes about the African continent, particularly those on Sub-Saharan African countries.

The disorienting dilemma, the first phase of Mezirow’s stages, occurs most often across the group and is perhaps both generally anticipated, but accepted by both the students and faculty in the Study Abroad Program. The disorienting dilemma begins in Part One of the experience (before leaving the U.S.) and continues throughout the study. However, the gradations of the disorienting dilemma vary according to the participant’s previous experiences and positionality. However, it was noted that the disorientation was most severe with American White student participants who had never been a minority race person over a sustained period. In addition to being unsettled by their new minority status, the White American students also reported experiencing discomfort, anxiety, and fear. At the other end of the same continuum were Black African American students who reported feeling a new level of comfort by the occurrence of not being a minority in an environment over a sustained period for the first time and the joy and newness of seeing “that all the people in charge look like me.” Moreover, another interesting point was that process of transformation was not a linear and rational one as described by Mezirow (1991). Even near the programs’ conclusion, participants were having disorienting dilemmas and using their prior experiences to skip the steps that involved shame and guilt, and were instead processing the new data quickly in order to resolve the conflicts and find their way to action. Moreover, this is in direct contrast to the Transformative Learning process as presented by Mezirow (1991). One student, a thirty-five year old African American mother of five school-aged children, wrote of what she referred to as her fourth disorienting dilemma, which occurred after visiting an orphanage. According to her, each previous dilemma was different and apart from the others in the type of experience and in the resulting learning and evolution. She wrote of her the overwhelming sadness that she imagined was the feelings of the AIDS orphans:

Do you have joy?
Joy in spite of? What is it to be alone?
To have your parents die?
To lose your childhood?
To wonder about your next meal…
Childhood is supposed to be a time of innocence
But happens when innocence is taken?

The participants who studied in South Africa quickly discovered the common ground of being unsettled by the recognition of the poverty and recent history of segregation that the participants encountered in South Africa. These viewpoints were most readily realized as they visited the Black townships, met with the children at the HIV/AIDS orphanages, met with political activists, and visited the Apartheid Museum. These sites and speakers were chosen with the intention of assuring that the students would not experience the Study Abroad Program as a tourist, but rather as an outsider exploring the inside (Hutchison, & Rea, 2011; Ripple, 2010).

During initial meetings before departing the U.S., the participants began to engage in self-examination of their feeling of guilt or shame regarding Africa, an assessment of their socio-cultural assumptions regarding Africa, Mezirow’s second, third, and fourth phases. However, after the disorientation, the next most often documented steps were the exploration of the participants’ options for establishing a proactive stance towards Africa and their desire to use new knowledge to implement courses of action, Phases Five and Six. One graduate student, a forty-five year old Cuban-American wrote in her journal:

A moment of sadness has come as I realize I am ending a journey, a journey that has been emotionally charged, and a journey that has challenged me. It has called into question that I am, who I want to be, and what I want my impact to be. The answers will go unknown until I return to my life. Does my life look different, a day, a month, a year, a decade from this day? This time? Do I remember and implement the lessons learned? Hopefully I will carry this with me forever. Hopefully I grow and learn with each moment and time. The tears fall, but this is not the end. It is a beginning. I have changed. I have begun again, a metamorphosis.

One absolute condition of the participation in the Study Abroad programs is the Full Heart, Empty Suitcase Principle, which requires that each student take two suitcases on their trip, one whose contents are to be left behind. According to the group decision, the contents can be books, clothing, toiletries, toys, or medicines. In most years, the groups have elected to visit orphanages that care for children whose parents died in the AIDS epidemic.

The second part of the Study Abroad Program, the Ground Experience, includes working with a Non-Government Agency (NGO), such as TALK (Teaching African Language and Talk Knowledge) to learn and to become oriented to the African culture (Hartford, 2011; Ripple,
This technique is employed to encourage critical reflection (Brookfield, 1995) which will support the process of transformation, and to avoid the students from being ugly Americans, a term used to refer to perceptions of arrogant behavior by Americans abroad. Using a theoretical frame grounded in Transformative Learning Theory, the adult educators work with the students to challenge assumptions, through critically reflecting in their journals (Hutchinson & Rea, 2011) and through daily debriefing group meetings. In the program, students are coached on the conversational styles of Southern African culture, informed how to avoid common cultural clashes, instructed on manners (issues such as proper dress, appropriate greetings, and African handshakes), and introduced to the Southern Africa cuisine.

An absolute directive of their Program is, Scholar Traveler/Not Tourist, so named as a constant reminder that the purpose is to learn and appreciate indigenous knowledge. The pursuit of African knowledge is operationalized by working with African scholars as subject matter experts, visits to women’s cooperatives, such as the Oodi Weavers in Botswana, research exchanges through a day of presentations by Study Abroad faculty and students, African University faculty and students, and community leaders.

Patten and Peters (2001) suggested that in planning an international program one should blend lecture and structured presentations to enhance the students’ academic experience. This recommendation was of utmost importance in planning the African Programs. As a result, the programs collaborate with institutions of higher education, junior-secondary school, and senior-secondary schools. An exchange of lectures and presentations, and discussions are engaged jointly with American and African scholars and students with local community agencies provide an outlet for additional educational activities. Learning activities include daily journaling, course lectures and presentations, tours (cultural, educational, and historical), and service learning.

There were several important adult education principles that were common across the programs being presented at the workshop discussion that distinguishes the programs as different from the typical undergraduate experience. For example, participants were allowed choices, particularly around events like church attendance or programs that might have been considered political in nature. More importantly, there were experiences built into the Study Abroad Programs that encouraged transformation. For example, there were regular debriefings, lengthy
question, and answer sessions with the speakers. In addition, the educators built in time for critical reflection and intermittently distributed questions that promoted critical thinking. Finally, the faculty modeled active sustained involvement with the staff and with the African programs visited, with the invitation extended to the participants to find a method that would foster their own independent association with the African communities included in the Program.

Conclusion

Overall Study Abroad Programs to Sub-Saharan Africa readily provide the conditions to enable a transformative learning experience for Study Abroad participants. These conditions include cultural, linguistic, and epistemological factors. However, what is necessary to optimize the chances for learners to experience transformational learning is to provide structured opportunities for reflection, engagement, and community – all of which – or any of which can trigger a shift in perspective about identity, racism, colonialism, and privilege. Tools that promote reflection can include free style journals, guided journal assignments that address assigned topics or questions that address cultural/regional differences, personal revelations, daily evening group discussions/debriefings, and post-return debriefings.

The developers of this will share Pre-Trip Strategies, Best Practices for the Field Experience, a Survival Tool-Kit Featuring Tales of Woe/Wonder, and Post-Program Essentials. The faculty will lead exercises that they have developed and share data from past Study Abroad trips to illustrate how Study Abroad Programs, if designed, implemented, and undergirded by transformative learning tenets can provide intense learning experiences. The facilitators draw upon postcolonial transnational perspectives (Dill & Zambrana, 2009) that help students deconstruct master narratives and work on developing new understandings of power, privilege, and nation-based positinalities. Primary data, collected from former participants, suggest that the effect of the students’ perspective transformation is enduring.
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Instructional and Assessment Tasks

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Abstract

Instructional and Assessment (I&A) tasks simultaneously address both assessment and instructional needs. Through these tasks, teachers can assess much more than whether or not students can answer questions or perform tasks; student conceptual understanding of numerous embedded notions can be assessed. As students respond to these tasks, they come to deeply understand and connect mathematical concepts. Herein, the assessment and instructional aspects of one rich mathematical task are presented through student work and responses.
Instructional and Assessment Tasks

Open-ended problem solving tasks are becoming increasingly commonplace in K-12 mathematics education. Students often enjoy the engagement with the problem and the interaction with other students in solving it. While, some of these problem solving tasks indeed contain much wonderful mathematics, the precise mathematical concepts embedded in such are often quite elusive. Often, the purpose for such tasks is to observe student problem solving heuristics more so than to assess their understanding of precise mathematical concepts or have them learn through such tasks. Nevertheless, these problem solving scenarios have important roles in mathematics education.

The authors of this paper make a distinction between open-ended problem solving and Instruction and Assessment (I&A) tasks. The latter possess a number of recognizable characteristics. First, they address conceptual understanding of precise mathematical concepts recognizable by both the teacher and the student; they are not simply problem solving experiences. Second, each task can be used to assess student understanding of particular mathematical concepts and also serves as a springboard through which the associated concepts can be investigated and learned. Third, I&A mathematical tasks can be generated to address any grade-appropriate mathematical concept. Fourth, most of these tasks can quite easily be differentiated to address students of differing ability levels. Fifth, I&T tasks address Krutetskii’s (1976) three processes of reversibility, flexibility and generalizability. Last, I&A tasks are solvable through multiple heuristics. Altogether, I&A tasks can be recognized as assessment tasks through which students simultaneously learn, or vice versa.

To provide a window into the application of I&A tasks in the classroom, this paper analyzes transcripts of student work on a mathematical I&A task. In later discussions, this paper
provides some guidance on implementing these tasks in the classroom.

**A Sample I&A Task**

The following is a truncated graph of a polynomial. (All the behavior near the $x$-axis is shown.) There is no scale for the $y$-axis. Write the equation of a polynomial function that would produce this truncated graph.

This task encompasses numerous notions associated with the concept of polynomials including: the definition of polynomial functions and their continuous nature; the role of the leading coefficient and the degree of a polynomial on the graph’s extreme behaviors; the definitions of factors, linear factors, and a factored polynomial; the graphical effects of roots of odd and even multiplicity; and the association of zeros, roots, factors, and $x$-intercepts between the polynomial function and its graph. Beginning with concepts from introductory Algebra, this task intersects PreCalculus through the generalized solution $y = (x - a)^{odd}(x - b)^{even}(x - c)^{odd}(x - d)^{even}$.

This specific task required that students: *reverse* their thinking about polynomials and factoring in a direction counter to what they typically experienced during instruction; be able to *flexibility* solve a problem in more than one way and to be able to understand more than one solution; and *generalize* from specific cases and make deductions from given or known facts.

Notably, all students in this study were from the same high school class under the same teacher and had previously investigated polynomial functions and graphical/algebraic representations in their high school pre-calculus class and had all experienced identical content, instructional practices, and extended problem solving challenges. The classroom teacher assessed the task as both challenging to most students and doable by all. (See Bossé, Adu-Gyamfi, & Chandler, 2014 for a more detailed description of the associated study.)

**Student Solutions**
All students were given up to two hours to complete the three tasks; most took less time (10-90 minutes) as they were either able to solve the problem quite quickly or struggled to persevere through the problem solving process. The following are syntheses of transcripts of student activity and are addressed below in two parts: assessment and learning.

**Assessment**

**Student 1:** (Average to weak student holding a course grade of C. Teacher believes that he will be able to do the task, albeit with a struggle.) With calculator in hand and through trial and error, he enters values and polynomial functions, trying to create a correct graph. *I don’t know what to plug in [the calculator].* (Prolonged pauses.) *I don’t know what “truncated graph” means? We need to know what happens above and below what we see on the graph.* (Prolonged pauses.) *I know what polynomial means. It’s something like \( x^2 + 2x + 3 \). And I think I know what a factor is. 5 is a factor of 10. But I’m not sure that I know what a “polynomial in factored form” means.* (Numerous prolonged pauses and trial and error.) *I keep trying to plug numbers in for a, b, c, and d into \( y = ax^3 + bx^2 + cx + d \), but nothing seems to work. Am I supposed to know how to do this?* (Prolonged pauses.) *I can graph a function by plugging it into my calculator, but I don’t think that the calculator can take a graph and give you the function. Plus, why would you want to do this? The graph is the answer to a problem.*

After a protracted period of time and beginning to demonstrate some degree of exasperation, he is shown by the interviewer \((x - a), (x - b), (x - c), \) and \((x - d)\) as factors. However, he is unsure as to how these are connected to the graph. After another significant duration, he is surprised when told by the interviewer that \( y = (x - a)(x - b)^2(x - c)(x - d)^2 \) represents a possible solution and tries to rewrite it in the form \( px^n + qx^{n-1} + \ldots + rx + s \), which he purports to better understand. He shows no understanding that the leading coefficient has to be positive.

The teacher speaks to the researcher in a private sidebar. *I really expected him to do better. I knew he would struggle some... We covered this material in class and he passed the tests. I am surprised that he didn’t even really know the vocabulary and what linear factors are or how they work in the polynomial. I guess that I learned a lot about him. I’m not sure why I did not see this before. We’ve got a lot of work to do.*

Student 1 demonstrates that he perceives the polynomial function and graph as mostly disjoint and disconnected. He does not: recognize zeros on the graph; understand the corresponding \((x – __)\) binomial in the factored form of the polynomial; or consider the far-left
and far-right behavior of the graph in respect to either the degree of the polynomial or the sign of
the leading coefficient. He only recognizes “polynomial” in the form \( y = px^3 + qx^2 + rx + s \).
Through his activity on this task, the teacher recognizes that: the student has significant gaps in
his knowledge; more concepts seemed to be missing then learned; and that much remedial
instructional effort will be needed.

**Student 2:** (Average to strong student holding a course grade of C. Teacher
believes that she will be quite successful with the task.) She writes down
expressions (i.e., \((x + 2)\times(x + 1^2)\times(x - 1)\times(x - 2^3), (x + 2)\times(x + 1^2)\times(x - 1)\times(x - 2^3)\)), and \(-3x^3 + 2x^2 + 2x + 3\), superficially analyzes them, and then attempts to graph
the function. (Brief pauses.) *I know that a and b represent negative numbers, but
I don’t know if they should be written as negative a and negative b.* She
repeatedly attempts to graph polynomials entered in general form and some in
factored form. (Brief pauses.) *I can see that the line passes through a and c and
that x ‘squareds’ hit the axis at b and d. But I don’t know what that does to the
equation. (Brief pauses.) I think that I need to use a, b, c, and d and graph
something like ax^3 + bx^2 + cx + d.*

After some investigation… *I know that we need to put a, b, c, and d in the
parentheses, but I’m not quite sure how they go in. I know how to use numbers in
an equation, but I’m not sure how to use letters other than x, or how to change
those into numbers. My calculator won’t let me graph letters.* After more
investigation, she points to sets of parentheses on the paper. *I know that some of
these are supposed to be squared somewhere. I don’t know if it is \((x – \text{something})^2\) or \((x – \text{something})^2\). I think it is \((x + 2)\times(x + 1^2)\times(x - 1)\times(x - 2^3)\).*
Her continued investigation (with numerous brief pauses) is full of inquisitiveness
and problem solving, without any semblance of frustration.

The teacher comments to the researcher. *Well, she did pretty well. But I
see that she still has some difficulty with understanding linear factors for positive
and negative roots and where the exponent goes. I didn’t expect these little
concepts to give her trouble. I thought she knew this.*

Student 2 recognizes a number of aspects of the graph itself including: the far left and far
right behavior of graphs of polynomial functions; the association of zeros, roots, and x-intercepts
between the graph and the equation; and the nature and effects of roots of odd and even
multiplicity. However, she still exhibits knowledge gaps regarding: the nature of linear factors
together with their multiplicities; whether the factors should be \((x – a)(x – b)\) or \((x + a)(x + b)\);
whether the exponentiation should be inside or outside the parentheses; and the interconnection
of zeros and intercepts on a graph and zeros and real roots of a function. The teacher recognizes
the particular concepts that need to be remediated for this student.

**Student 3:** (Very strong student with an A+ average in the course. The teacher
expects that he will fully master all the concepts in these tasks.) (Quite fluently,
with only a few very brief pauses – more as a flow of consciousness.) I always
know what a polynomial in factored form looks like – or at least what its x-axis
and far out behaviors look like. But I can’t picture what the graph of a
polynomial in general form (like \( ax^3 + bx^2 + cx + d \)) would look like. This
polynomial is of even degree with a positive leading coefficient. \( a, b, c, \) and \( d \)
represent the zeros of the function. Writing \( x–a, x–b, x–c, \) and \( x–d \) inside the
parentheses produces the same zeros. But we need to also consider the exponent
outside of each parentheses and the multiplicity of the zeros at those values. The
x-intercepts (bouncing off or passing through) show that some zeros are of even
and odd degrees. So, this function must be of degree at least 6. (Very brief
pause.) I think that we can start with \( y = (x – a)(x – b)^2(x – c)(x – d)^2 \). But since
we are only looking at the x-axis and we don’t care what goes on above and
below, \( y = (x – a)(x – b)^2(x – c)^3(x – d)^4 \) could also work. (Very brief pause.) In
fact, \( y = (x – a)^{\text{odd}}(x – b)^{\text{even}}(x – c)^{\text{odd}}(x – d)^{\text{even}} \) could be the answer.

The teacher comments to the researcher. He’s really bright and always
gets it – sometimes even before I teach it. He seems to see both the big picture
and the more minute concepts. I often wonder if his math is better than mine; I
sure know that it will be in the future if he continues. But it is so easy for him, I’m
afraid he will get bored.

Student 3 has a strong understanding of mathematics in the task; understands the salient
ideas from the graph and connections between the graph and the equation; operates on the given
function through either the symbolic or graphical representation; and mentions concepts and
attributes associated with one representation in context of another (e.g., the “roots of the graph”
and “multiplicity of the x-intercepts”). The teacher recognizes that this student has not
sufficiently challenged and decides to provide additional targeted I&A tasks.

The teacher was surprised at the precise student understanding, misunderstandings, and
knowledge gaps that were observable through the task and how the task prescribed precise and
differentiated instruction for each student.

**Learning**
**Student 2:** Approximately 45 minutes later... This polynomial has to be raised to an even power to get this left and right behavior. But, how does that work with the parentheses? (A significant pause with silent thought.) I’m gonna use some numbers instead. She decides to graph \( y = (x + 3)(x + 1)(x - 1)(x - 3) \). It does not produce the correct graph and she attempts to graph other cases. Through protracted trials, she recognizes that \( y = (x + 3)(x + 1)(x - 1)(x - 3) \) implies \( y = (x - a)(x - b)(x - c)(x - d) \).

After more investigation (through a number of pauses) ... I think that there is something here about single and double roots. I think that double roots bounce. Or is that single roots? (Brief Pause.) I think that we need exponents to make some of these bounce. When the graph correctly passes through the desired zeros, she demonstrates uncertainty as to if a double root at \( b \) is accomplished by \( (x - b)^2 \) or \( (x - b)^2 \). (A thoughtful, brief pause.) After successive trials and random variations ... I think it is \( (x + 2) \times(x + 1)^2 \times(x - 1) \times(x - 2)^2 \). After more thought ... It took me a while to figure out why \( (x + a) \times(x + b)^2 \times(x - c) \times(x - d)^2 \) wasn’t right; I needed \( (x - a) \times(x - b)^2 \times(x - c) \times(x - d)^2 \). Hey, I think that \( (x - a)^{odd} \times(x - b)^{even} \times(x - c)^{odd} \times(x - d)^{even} \) works.

The teacher responds to the researcher. She got it! She figured it out – all by herself. I took quite a few days to cover some of these ideas in class. I really thought the class got them – or at least as well as each could. Then, with this one activity she got it. It took her less than a class period; it was time worthwhile.

The progression from Student 2’s previous transcripts to this transcript (over the total span of about 90 minutes, with no assistance from the teacher) demonstrates significant learning of concepts and the formation of connections between the two representations. The teacher was pleased with the student’s progression of learning through the I&A task. Extended transcripts reveal that Student 1 also learned many of the mathematical concepts in the task, but at a slower pace than Student 2. The teacher believed that a simpler version of the task would have led to more efficient learning, decided to create concept-similar tasks that would scaffold learning for this student (e.g., begin with quadratic functions), and decided to allow this student to work with another student on future I&A tasks to diminish potential frustration. For Student 3, already understanding the mathematical concepts in the task, the teacher decides to create parallel I&A tasks (using transcendental functions) to more appropriately challenge the student.
The Instructional & Assessment task served to both assess student understanding and provide them a conduit to learning. This led to the teacher being better able to adjust instruction according to student needs.

**Discussion**

Due to their nature of addressing precise, interconnected, mathematical concepts, I&A tasks may seem more difficult than more traditional classroom instructional questions. Classroom time must be planned to complete these I&A tasks and for students to realize their benefits. Both students and teachers need sufficient time to benefit from these activities. While weaker students benefit from I&A tasks, they do so at a slower pace than others. Because they are given little guidance toward completing the task and the tasks are unusual, they initially struggle with these tasks; however, experience leads them to appreciate these tasks. It is recommended that teachers scaffold I&A tasks to best meet the student’s needs, sequence the problems to begin with those that are more brief before continuing on to more lengthy tasks, and allow them to work with others. I&A tasks can also be readily modified to be deeper and more challenging for stronger students. These students often enjoy the challenge of I&A tasks, prefer them more frequently, can learn through them independent of instruction, and can be asked to create and solve their own I&A tasks.

For any mathematical topic at any level, I&A tasks are available. To demonstrate that these tasks are relevant to all grade levels, a few additional tasks are provided. Notably, for each example, a companion example is provided to differentiate the problem to be either more or less mathematically complex.

**For Elementary Grades.**

1. In the following examples, fill in the blank with an appropriate value and explain why your answer works. Then consider more possibilities for each blank and see if you can find a pattern.
I&A TASKS

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a. Fill in the blank with a fraction so that the result of 8 ÷ ___ is larger than 8.
b. Fill in the blank with a fraction so that the result of -8 ÷ ___ is less than -8.
c. Fill in the blank with a decimal number so that 8 × ___ is less than 8.
d. Fill in the blank with a decimal number so that 8 × ___ is less than -8.
This task can be amplified by replacing the numeral 8 with a variable.

2. Explain the necessary conditions for the variables such that \( a \times 10^b > c \times 10^d \).
This task can be simplified by using numbers such as \( 1.35 \times 10^{32} \) and \( 9.76 \times 10^{-32} \).

3. Find four evenly spaced numbers between -3.305 and 2.027.
This task can be significantly amplified into a form such as: For \( a \) and \( b \) as positive rational numbers, find \( c \) evenly spaced numbers between \( -a \) and \( b \).

For Middle Grades.

1. Explain whether or not each of the following numbers is rational or irrational:
1.23456789101112…; 1.23456789101112; 1.234234234…; 1.122334455667….
This problem can be enhanced in this way: Write three numbers, in decimal form, which are all irrational numbers and explain why each is so.

2. The long division problem, \( \overline{0.ab \cdots} \), is most usually solved by moving the decimal in the divisor and dividend. Use fractions to explain why \( \overline{ab \cdots} \) is an equivalent expression to solve.
This task can be simplified by using numerals as digits.

3. Find the number that is 3/7 of the way from 2/3 to 3/4.
This task can be amplified by considering: Find the number that is \( a/b \) of the way from \( c/d \) to \( e/f \).

High School.

1. The following functions are equivalent, but in different algebraic forms. What information regarding the function is revealed or hidden in each of the forms?
\[
f(x) = 2x^2 + 3x + 1 \quad g(x) = x(2x + 3) + 1 \quad h(x) = (2x + 1)(x + 1)
\]
This task can be simplified by providing options such as: show it is a quadratic; shows its factors; reveals its roots; reveals its \( y \)-intercept; shows that it is concave up.

2. Explain why the accompanying function and graph are inconsistent.
\[
f(x) = \frac{(x-2)^2(x+1)}{x^2(x+1)}
\]
This task can be simplified with polynomial functions.

3. For \( f(x) = 2x+3 \) and \( g(x) = (x-3)/2, f(g(x))=g(f(x)) \). Is it usually the case that \( f(g(x))=g(f(x)) \)? Explain why or why not.
To increase the complexity of this task: Explain necessary conditions for \( f(g(x))=g(f(x)) \) to be true.
4. For \( \_\_x + \_\_ = \_\_x + \_\_ \), fill in the blanks such that the equation has: one solution; no solution; an infinite set of solutions.
To increase the complexity of this task, create an equation including a quadratic and a linear function.

5. Without converting the graph to an equation, explain everything you can about the graph and its respective function.
To simplify this question, use a polynomial function.

**Conclusion**

It is hoped that this brief introduction to Instructional and Assessment Tasks will evoke interest in them and encourage teachers to try them in their classrooms. The authors have used these tasks with great results. We hope others see their worth and enjoy them also.

**References**


BENEFITS & EFFECTS OF PNF STRETCHING IN THE COOL DOWN PHASE OF EXERCISE

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Abstract

PURPOSE: The purpose of this study was to investigate the effects of a 4-week proprioceptive neuromuscular facilitation (PNF) stretching training program compared to a 4-week static stretching training program during the cool down phase of exercise, followed by comparing and analyzing the resulting differences in range of motion (ROM), specifically the extensibility of the hamstring. METHODS: 25 volunteers (male = 13; female = 12; 20.44 ± 1.32 years; BMI 23.65 ± 2.01 lb/in²) were randomly assigned into either PNF stretching experiment groups or static stretching control groups. Before and after the stretching intervention, we determined the maximum extension ROM in the right (R) hamstring. Subjects’ active ROM was measured by use of angular degrees by means of a goniometer at the knee. RESULTS: The PNF group showed a statistically significant increase in hamstring ROM (preROM = 124.00° ± 12.767°, postROM = 136.08° ± 8.301°; t(12) = 4.416, p = .001). The static stretching group showed an increase in hamstring ROM, although not statistically significant (preROM = 136.58° ± 15.012°, postROM = 142.33° ± 12.235°; t(11) = 1.960, p = .076). CONCLUSION: We conclude that a 4-week PNF stretching training program in the cool down phase of exercise increases ROM and is superior to the effects of static stretching.

Key Words: PNF; cooldown; exercise; stretch
Introduction

Muscle flexibility and extensibility is a pertinent topic among competitive athletes, particularly those displaying either hypo-mobility or hyper-mobility. Athletes who display either disposition are at a greater risk of suffering a non-contact injury, such as a muscle strain or joint sprain. Additionally, overly tight muscles, if left unattended, will, over time, result in postural change and compensation due to a lack of available mobility and muscular flexibility that are needed to perform basic mechanical movements. Although genetics plays a significant role, muscles are highly trainable, and significant improvements in flexibility can be made through the implementation of various stretching modalities. The most popular of modalities tend to be static stretching, dynamic stretching, and proprioceptive neuromuscular facilitation (PNF) stretching. It is worthy to note that there is an ongoing debate about what exactly is meant by “flexibility gains” throughout literature. Is the muscular tissue actually lengthening, or is a greater tolerance to stretch being developed?

Folpp, Deall, Harvey, and Gwinn (2006) performed a study that was aimed at determining whether a stretch program would produce positive change in muscle extensibility (making the muscle longer) or produce a greater stretch tolerance. They found while there was no gain in muscle extensibility, there was significant positive change in stretch tolerance. Folpp et al. (2006) emphasized that investigators need to distinguish between extensibility and tolerance, because there is an immense difference. The difference is such that clear reference must be stated in each study. Stretch tolerance is, more often than not, mistaken as extensibility gains, when the reality is that stretch tolerance simply means that one has merely trained the Gogli tendon organs and muscle spindles to tolerate a greater tension and stretch put on the muscle. Additionally, Weppler and Magnusson (2010) argue that in order to gain true muscle
extensibility, one would need to be following a strict regimen of stretching five days a week for at least 8 weeks before any improvement in extensibility would be noticeable. Simply stated, true increases in extensibility of the muscle take an incredible amount of disciplined stretching before any form of noticeable change would begin to occur. With that being said, it is important to note that for the purpose of this research, flexibility gains will be referring to a sensory end point, or a level of stretch tolerance, within the subjects.

Methods

Study Participants

Twenty-five subjects voluntarily participated (male = 13; female = 12) (mean age = 20.44 ± 1.32 years) (mean BMI = 23.63 ± 2.01 lb./in²) in this study. The subjects were all competitive collegiate NAIA division II basketball athletes. Of the participants, six were freshmen, three were sophomores, 11 were juniors, and five were seniors. Throughout the pre-trial testing, the average degrees of ROM the athletes displayed in the PNF group was 124° (preROM = 124.00° ±12.767°), while the static group displayed an average ROM of 136° (preROM = 136.58° ± 15.012°).

Pre-Trial & Post-Trial Testing

Participants were randomly assigned to either a PNF stretching experiment group or a static stretching control group. Each participant’s maximum hamstring extensibility ROM was measured prior to the stretching regimen by means of a goniometer that was used to capture an accurate recording of an active knee extension while the hip was in 55° flexion. To capture the maximum ROM, the participants were instructed to lie down in the supine position, making sure their left legs were completely straight while their right knees were in a state of flexion. The participants were then given heavy, stiff bands and were instructed to place the bands behind
their right knees. Using the bands, the participants were instructed to pull their right knees up to their chests, until the angle of flexion at the hip measured 55° by means of a goniometer. Holding this position, while ensuring the left legs remained straight, the participants were instructed to actively extend their right knees until they reached a maximal sensory end point. The participants’ maximum active ROM was measured by use of angular degrees by means of a goniometer at the knee.

After the participants had performed the prescribed stretching exercises for four weeks, the participants’ maximum ROM was then re-evaluated. The procedures for the post-trial testing were executed in exactly the same manner that the pre-trial testing was conducted.

**Intervention**

Following the pre-trial testing, the subjects were given stretching prescriptions according to their group and were instructed to execute the exercises after every practice and game for four weeks.

The PNF (experiment) group was prescribed two different stretches that targeted the hamstrings, quadriceps, and hip-flexors. The first was a 10-second isometric contraction (50% maximal contraction) of the hamstring in an already extended state, followed immediately by 3-4 seconds of relaxation. During the relaxation phase, the partner would gently lower the participant’s leg all the way to the floor before performing the stretch again. This process of a 10-second contraction followed by 3-4 seconds of relaxing was repeated three times on each leg.

The second stretch that was prescribed for the PNF group also utilized an isometric contract-relax technique with 10 seconds of a 50% maximal contraction of the quadriceps, followed by 3-4 seconds of relaxing, during which the partner would gently lower the participant’s foot to the floor before performing the stretch again. This process was also repeated.
three times on each leg. For this specific exercise, it is vital to understand that the pelvis must be in a neutral position in order for this stretch be of maximal efficacy. This is because, as reported by Witvrouw, Lysens, Bellemans, Cambier, and Vanderstraeten (2000), a significant population of the athletic demographic display overly tight quadriceps and hip-flexors. In order to achieve a neutral state of the pelvis, the participants were instructed to apply a significant amount of pressure to the stretch-subject’s hips by sitting on them, forcing their pelvis into a neutral state (Figure 1).

The static (control) group was prescribed a total of five different traditional static stretches that targeted the hamstrings, quadriceps, hip-flexors, groin, glutes and calves. The participants were instructed to hold each stretch for 30 seconds, on their own count.

**Statistical Analysis**

Before the study was conducted, the significance level was established at $p < 0.05$. Data was analyzed using the statistical software SPSS version 23. The independent variables are the experiment group and the control group. The dependent variable is hamstring ROM. We compared the initial baseline scores to the final baseline scores in each group. Paired sampled t-tests were used to determine the mean between the experimental and control groups. Sample size was pre-determined by the number of athletes on the respective basketball teams.

**Results**

The average increase in ROM for PNF stretching in the cool down phase of exercise was greater than the average increase in ROM for static stretching in the cool down phase of exercise. The overall difference between PNF and static stretching was statistically significant; the mean improvement for the PNF group was $12.07^\circ$ of ROM (preROM = $124.00^\circ \pm 12.767^\circ$, postROM = $136.08^\circ \pm 8.301^\circ$; $t(12) = 4.416$, $p = .001$), while the mean improvement for the static group was
5.75° of ROM (preROM = 136.58° ± 15.012°, postROM = 142.33° ± 12.235°; t(11) = 1.960, p = .076) (Figure 2). Differences between males and females were noteworthy as well, with males showing greater increases in ROM (Table 1). In relation to the number of times participants executed their prescribed stretching exercises, the difference between the PNF group and the static group showed that those who participated in the exercises four times or more per week displayed greater increases in ROM, especially those in the PNF group, whose improvements were, on average, greater than those in the static group (Table 2). Finally, tests were conducted in order to see if any sort of correlation between ROM improvements and year in sport presented itself. Those who were freshmen and sophomores showed greater increases in ROM than those who were juniors and seniors, especially those in the PNF group, although not statistically significant (Table 3, Figure 3). Based on the statistical evidence, I must reject the null hypothesis that states that post-workout PNF contract-relax stretching will not yield more significant gains in flexibility than post-workout static stretching.

**Discussion**

This present research began with a hypothesis stating that PNF stretching in the cool down phase of exercise would yield more significant increases in ROM than static stretching in the cool down phase of exercise. Foehrkolb (2013) discussed the advantages and disadvantages of static stretching, with one of the advantages discussed being the apparent increase in flexibility that is displayed if it is performed on a regular basis. Further, Foehrkolb also supported the notion of using static stretching as a primary means to generate an increase in flexibility over time. While the static stretching group did show increases in ROM, supporting Foehrkolb, it was not statistically significant. In comparison, the PNF stretching group showed very significant increases in ROM as seen in Figure 1.
PNF stretching has shown itself to be highly effective in producing gains in flexibility. Osternig, Robertson, Troxel, and Hansen (1990) found that the antagonist contract-relax (ACR) technique produced significant increases in hamstring electromyography (EMG) activity: 89% - 110% more in participants, while also producing 9% - 13% greater ROM in the knee before the participant communicated a sensory end point of restriction.

Additionally, Mayer, Pederson, and Simons (2005) performed a study on PNF stretching, specifically the contract-relax (CR) technique, with 20 female soccer players who were separated into a control group that performed self stretching or into the experiment stretch group that performed prescribed PNF stretches three times per week for three weeks. Mayer et al. (2005) found a significant increase in flexibility and ROM in the experimental stretch group when compared to the control group, which actually displayed a decrease in average flexibility and ROM.

The present research methodology utilized a submaximal contract-relax technique for the PNF group, similar to that of Feland and Marin (2004) and, Sheard and Paine (2010), whom also utilized a submaximal contract-relax technique. Feland and Marin conducted a randomized controlled clinical trial in which they recruited 72 college-aged men who were deemed healthy, but did display qualities of overly tight hamstrings. Feland and Marin (2004) found that submaximal contract-relax PNF stretching displayed the most gains in flexibility when compared to a maximal contract-relax group. Additionally, Sheard and Paine found that the peak positive change in ROM occurred at about 65% of the participants’ maximal voluntary isometric contraction. The contraction of around 65% elicited an increase of participants’ ROM by an average of 13.3 degrees. Once 65% of the participants’ maximal voluntary contraction was surpassed, positive change in ROM began to gradually decrease. In fact, participants who exerted
100% of their maximal voluntary isometric contraction experienced a negative change in their ROM by an average of about 6 degrees. It should be noted, that in the present research, the force of the participants’ contractions were not quantitatively measured throughout the trials; although participants were instructed to perform a contraction of what they believed was near 50% of their maximal contraction, it cannot be assured that the goal of 50% was accurately performed. Similar to Feland and Marin and Sheard and Paine, the participants elicited strong increases in ROM when they performed submaximal contractions throughout the contract-relax cycles.

Additionally, for this present research, the stretching exercises were performed strictly in the cool down phase of vigorous exercise. Although further study is necessary, it is believed that performing active contract-relax PNF stretching in the cool down phase of vigorous exercise, while the muscular tissue is still in a state of plasticity, will yield the greatest results in terms of ROM.

However, it should be noted that too much flexibility can be detrimental to performance. Decoster, Bernier, Lindsay, and Vailas (1999) performed a study in which they examined hypermobile lacrosse athletes and non-hypermobile lacrosse athletes across over the duration of an entire competitive season. Although no statistically significant data presented itself, they did see a higher rate of ankle joint injuries in the hypermobile athletes and a higher rate of muscle strains in the non-hypermobile athletes. These results, although not statistically significant, point to the notion that there is a fine balance between overly tight muscles resulting in strains and hypermobility resulting in joint-instability related injuries. It is necessary for more research to be done in this area to reach a solid conclusion.

Additionally, as displayed in Table 1, there was a slight difference between males and females. Although not statistically significant, the males in the PNF group did show slightly
greater increases in ROM than females in the PNF group. What is particularly interesting is the stark difference between the males’ increased overall ROM in the static group and the females’ decreased overall ROM in the static group (males = +10.66°, females = -1.66°). However, it should be noted that three of the male participants leisurely shot baskets for 10-15 minutes immediately prior to their post-trial testing. Whether this was an anomaly or not is unclear. What is clear is that more research regarding the gender differences in stretch preference is necessary.

Furthermore, tests were conducted to draw out any correlation that could be seen between the frequency of executing the prescribed stretches and an increase in ROM. As displayed in Table 2, participants who executed the prescribed stretching exercises at least four times per week showed the greatest increases in ROM. While the static stretching group displayed an average increase in ROM of 6.51° for participants who executed the stretching exercises at least four times per week, the PNF group displayed nearly double that with an average increase in ROM of 12.83° for participants who executed the stretching exercises at least four times per week. Even the participants in the PNF group who participated only 2-3 times per week showed drastic increases in ROM, displaying an average increase of 11.42°, while the participants in the static group that performed the stretching exercises only displayed an average increase of 2.01° ROM.

Furthermore, the relationship between the increases in ROM and the year of participation in sport the participant was currently in is noteworthy. As displayed in Table 3, freshmen and sophomores displayed the most significant increases in ROM. While juniors displayed less of an increase, although moderate, the seniors displayed the least increase in ROM. This could be due to the number of participants in the senior category, or it could be that juniors and seniors are much closer to reaching a maximal increase in ROM over the span of their collegiate careers.
than their underclass counterparts. Equally noteworthy was the fact that the seniors in the static stretching group displayed a greater increase in ROM than the seniors in the PNF group, which is contrary to evidence in every other category. However, an accurate explanation of this will require further research.

**Limitations**

Throughout the duration of the present study, a number of things presented themselves as being potentially unstable in regards to the methodology and procedures. The first limitation that needs to be addressed is that athletes need clear, firm instructions about the proceedings of pre- and post-testing trials. For example, three of the male participants leisurely shot baskets for 10-15 minutes prior to their post-testing trial. Although this didn’t make a *significant* difference in the outcome of the data, it certainly changed what their original degree of ROM would have been. Thus, clear communication of instruction in regards to the proceedings of pre- and post-trials is absolutely necessary in order to ensure the most accurate data is recorded.

Additionally, it would have been highly preferable to have a form of computer-mechanized measurement to record the degrees of ROM. Although the recruitment and use of a goniometer sufficed, it could not provide the most accurate recording of ROM. Additionally, a more reliable process for ensuring the angle of the hip maintains a 55° state of flexion is needed. While the use of a stiff band sufficed in recording fairly accurate data, it would have been much more preferable to have a mechanism that would ensure a constant state of both the pelvis and the hip that would enable the investigators to record very accurate data.

Finally, the ability to accurately measure 50% of the participants’ maximal contraction of the hamstring would have been beneficial. Telling the participants to elicit a 50% maximal contraction without being able to measure the force they are exerting is not precise enough.
Thus, the study is unable to support that 50% of a maximal contraction is preferable to 75% of a maximal contraction while performing sub-maximal contract-relax PNF stretching exercises.

**Conclusion**

This present study has produced evidence showing that just four weeks of submaximal PNF stretch training will have significant effects on improving ROM. While it is unclear whether a neurological sensory end point is being trained or the muscle is indeed gaining extensibility, levels of ROM have improved vastly for the participants within the experimental group of the present study. Finally, the evidence has presented a clear conclusion that submaximal contract-relax PNF stretch training is highly preferable to traditional static stretch training in regards to ROM improvements.

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References


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   This paper provides an overview of the merits and limitations of Guskey’s PDEM (Professional Development Evaluation Model) based on a study investigating faculty perspectives of a multi-year professional development program in a large urban community college system in the American Mid-west. The mixed method research design included community college faculty survey and focus group data.

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The merits and limitations of Guskey’s PDEM for evaluating community college faculty professional development

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Abstract

This paper provides an overview of the merits and limitations of Guskey’s PDEM (Professional Development Evaluation Model) based on a study investigating faculty perspectives of a multi-year professional development program in a large urban community college system in the American Mid-west. The mixed method research design included community college faculty survey and focus group data.

Key words: Adult education, Classroom practices, Faculty attitudes & beliefs, Faculty professional development; Higher education, Instructional reform; Professional development planning, implementation, and evaluation; Program evaluation; Student outcomes; Teaching and learning; Training evaluation

Introduction

Once viewed among educators as a lifelong learning process with the purpose of improving instruction, professional skills, organizational functioning, and personal growth, professional development has become somewhat synonymous with organizational development and increasingly viewed as an investment with expected returns (Sandford & McCaslin, 2004). With the current emphasis
on data-driven decision-making and accountability, teacher professional development programs are considered fundamental to improving the quality of education, and there is a great deal of literature available that focuses on; designing and implementing high-quality, comprehensive programs (Bergquist & Phillips, 1975; Gardiner, 2000; McLean, Cilliers & Van Wyk, 2008; various types and combinations of delivery systems (i.e., peer coaching, communities of practice, action research, workshops, seminar series) (Steinert, Mann, Centeno, Dolmans, Spenser, Gelula, & Prideaux, 2006); and a seemingly endless range of content related to teacher professional development including subject specific content and curricula, various instructional practices and strategies, pedagogical theories, and technological applications (Desimone, 2011, St. Cyr, 2009; Davis, 2004; Davis & Krajcik, 2005; Cummings-Hlas & Hlas, 2012; Othman & bin Dahari, 2011; Mundy, Kupczynski, Ellis, & Salgado, 2012). While there may appear to be an extensive body of research literature on professional development initiatives in higher education, there is in fact, “a paucity of research demonstrating the effectiveness of faculty development interventions” (Steinert et al, 2006, p.498).

This paper offers an appraisal of the merits and limitations of using one of the most popular models of evaluating training in education —Guskey’s (2000, 2002) Professional Development Evaluation Model (PDEM) — for evaluating a faculty professional development program at a comprehensive multi-campus community college system. While the merits and limitations have been identified based on data derived from a community college setting, they have broad implications to a wide range of higher educational institutions.

Overview of the initial research design

In 2013, a comprehensive study was conducted investigating faculty perceptions of the perceived effectiveness of the Institute for faculty Excellence (IFE), a multi-year professional development program at a large, urban, Midwestern multi-campus community college system. Implemented in the fall semester of the 2007, the IFE featured a collection of essential, research-based and readily applicable strategies, techniques, and theories to help faculty members engage and encourage students and foster student academic success. Five years later, when the comprehensive study began, approximately 600 community
college faculty members had participated in the program.

The study was designed as a single evaluative, instrumental case study in conjunction with the completion of the doctoral dissertation *A culture of excellence: Professional development as an instrument of change* (Williams-McMillan, 2013). The six research questions included the following: To what extent do the faculty participants understand and apply the training concepts? What is the frequency and extent that the faculty participants employ specific pedagogical techniques during their instruction? What impact has the [training] had on the classroom instructional practices of the participants? What is the subsequent impact of the [training] on the academic performance outcomes of students’ taught by the faculty participants? What are some benefits that participants identify related to the program? What recommendations do the participants offer for improving the program?

A mixed methods research paradigm was implemented and data was collected through the use of individual and focus group interviews with administrators and faculty from each of the seven individual campuses; surveys; classroom observations; and training evaluations submitted by participants. An in-depth analysis of various program and institutional materials was also performed. Guskey’s (2000) adaptation of Kirkpatrick’s (1994, 1996) model of program evaluation, the *Professional Development Evaluation Model* (PDEM) was used to guide the inquiry and contextualized the study’s findings in relationship to the literature. Theory-building was not intrinsic to the design of the study; however, the findings from the study provided a basis upon which to offer opinions, judgements, and recommendations for future program planning, implementation and evaluation.

**Assessing faculty professional development**

For nearly four decades, the most popular approach to evaluating business and industry training programs has been Kirkpatrick’s (1996, 2006) model, in which four levels of training outcomes were delineated: reactions, learning, behavior, and results. It has been the foundation for evaluating training in business and industry for more than four decades. Its overwhelming popularity is a result of its capacity to: simplify the complex process of evaluating training; address the evaluation process in a systematic way; provide a clear and simple guide to determining which criteria would be appropriate; formulate
relevant and specific questions; and offer a straightforward, common language for discussing objectives and outcomes (Kirkpatrick & Kirkpatrick, 2006). Furthermore, because it focuses specifically on the four categories of outcome data that are generally collected after the training has been completed, the need for pre-course measures of learning or job performance measures was greatly diminished. In effect, Kirkpatrick’s model eliminated the need to measure or account for a complex network of factors that surrounded and interacted with the training process and evaluated training effectiveness by focusing entirely on outcome measures.

Refining and adapting Kirkpatrick’s (1974) model so that it can be used to evaluate adult education programs, Thomas Guskey (2000, 2002) categorized five levels, and hierarchically arranged them in critical stages, from the simplest to more complex, each higher level building on the ones that came before. Called the Professional Development Evaluation Model (PDEM), it not only focused on reactions, learning, behavior, and results, but also considered organizational support and change. The following is a brief description of the merits and limitations of evaluating a faculty professional development program using the five stages of the PDEM.

**Merits of the PDEM in determining a professional development program’s success**

The goal of stage one is to identify the level of participant satisfaction with the training. Guskey (2000, 2002) contends that “measuring participants’ satisfaction with the experience provides information that can help improve the design and delivery of programs and activities in valid ways” (p. 4). To accomplish this, he suggests asking questions such as: “did they like it? Was their time well spent? Did the material make sense? Will it be useful? Was the leader knowledgeable and helpful? Were refreshments fresh and tasty? Was the room the right temperature? Were the chairs comfortable? He also suggests using questionnaires provided to participants immediately at the end of their training to collect this information.

Stage two determines whether or not participants acquired the intended knowledge and skills. Here documents such as the program’s registration forms, training manuals and supplemental materials, and the goals outlined in the program’s mission and/or vision statements can be used to create indicators
of successful learning. Stage three “focuses on the organizational characteristics and attributes necessary for success” (Guskey, 2000, p. 6) such as time, effort, and resources invested. At this stage, success may be determined from specific types of questions such as:

- Was the advocated change aligned with the mission? Was change at the individual level encouraged and supported at all levels? Was administration support public and overt? Were problems addressed quickly and efficiently?
- Were sufficient resources made available, including time for sharing? (Guskey, 2000, pg.6)

Not only will asking these types of questions provide extremely important insight about a program where no clear documentation of the proposed mission, vision, or goals are available, but they will also provide insight into organizational climate and knowledge at the time the program was implemented.

The goal of stage four is to determine whether or not specific strategies and techniques taught in the training are transferred to the classroom, and how frequently they are implemented. Guskey (2000, 2002) suggests using questionnaires and classroom observations to determine the extent to which the things that faculty say they were doing are indeed, what they actually do. Observations allow researchers and evaluators to gain first-hand evidence of when, how often, and for how long, the practices taught and encouraged by the training actually occur within an authentic instructional setting. To gain consistent and reliable information, a standardized instrument such as a check list, outlining the specific criteria under observation, must be used during every classroom observation.

The fifth and final stage of Guskey’s (2000, 2002) PDEM focuses on the “bottom line” in education—the impact of the program on the academic performance outcomes of students. Guskey suggests perusing academic records of the students of “trained” faculty members to determine improvements in student learning. Much of this information is readily available as most institutions gather this type of data for public papering purposes.

**Limitations of using the PDEM to determine success**

Undeniably, achieving program goals are essential, and the PDEM provides information that
Guskey (2000, 2002) contends is “sound, meaningful, and sufficiently reliable for making thoughtful and responsible decisions about professional development processes and effects” (Guskey and Sparks, 1991, p.34), but there are a number of drawbacks to relying on information gained solely through the PDEM. First, the model itself is not necessarily designed to elicit the perspectives of various stakeholder groups other than those of the program’s originators and administrators. Given the opportunity — and only when other theories and analytical techniques are incorporated into the evaluation — separate and distinct perspectives espoused by different stakeholder groups will emerge. Document and data analysis associated with the study revealed that there was no system plan to gather, analyze, or incorporate in perspectives of various stakeholders involved in the planning, implementation, and evaluation of the IFE (Williams-McMillan, 2013). Moreover, the differences in faculty status, rank, and interests were not included in the IFE design. For example, as this study revealed faculty members are not a homogenous group. Faculty may be full-time or part-time, tenured or tenure-track, and non-tenure-track. Even among tenured faculty, there may be potent differences in their professional development needs and interests. To illustrate, a newly full-time tenure-track faculty member may find professional development programs that provide opportunities to learn teaching and assessment strategies valuable. These same programs may provide opportunities for new faculty to meet and collaborate with other faculty members. A full-time tenure track faculty preparing for tenure and promotion may have very different professional development interests and needs. She or he may be more interested in professional development programs that focus on very specific pedagogical issues or that enhances research and scholarship opportunities. Full-time tenured faculty may have yet again, different professional development interests and needs, as in the case of a tenured faculty considering promotion to full professor. Typically exempt from the pressure to provide scholarship, part-time faculty may have very different professional development interests and needs altogether from their full-time faculty colleagues. Given the complexity in the array of different roles of faculty members, not to mention the differences in the stages of their careers, the PDEM may not provide an adequate means to discriminate among the multitude of individual needs and interests.

Another drawback of the PDEM is that the model assumes that faculty members have no prior
understanding of the information to be presented; that participants will learn the information at a similar rate and quantity; and that once acquiring this new information, they will eagerly implement it in its entirety in the classroom. The focus group interviews with faculty members in this study revealed a wide range of faculty pedagogical expertise and motivation. This study confirmed that the motivating factors that faculty participants consider when deciding if, and how to use their new knowledge in the classroom is consistent with the literature on conceptual change, which states;

It is not the professional development per se, but the experience of successful implementation that changes teachers’ attitudes and beliefs. . . . Change is primarily an experientially-based learning process for teachers . . . . [and] research demonstrates that experienced teachers seldom become committed to a new instructional approach or innovation until they have seen it work. (Guskey, 2002, pp. 383, 388.)

Furthermore, the model does not explore unintended consequences of training such as; how concepts, training materials and techniques included in the program might be modified and adapted by participants in ways not foreseen by curriculum designers; or how the experience of completing a program might create or transform organizational culture. One such unintended consequence revealed in the Williams-McMillan study (2013), was that the Institute of Faculty Excellence (IFE) the college’s signature professional development program was valued among full-time, tenured faculty as a rite of passage; an indispensable mechanism for orienting and socializing new and part-time faculty. As these new faculty members progressed through the program, they were exposed to, and given an opportunity to absorb and assimilate the culture and customs of the college. They learned the preferred ways of planning and delivering instruction; and experienced shorter learning curves and fewer blunders in understanding and following implicit and explicit college policies. They also formed stronger, more productive mentorships with experienced faculty members which helped them more quickly become an integral part of the college.

Lastly, using program objectives as the only indicator of program success may be result in incomplete or strongly biased information. For example, a program objective might be; by the end of the
course, participants will have a fundamental understanding of active learning; course objective and student learning outcomes development; and assessment of student learning outcomes at three levels — i.e., the individual course; the program; and at the institutional level. The data gathered from the PDEM would either prove or disprove that participants have achieved this outcome, but would not adequately take into account how faculty might manage the differences in student ability levels, learning styles, or differences in academic discipline as they attempt to implement these strategies in the classroom (Opfer & Pedder, 2011). The analysis of the focus group data associated with the study revealed that faculty members have a very complex set of understandings and expectations associated with meaningful program evaluation beyond the scope of established program objectives.

Conclusion

Professional development programs may vary widely in their content and format, but most high-quality programs share the common purpose of systematically bringing about change in the attitudes and beliefs of teachers, their instructional practices, and in the learning outcomes of their students (Guskey, 2000, 2002). To this end, there is value in using the hierarchical PDEM and the information it helps to gather in the various stages of planning, implementation, and evaluation. The resulting information would be invaluable to program designers and administrators who need to make thoughtful and responsible decisions about their program’s processes and effects. However, in order for the PDEM to be used most effectively in faculty professional development programs in higher education, the complex array of different faculty roles and the differences among faculty members related to their interests and needs, must be carefully and systematically considered.

Incorporating broader measures of success and the mechanisms needed to gather and analyze feedback from diverse stakeholder groups, including faculty participants, trainers, curricula designers, and administrators, will enable multiple and equally valid perspectives to emerge. This great diversity of perspectives would provide for a fuller, much more comprehensive understanding of the professional development experience, and degree to which it may be deemed successful. Moreover, incorporating systematic methods of gathering and analyzing both the qualitative and quantitative data associated with
the application of the professional development content in practice is an essential, yet often
underappreciated element of successful professional development. After all,

“[These] professionals are not naïve consumers of professional development, but bring
their professional identities and knowledge to bear on considering transfer” and in
particular that “teachers are professionals who use their understanding of innovations,
their classroom, and their personal goals to impact transfer from professional
development to the classroom” (Van Duzor, 2011, p. 364).

References


Top-Down Teaching of C++ And Other Programming Languages

Topic Area: STEM Education
Presentation Format: Paper Session

Description: This paper proposes a new way to teach students how to write computer programs. Instead of teach individual programming commands this approach follows a top-down approach. Students begin by designing the components of a program and leave the actual coding until the end of the course.

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Abstract. In this paper we propose a new and top-down approach to instructing computer languages, specifically C++. Instead of learning from the basic language syntax, and moving from this to creating small insignificant programs, we start instead with a fully functioning and nontrivial software program. The instructor explains the adopted program design, and works downward from there to the individual line items of software code and syntax. Students are then challenged to understand and modify the code in order to optimize it in competition against other groups of students from the class.

I. Introduction

A frequent complaint of students taking computer language courses is that they are tedious, boring, and overly challenging [1]. Attrition in these types of courses is typically high. Many students are forced to change majors or be dropped from the program as a result of this situation [1]. We are striving to create a new instructional approach that will improve the results, and motivate students to put in more time to learning the language and becoming possibly professional software developers. This approach we are calling Top-Down Language Instruction (TDLI).

II. Current Instructional Practice

Current instructional practice for most computer languages, including C++, is to teach the language from the bottom up [2]. Starting with the most basic variable declaration and syntax, very simple programs, usually starting with the ubiquitous "Hello World" program, are gradually built up into more
sophisticated constructs, later germinating into object-oriented programming, user interface, and software engineering principles [3]. This has been common practice since the origin of high level computer languages in the 1950s [4, 5, 6, 7, 8].

Prior to high-level languages, typically no formal instruction even existed — programmers were largely self-taught and relied on trial and error experience to build simple (by today's standards) assembly language programs [9]. As a result, this practice of bottom-up instruction and learning has become deeply ensconced in the computer science and IT communities globally. It is taken as a given that you learn the low-level concepts first, and gradually build up on top of those higher-level knowledge and practice [10, 11, 12].

Surprisingly, very little innovations on this established practice have been proffered or experimented with over the last 50 years [13]. Students typically find programming language courses extremely challenging, many find them a bit tedious and boring [1], and a huge amount have probably changed majors or avoided a major with computer programming courses because of the hurdle of programming language courses [14, 15].

Students successfully completing introductory computer language courses normally are not properly equipped to comprehend or to write industry level software, and many forget what they have learned very quickly and do not come back to programming [2, 3]. They have not hit a critical mass of competence to independently create, test, and release software [16, 17, 18].

This would be analogous to learning a foreign language; the critical mass occurs when one can freely converse with individuals in the new language — that is when the payoff occurs. Otherwise the effort may have been largely wasted. For too many students learning a new computer language, this is often the case. How can we improve computer language instruction with long-overdue new ideas?
III. Proposed Instructional Practice

Overview of Approach

We propose teaching the C++ computer language using a top-down approach instead of a bottom-up approach. The keywords and syntax of the language are taught as the details of a higher level program, iteratively starting with the high-level design of the program and working downward repeatedly to the code to implement the necessary features and requirements including user interface, classes, subroutines, and functions.

As a foundation for the course, the starting point would be a largely complete and functioning non-trivial software system, created by the instructor specifically for the goals of the course. The level of sophistication of the software program can be carefully chosen based on the interest, capability level, and goals of the student body taking the course.

For example, for students with an emphasis on computer gaming, a complete computer game with source code could be presented to the class on the first day. One challenging example could be a computer chess AI program with user interface. Gradually less challenging implementations could be functioning Tetris, Suduko, checkers, blackjack, pong, or tic-tac-toe.

Detailed Description

Naturally for many students, their interest level would be increased dramatically by the possibility of working on and experimenting with a functioning game very quickly. For engineering students, simulation software typically used in their profession may be extremely useful — stress analysis for civil engineers, circuit analysis for electrical engineers, etc. Code commenting would be based on the needs of the students to understand components of lines of code for the purposes of the course.

The second step in the proposed instructional practice would be to identify, demonstrate, and explain the requirements for the game or other software including: user interface and response to input events, implementing the rules of the game (chess would require referring to the international rule book for
example), AI required, and any other obvious goals such as the ability to store scores between sessions and so forth.

Once user interface and other requirements were identified, the next step would be to delineate likely functional areas necessary in the implementation. This would be the beginning of introducing basic software design and architecture concepts that students could intuitively understand and comprehend, despite lack of software language knowledge. In the chess example, we could group functional areas into: 1. user interface, 2. rules implementation, 3. representing the board, and copies of the board, internally, 4. representing the pieces internally, 5. AI algorithm (primarily min-max) and support for scoring the next move, 5. finalizing and implementing move results.

At this point it would be possible to drill down from the major functional areas to individual subroutines and functions, starting with the simplest groupings such as responding to a button click. This would be gradually expanded to larger and more complicated routines that would be required, such as calculating the min-max algorithm move score, which demonstrates quite sophisticated recursion techniques. Note that the notion of recursion would be initially presented and discussed without the presentation of any specific programming language syntax, variables, or keywords. It would be a general pseudocode representation initially.

Given the theoretical understanding of the whole program overall architecture and design, at this point it would be possible to drill down into the innards of a single necessary simple keyword – such as how to specify a constant in C++. Generally piece values are assigned using a global constant in computer chess. After explaining this and some other low-level details, a single function could be stepped into line by line and frequently used C++ operators, declarations, and statements could be explained. To keep things as simple and straightforward as possible, a comprehensive C++ Quick Reference document, such as the one located [here], could be referred to frequently and would list the major language features. By referring to this frequently, through the use of repetition, students would more quickly memorize the most valuable aspects of the C++ language. The quick reference card/document listed above is 4 pages long and has preprocessor directives, literals examples, declarations, statement examples, common functions and
expressions, class specification details, and basic I/O syntax. Controversial issues such as pointers and utilizing memory addresses should be skipped over and strongly discouraged at this point. Ideally these would constitute optimizations that could take place later when students are encouraged to tweak and modify the code on their own.

Coursework

Iteratively in lectures, the instructor would visit various code internals throughout the program, in a gradually increasing level of complexity, and gradually decreasing level of frequency of access in program operation. Stepping through each function or subroutine line by line, instructor would explain what each line did and how it interacted with other aspects of the code. Details like preprocessor header files required by the program, instead of being covered first like they commonly are, would be covered near the end of the code presentation. Program operation, in other words, is covered first before program environmental requirements, such as access or shared libraries. Last of all, details on the specific IDE in use in compiling the source code would be discussed. As a result of this the focus would be on firstly: program design and understanding good design, C++ language features, and finally issues such as IDE manipulation, header files, and compilation.

Students as mentioned earlier have access to the complete source code and can study it both in class and at their leisure. They will need to be doing this, because they have the opportunity to modify and optimize the code, and contest against other students in a competition of sorts!

With the tremendous emphasis on project learning, group interaction, and team competitiveness in higher education degree requirements presently, rigorously implementing these qualities in a computer programming language course is a daunting prospect indeed. Since the code is already in a fully functional and debugged end product, students do not have to waste any time debugging awkward code they may have managed to write, or studying code poorly written in the first place. They already have a solid example starting point, and if any changes they make "break" the code they can quickly go back to the starting point. As a result, this increases learning efficiency: it minimizes useless time debugging, and maximizes the scrutiny and understanding of functioning code.
At a certain point in the course where a critical mass occurs where students are becoming proficient at not only understanding but modifying the code to some extent, team groups could be formed. The idea at this point is to encourage the students to understand and modify the code enough to result in certain specific improvements — in competition with the other groups in the class.

**Specific Example**

Using the example of computer chess, student groups could implement any number of the myriad of AI improvements and implementations displayed on thousands of locations on the net, and compete in a chess competition with the other groups in the class.

Whichever group's AI works the best (not to mention whichever groups program's UI or other code does not crash in the middle of a game) would be the champion, and to some extent the final course grade would be based on the competition.

The instructor would outline some of the common optimizations and improvements to AI typically made for computer chess programs, and then encourage students to pursue whichever line of program development seemed the most promising for their team. Some source code examples of some of the optimizations could be provided for their review. TA's would be enlisted to monitor outside of class informal and formal competitions leading up to the class group champion.

In combination with the grading using game challenge or competition results, we propose a new examination format where students are presented with 20 to 30 line blocks of code and are required to write coherent essays explaining from start to finish what the code does generally, and how it functions line by line. This would be referring to line number. The realistic expectation here is that as developers in the professional environment, they will never be called upon to answer multiple-choice questions regarding the C++ language, but will be frequently required to review existing code and quickly understand what it does as a whole and line by line. They will need to do this for their own benefit, but also to explain to other developers and managers what they are seeing clearly and succinctly.

**Conclusion**
We envision by the end of the class students will be more enthusiastic and fulfilled than when they started, they will be able to see the fruits of their results of studying a new computer language, and in addition to learning syntax and keywords, will also learn program architecture, object-oriented development, AI techniques and algorithms, and working in groups on software code. They will be prepared to study and modify code on their own, and hopefully by the end of the course will have spent countless hours modifying and testing operational code for the benefit of their team competition. Any code they write functions within the whole of a nontrivial program, making their experience completely realistic and not functioning in isolation.

Instead of being exposed to the language in isolation, they would be getting much more of the flavor of what it means to be a professional software developer. "Hello world" could be relegated to history as tedious and boring. In its place is what students are used to seeing: functioning software, and on the first day of class. They start from what they know already from a lifetime of interaction and work downward. Students bridge the gap from their existing knowledge base to what they do not know, instead of the other way around.

**IV. Software Examples**

Some examples of baseline software provided at the beginning of class include:

1. Pong clones
2. "2048"
3. Tetris
4. Sudoku
5. Checkers
6. Computer chess
7. An engineering application (possible optimization competition could be for speed or efficiency here)
Figure 1. Examples of programs we have used for teaching: Pong clone, "2048" clone, and computer chess. 2048 is a 2D puzzle game that is a hit with young students: http://gabrielecirulli.github.io/2048.

V. Comparison Between the Methods

Typical practice for computer language instruction works up bottom to top in the following sequence:

1. IDE installation
2. Compilers
3. Hello world (basic language syntax)
4. Functions
5. Routines
6. Classes
7. Object-oriented programming
8. Higher-level design
9. Program architecture
10. Program Requirements/UI

We propose basically reversing this process into the following sequence, and starting with the fully complete and functional source code baseline for the program in use. For the initial coverage of object-oriented programming, classes, routines, and functions — all this will be done at a theoretical level without discussing language specifics.

1. First day of class: showing the UI and discussing the requirements
2. Program architecture (explanation of how and why the architecture exists)
3. Higher-level design (discussion of trade-offs of different design possibilities)
4. Object-oriented programming (the complete set of classes already exists and is discussed)
5. Classes (implementation details)
6. Routines (the benefit here is that the routines already are working can be studied)
7. Functions (the line by line commenting informs the student what they need to know)
8. Basic language features and syntax (presented in order of frequency and importance)
9. IDE issues/compilation (typically, weeks are lost while students struggle to set up their IDE. This persistent problem is put off here until last.)

For the presentation of basic language features and syntax, we propose the following presentation, delivered initially in a single carefully prepared lecture (basically summarizing the reference card in use):

1. Description of variable types
2. Variable declarations, including arrays
3. Mathematical and other operators
4. Decision statements including if/then and select case
5. Looping structures including do and for-next loops
6. Explanation of functions and subroutines
7. User defined type structures
8. Classes: theory/declaration/initiation/manipulation/termination
9. Calling APIs and other code not within the program

One of the purposes of covering virtually the entire language in a single lecture is to clearly demonstrate to students learning a programming language may not have been as difficult as they thought, as long as they do not get bogged down with confusing details and too many examples, over too long of a time period. Since repetition is one of the most effective forms of boosting retention, students can review the lecture in a recorded video frequently over the semester. That way they will get multiple exposures to each of the major concepts, in a single place.
VI. Advantages and Disadvantages

Both the traditional and proposed methods have advantages and disadvantages. It is our belief that for a vast majority of students the proposed method is better. We do outline the advantages and disadvantages of both methods based upon the literature and our personal experiences.

Advantages

Proposed Method

- IDE issues are put off until later in the class, saving students time and improving their learning efficiency.
- Students are presented with a large body of functioning code on the first day of class that they can study.
- Groups, and group teamwork are encouraged.
- Enthusiasm is increased by having the opportunity to work on functioning game or engineering code.
- After the class is over students can continue to study, modify, and improve the code.
- The software program utilized can be chosen to coincide closely with the students major or emphasis of study.
- The programming language in use in the class can be more easily swapped out. For example Java could be substituted for C++ at the lowest level, most of the concepts remain the same at higher levels.
- The study of the course more closely resembles what professional software developers do in industry.
- The questionable practice of forcing students to spend hours tediously debugging poorly written textbook source code is dispensed with.
- The investigation of optimizations outside of class is strongly encouraged, for example students of superior ability and interest can spend more time researching chess AI optimizations, with the results that it will directly improve their grade and competition results.
- This approach may obviate the need for expensive textbooks.
- Greater enthusiasm should be generated compared to that from Hello World, or cat and dog OO classes.

Traditional Method

- Less motivated students may be more amenable to this method as it builds up in very small steps. This is as opposed to forcing the student to take an active role and initiative in their learning.

Disadvantages

Proposed Method

- It is a requirement upon the instructor to complete the necessary source code, and to fully understand it, prior to the first day of class. For non-trivial application, such as that of computer
chess, this is a large time requirement.

- Significant outside of class faculty supervision may be required, such as that for informal and formal chess challenge competitions.
- Students will need much more individualized group support and guidance in this approach.
- Ideally this approach will work well with more motivated and high capability students, compared to less capable are well-motivated individuals.

**Traditional Method**

- Traditional methods have students struggling with IDE installation issues that may last for weeks right at the beginning of class, hampering their learning process.
- Very little group interaction or learning takes place using this method [19].
- Highly motivated and capable students may be insufficiently challenged and become bored through the class, as they are dragged down by slower moving students.
- Real-world programming of functional applications is normally not studied at all — the largest and most sophisticated program may be less than 50 or lines of code through the entire semester.
- Program design and architecture is insufficiently studied.
- Students must bridge the gap from what they do know (working software) to what they do not know (language syntax) and close the gap from outside in — resulting in a larger mental hurdle.
- Students spend far too much time trying to write code they do not yet even understand, and debugging poorly written code examples both from the textbook and what they have written themselves. Countless hours are wasted.
- Exams are unrealistic from programming practice — students will never be required to answer multiple-choice questions on software code in industry.
- Switching to a different programming language becomes difficult or impossible learning from the bottom up — just the opposite is true from the top down, only the syntax is swapped out at the bottom.

**VII. Additional Practices**

We propose the adoption of several additional practices in introductory C++ programming language courses. Pointers should be avoided, except as independent student optimizations. Carefully timed repetitions at intervals would be performed: most frequently utilized syntax should be revisited frequently throughout the course lectures. Each repetition in turn increases the likelihood students will remember it weeks, months, and years into the future. Frequency can be calculated based on statistical studies of existing software source code bodies, items like variable declaration and select case statements will score much higher than obscure functions such as mapping from string to integer. If professional software developers are using it frequently, it should be taught, otherwise it should be left to students to learn on
their own if necessary. Students should also be presented with basic testing practices so that they can test their builds as a group prior to their software being used in competition.

As mentioned earlier, a new format for periodic examinations would be for essay questions. Students will be presented with a routine of 20 to 30 lines, and would explain what it does, how each line functions, and what the output or result would be.

Each semester, preliminary software source code body could be improved based on what was learned in the previous session. The best student group optimizations, the winner of the last competition, could be maintained as a benchmark for the new group champion to play against to try and beat the "all-time high score".

Students could be required to contribute to a software wiki that discusses lessons learned — this wiki would expand gradually session to session with a corpus of information based on students learning and problem-solving experiences. Students from prior sessions could return as mentors or TA's, and would be well-versed on the internals of the software, to help improve on the team's optimizations and competition results. Eventually interschool or intersection competitions could be envisioned.

VIII. Conclusion

In this paper we have presented a novel approach to teaching introductory C++ computer language courses, that can also be utilized for teaching other language courses in a more challenging and rewarding fashion. However, in this approach much more work would be incumbent on the instructor in writing the preliminary software and understanding it extremely well. At the same time students would be greatly challenged to spend out of class hours modifying the software and working with their team group, as well as testing out their software and competing with other groups to see which team can add the most functionality. We envision that this top-down approach will be a better fit for young students based on their previous experiences of using working software, than from previous generations of programmers that work from the bottom up using assembly language code or other low language code.
In previous times functioning software programs were of a much smaller size and sometimes could be written in a matter of weeks. As a result studying computer languages from the bottom up sufficed. Programs today, specifically computer games, are magnitudes more complex and focus more on the user interface than on the low-level code [20, 21]. Teaching from the top down the language is a better fit we feel in this regard.

**IX. Future Research**

We plan to implement this approach in an introductory C++ programming course with students of moderate capability and enthusiasm. Student results and feedback will be investigated and statistics compiled. We will try to gauge the difference between top-performing groups for versus low performing groups, and how much each learned respectively. Students’ enthusiasm for programming careers in the future will be gauged, based on the course design that they were involved in. As a result of this information, we hope to derive information that will not only improve our proposed approach, but demonstrate conclusively that teaching computer languages in the future will be much different than how it has been for the past 50 or more years.
X. References


Electromyographic Analysis of the Upper Trapezius, Pectoralis Major, and Latissimus Dorsi During Shoulder Exercise

Kinesiology and Leisure Science

Paper Sessions: This presentation will include literature review on the topic of EMG, Postural Restoration Institute methods, and the findings of the current study. Some examples will be given for the audience and future possible research discussed.

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Abstract

The purpose of this study was to determine if postural restoration exercises effects shoulder range of motion and position through an increase in maximal electromyographic (EMG) activity through electromyographic analysis. The human body is not symmetrical. The Postural Restoration Institute state that posture is a reflection of the position our body through the many systems it regulates. Due to this, limited functional patterns are created faulting our ability to either breathe, rotate, or rest in a symmetrical state. These limited functional patterns refer to a restriction of movement in certain directions or normal functional range. METHODS: 4 adolescent males (19.425 ± 0.2) years attending the university participated in this study. Maximal EMG testing was completed. Maximum Voluntary Isometric Contraction (MVIC) was used to determine a standardized method for muscle strength. MVIC and maximum EMG data were collected from 3 muscles; upper trapezius pectoralis major and latissimus dorsi. Maximum EMG analysis was recorded with subjects sitting in a chair with the right arm placed at 90 degrees of humeral abduction; and the elbow placed at 0 degrees of horizontal abduction, externally rotating the humerus to 90 degrees. Three trials were given to each subject. After the initial test, the postural restoration corrective exercise; 90/90 hip bridge with ball and balloon was given. The exercise was chosen to enhance both posture and stability in order to improve function and/or decrease pain. 5 sets of 5 breathes (maximal inhalation, and exhalation) were given to each subject. 3 final trials were given to each subject to determine if maximum EMG activity has increased. RESULTS: A change in Maximum EMG activity will be measured with paired sample t test. There was an increase in EMG activity post postural restoration corrective exercises for each of the three muscles, with the Upper Trapezius increasing to statistical significance. Maximum Upper Trapezius EMG (pre = 713.598 ± 206.435mV; post = 1339.750 ±
ELECTROMYOGRAPHIC ANALYSIS OF THE UPPER TRAPEZIUS, PECTORALIS MAJOR, AND LATISSIMUS DORSI DURING SHOULDER EXERCISE

84.240mV; \( t(3) = 4.308, p = .023 \). Maximum Pectoralis Major EMG (pre = 227.5350 ± 12.21800mV; post = 299.9900 ± 51.78800mV; \( t(3) = 2.264, p = .109 \)). Maximum Latissimus Dorsi EMG (pre = 207.1936 ± 300.40960mV; post = 249.4150 ± 241.59600mV; \( t(3) = 1.436, p = .247 \)).

CONCLUSION: Due to the natural asymmetry in our body, over dominance can occur. Reciprocal function is needed to maintain balance throughout the entirety of the body. The results of maximal EMG activity increase may be the cause of reduced system unilateral overuse and increase in balance needed to maintain proper muscle contraction.

**Literature Review**

**Introduction**

The human body is not symmetrical. The Postural Restoration Institute and Ron Hruska (2015) state that posture is often a reflection of position through the many systems our body regulates. Limited functional patterns are created through our ability and inability to either breathe, rotate, or rest in a symmetrical state. These limited functional patterns refer to a restriction of movement in directions or certain normal functional range. Polyarticular chains make up the structures of our asymmetrical patterns in our body. Francoise Mezieres (2015) describes polyarticular chains as a chain group of overlapping muscles running in the same direction with no break in their continuous structure that are dependent on their function. Over dominance can cause one side of the body to develop system unilateral overuse. Reciprocal function is needed to maintain balance throughout the entirety of the body.

**Asymmetry in the body**

There are two normal patterns of asymmetry in the human body. The left Anterior Interior Chain (AIC) which consists of the diaphragm, iliacus, psoas, tensor fasciae latae (TFL), vastus lateralis, and bicep femoris. The right brachial chain (BC) pattern is consisted of the
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sternocleidomastoid, scalenes, sibson’s fascia, deltoïd-pectoral, anterior-lateral intercostals, triangularis sterni, and diaphragm (2011). These two patterns orient the pelvis to position the lumbar spine and the diaphragm toward the right side while the thorax and rib cage sitting above the diaphragm rotates to the left. The left AIC pattern is the dominant lower body pattern that is driven by an overactive left psoas and iliacus, right hemidiaphragm, left (TFL) and vastus lateralis, right biceps femoris and adductors. In the upper body, the right BC is the dominant pattern of the two that consists of an overactive right hemidiaphragm, left pectoralis, right triangularis sterni, and right abdominal obliques. Our anatomical structure causes an occurrence of dominance in these chains promoting dysfunction in our body (2005).

The Role of the Trapezius

The trapezius consists of three types of fibers; upper, middle, and lower. The upper fibers which originate from the spinous processes of C1-C7, the occipital protuberance, the superior nuchal line of the occipital bone, and the ligamentum nuchae. The fibers then attach and insert into the posterior border of the lateral third of the clavicle. The middle fibers; originate from the spinous processes of C7-T3 and insert medially into the acromion and posterior border of the scapula. The lower fibers originate from the T4-T12 and insert upward and laterally towards the scapula, and also insert medially at the end of the spine. Functions of the trapezius include upward rotation and elevation of the scapula for the upper fibers, adduction (retraction) of the scapula for the middle fibers, and upward rotation and depression of the scapula for the lower fibers (Paine & Voight, 1993).

The Role of the Pectoralis Major

The pectoralis major consists of two heads; the clavicular head, and the sternal head. The origin of the clavicular head starts from the anterior surface of the clavicle, and inserts into the
lateral bicipital groove of the humerus the anterior surface of the sternum. The sternal head of the pectoralis major originates at the upper costal cartilages and the aponeurosis of the external oblique, while inserting in the crest of the greater tubercle of the humerus. The clavicular head flexes the arm at the glenohumeral joint. The sternal head extends the arm at the glenohumeral joint from a state of flexion. When both heads work together, they medially rotate the shoulder, and adduct the arm at the glenohumeral joint (Brown, Niehues, Harrah, Yavorsky, & Hirshman, 1988).

The Role of the Latissimus Dorsi

There are five places the latissimus dorsi originates; spinous processes of T7-L5 vertebrae, iliac crest of the sacrum, thoracolumbar fascia, inferior angle of the scapula, and the lower three ribs. They all insert at the floor of the bicipital groove of the humerus. Brown (1988) state that the latissimus dorsi it is responsible for extension, adduction, and horizontal adduction of the shoulder, flexion from a position of extension, and internal rotation of the glenohumeral joint. It is also plays a part in extending and laterally flexing the lumbar spine.

Muscle Patterns Affecting Posture and Position

In the left AIC and right BC pattern, the ribs move on the right side during an exhaled state of internal rotation (IR) which then creates a right posterior thoracic rib hump. At the same time the ribs on the left side go into a state of inhaled external rotation (ER) which creates a left anterior rib flare. Due to the downward position of the right anterior ribs, and the exhaled state of the right side, the right transverse abdominus (TA) shortens (2011). The left upper trunk rotation shortens the right internal obliques (IO). Due to the superior attachment, the right IO is moving closer to the inferior attachment on the right oriented pelvis. The upward position of the left anterior ribs and the inhaled state of the left side, the left TA lengthens. Because of the left upper...
trunk rotation lengthening the left IO the superior attachment of the left IO is moving further away from the inferior attachment on the right oriented pelvis (2005)

**Zone of Apposition**

The left AIC and right BC patterns represent dysfunctional polyarticular chains lacking muscle cohesion causing over dominance in our anatomical structure. In order to achieve proper positioning of these polyarticular chains, rehabilitation of better positioned Zone of Apposition (ZOA) should occur first. The Zone of Apposition (ZOA) described by Boyle (2010); is the area of the diaphragm that surrounds the cylindrical area of the diaphragm (the dome) which then relates to inner portion directly apposed to the inner aspect of the lower rib cage. The ZOA has a high importance as it is controlled by abdominal muscles and directs diaphragmatic tension. A decrease in ZOA causes negative consequences which include inefficient respiration (there is less air in and out) and diminished activation of the transverse abdominus. Due to a smaller ZOA, the transdiaphragmatic pressure is reduced causing less inspiration of the diaphragm on the rib cage (2015). Optimizing the Zone of Apposition should allow for reciprocal pelvic and thoracic activity during gait with a balance of respiratory activity to minimize the negative influences to achieve postural restoration. Restoring the ZOA will support a right-oriented spinal position and a torso that rotates to the left. This will orient the pelvis, spine, and diaphragm back towards the left, while establishing the left acetabular-femoral (AF)/femoral-acetabular internal rotation (FA-IR) strength (2015).

**Left Anterior Interior Chain**

With the pelvis orienting the position of the lumbar spine and the diaphragm towards the right, the upper thorax and rib cage are countering to the left, while the thoracic spine still remains oriented to the right of the midline in the transverse plane (Hruska, 1998). The thorax
will continue to rotate to left with the scapula rotating into internal rotation on the right and external rotation on the left. In this current state, the right lower trapezius lengthens as the right scapula continues to move into internal rotation and moves away from the spine. At the same time, the left low trapezius shortens as the scapula continues to rotate externally towards the spine. With the spinal attachment shorter on the left side, this continually feeds the pattern of the left AIC turning the spinal orientation to the right (2015).

**Right Brachial Chain**

The upper thorax and rib cage above the diaphragm rotate back towards the left, while the ribs on the right side are being rotated back into an exhaled state of internal rotation. This can also lead to an overactive scalene, as the muscles in the neck attempt to overcome airflow restriction on the right side (2015). The scalenes then pull the right upper ribs into external rotation, which will then lead the ribs into an elevated state, lengthening the anterior attachments of the upper right part of the serratus anterior. The lower part of the ribs remain in exhalation (IR) lengthening the anterior attachments of the lower part of the right serratus anterior. The restricted thorax oriented to the right rotates the scapula internally, with the medial border of the right scapula moving posteriorly. The scapular attachment of the right serratus anterior causes both the scapula and serratus to be challenged functionally (2015).

**Repositioning and Muscular Activation**

It is essential that muscle facilitation and inhibition occur in a consistent pattern. Boyle (2010) states that activation should occur in the sagittal plane first, frontal plane second, and traverse plane last. The sagittal plane takes priority because the pelvis and the thorax need to be repositioned first. Subjects need to have a balanced ratio of flexion to extension. Next, the frontal plane will allow for optimal
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joint centration and abduction/adduction control. Finally, the transverse plane will allow for movement through tri-planar movements. Moving from sagittal to frontal to transverse will allow the brain to establish motor control in safer ranges before moving to something complex.

**Measurement Tools**

Electromyographic analysis is a method used for evaluating and recording the electrical activity of skeletal muscles in response to a nerve stimulus. Electrical activity is recorded by a needle of an electrode inserted into the muscle and connected to an electromyograph. The activity produced by the muscle is known as an electromyogram. Reinold (2004) states that an EMG can detect if a specific muscle is responding properly to the stimulus provided by the EMG or whether the muscle remains dormant when stimulated. An understanding of muscle interrelationship during shoulder activity has helped develop preventative corrective exercises and rehabilitation protocols. Comparing normal EMG analysis to a pathological state of analysis could suggest new ideas to pathomechanics of the body. Bradley & Tibone (1991) suggest that integrating EMG and motion analysis will also help propose new treatment and rehabilitation plans (Bradley & Tibone, 1991).

**Research Question:** Determine if posture effects shoulder range of motion and position through electromyographic analysis through postural restoration exercises.

**Null Hypothesis:** Postural Restoration corrective exercises will not improve shoulder range of motion and position of glenohumeral external rotation through electromyographic analysis.

**Alternate Hypothesis:** Postural Restoration corrective exercises will improve shoulder range of motion and position of glenohumeral external rotation through electromyographic analysis.

**Objectives:** Assess subjects through glenohumeral external rotation tests through electromyographic analysis. Based on subject’s current state of range of motion and position,
Postural Restoration corrective exercises will be given in order to achieve full range of motion and proper position. A run through of all the tests will be given at the end of the assessment to compare the before and after measurements of each client.

Methods

Study Participants

Four healthy university male students volunteered to participate in the experiment. All were assigned to the same procedure. In this study, informed consent was obtained from all participants. The average age for each participant ranged from 19.425 ± 0.2, showing that each participant was in the stage of pre-adolescence. The standard deviation ranged from 1.436 to 4.308 (Table 1).

Testing

Participants started with 0 degrees of humeral abduction and 90 degrees of horizontal abduction of the arm. Electrodes are placed on the upper trapezius, pectoralis major, and latissimus dorsi. The participants rotated the arm to 90 degrees of external rotation. Three initial tests are given to measure the electromyography of the muscles. Participants are then given a Postural Restoration corrective exercise known as the 90-90 hip lift to ensure optimal respiratory and postural function. Three final tests runs were given to see if changes in maximum EMG activity had increased.

Statistical Analysis

Statistics were run using SPSS software, version 23. A paired sample \( t \) test was used to determine an increase in Pre-Testing and Post Testing EMG Analysis. Statistical significance was tested at \( \alpha = .05 \).

Results
A change in Maximum EMG activity will be measured with paired sample $t$ test. There was an increase in EMG activity post postural restoration corrective exercises for each of the three muscles, with the Upper Trapezius increasing to statistical significance. Maximum Upper Trapezius EMG, Maximum Pectoralis Major EMG, Maximum Latissimus Dorsi EMG mean were reported Pre-Testing and Post-Testing respectively (Table 1).

Table 1

<table>
<thead>
<tr>
<th>Muscle</th>
<th>Pre-Testing</th>
<th>Post-Testing</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Trapezius</td>
<td>713.598 ± 206.435mV</td>
<td>1339.750 ± 84.240mV</td>
<td>.023</td>
</tr>
<tr>
<td>Pectoralis Major</td>
<td>227.5350 ± 12.21800mV</td>
<td>299.990 ± 51.788mV</td>
<td>.109</td>
</tr>
<tr>
<td>Latissimus Dorsi</td>
<td>207.1936 ± 300.4096mV</td>
<td>249.415 ± 241.596mV</td>
<td>.247</td>
</tr>
</tbody>
</table>

*Note. p<.05 statistical significance*

**Discussion**

Cook (2010) proposes that the musculoskeletal system will migrate toward the least resistant patterns of movement in response to either pain or muscle imbalance. Hruska (1997) also explains the prevalence of altered movement in individuals is due to faulty breathing mechanics. Hruska (1997) states that the existence of thoracic dominant breathing results in hypertonicity of the muscles associated with breathing. This leads the diaphragm in a restricted state to return to its full optimal respiratory resting position. Hruska (1997) also states that due to the faulty diaphragmatic position, it challenges motor patterns that control trunk stability, causing imbalance and eventually having a negative effect on body mechanics. Normal movement can be achieved through a balance of mobility and stability. Changes in trunk stability could lead to dysfunction. This was found in the pre-testing of EMG analysis on each subject.

The use of the 90-90 hip lift targets a variety of patient population, however there is little data published on the effects of the exercise. O’Sullivan (2002) reports that the need for lumbar-
pelvic stability come with proper integration of the diaphragm, deep abdominal muscles and pelvic floor. There is lacking evidence that shows the need for these in order to obtain pelvic stability. The 90-90 Hip lift is an example of an exercise that is useful for integrating co-activation of the deep abdominal muscles, diaphragm, and pelvic floor during neuromuscular training. Post-Testing results showed an increase in all three muscles. Curvature and length of the diaphragm, and the size of ZOA will influence efficiency and power. Upper trapezius showed an increase due to the influence of ZOA size. A decrease in Transdiaphragmatic breathing has consequences such as; postural stability and optimal respiration. Roussel (2007) showed that individuals who had low back dysfunction demonstrated faulty breathing mechanics during movements where the deep abdominal muscles were challenged.

Lando (1999) conducted a study of 25 subjects with chronic obstructive pulmonary disease to investigate surgical influence of lung volume reduction during breathing. Lando (1999) reported that the subject’s ZOA increased after surgery which will result in better breathing capacity. The 90-90 hip lift is an exercise intended to assist patients in obtaining optimal respiratory function (diaphragmatic breathing (ZOA) and posture (lumbo-pelvic stability)). However Postural Restoration and the 90-90 hip lift has not been studied or tested.

Limitations

Firstly, reliability of the 90-90 hip lift was examined in a study, but further studies have yet to be done. The 90-90 hip lift has been observed by Boyle (2010), the evaluation method remains to be examined. Secondly, all subjects were examined by the same observer, which could potentially lead to biased data scoring. Lastly, the position of the subjects during the 90-90 hip lift could have affected the outcome.

Conclusion
Due to the natural asymmetry in our body, over dominance can occur. Reciprocal function is needed to maintain balance throughout the entirety of the body. The results of maximal EMG activity increase may be the cause of reduced system unilateral overuse and increase in balance needed to maintain proper muscle contraction.
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strategies. On Target Publications.

Orofacial Pain.
ELECTROMYOGRAPHIC ANALYSIS OF THE UPPER TRAPEZIUS, PECTORALIS MAJOR, AND LATISSIMUS DORSI DURING SHOULDER EXERCISE


Abstract
This study set out to examine the influence of Industrial Design-themed English for Specific Purposes (ESP) instructional materials on the classroom engagement of Japanese engineering students learning English as a Foreign Language (EFL). It examined both general attitudes towards class content and engagement in a particular design activity. Data were collected via an open-ended item questionnaire administered in the final week of the semester, and a post-activity Flow State Scale. Results indicated an overall positive endorsement of learning of English through industrial design-themed instructional materials due the interest and enjoyment the content invoked, and the positive experience of designing and sharing original designs. The short Flow State Scale was positively endorsed overall with results indicating that the autotelic, time transformation, task concentration, and goal orientation characteristics of the design tasks within the materials contributed to a state of flow in the EFL classroom.

1. Introduction

One of the greatest challenges facing foreign language educators is the production or selection of instructional materials that engage learners. For most instructors, instructional material selection is an intuitive endeavor, informed by both their past experiences and the inferred characteristics or needs of a particular cohort of learners (Spratt, 1999). Selection of instructional materials is of particular importance to foreign language learning as such materials have been demonstrated to have both motivational and demotivational influences on learners in the classroom. In particular, studies have shown Foreign Language Learning (FLL) motivation to be hampered by materials that are perceived to be poorly designed, inappropriate, or uninteresting (Arai, 2004; Falout & Maruyama, 2004; Falout, Elwood & Hood, 2009; Hamada & Kito, 2008; Ikeno, 2002; Kojima, 2004; Tsuchiya 2006). In contrast, instructional materials that are carefully designed, contain relatable or unique content, have a degree of perceived learner control and personalization, and clearly outline goals and processes have been shown to encourage learner engagement (Davies, 2006; Hart, 2002; Stott, 2004).

Language learning materials have also been demonstrated to contribute to particularly high states of engagement and satisfaction in the FLL classroom. Drawing on Bloom’s (1982) concept of Peak Experiences where learning experiences contribute to a state of high affective and cognitive fulfilment, Matsumoto (2007) revealed that particular types of authentic materials contributed to states of peak learning in tertiary foreign language classes. Similarly, instructional materials have also been demonstrated to contribute to a state of “flow” in learners.
Flow has been described as “the way people describe their state of mind when consciousness is harmoniously ordered, and they want to pursue whatever they are doing for its own sake” (Csikszentmihalyi, 1991 p. 6). Such moments generally occur whilst an individual is engaged in artistic, athletic or spiritual pursuits, but are also evident in peak language learning experiences (Egbert, 2003; Schmitt & Savage, 1992, Schmidt, Boraie & Kassabgy, 1996), particularly when attention is paid to content which is of particular interest to learners (Grabe & Stoller, 1997). In learning, flow has been described as the highest state of intrinsic motivation, achieved only when a number of factors dynamically align (Ceja & Navarro, 2009). Due to its elusive and transitory nature, flow is difficult to maintain and cannot be expected to be a permanent state in class (Brophy, 2004). Rather, it is something that should be aspired toward through attention to learners’ goals, interests, learning needs, and through giving learners control over activities (Egbert, 2003).

Drawing on this past research linking instructional materials with motivation, peak learning, and flow states, this study set out to examine how an Industrial Design-themed ESP class would be received by Japanese engineering students learning EFL. This is a population of learners that has been identified as being reluctant toward EFL learning (Nishizawa, Yoshioka, & Fukada, 2009), and a new curricular approach was viewed as one possible means to promote positive attitudes towards learning English and encourage classroom engagement. Industrial design was chosen for class content as it is a subject which underlies the practical commercial output component of engineering and the hands-on nature of design was thought to align well with engineering students’ leaning styles and preferences (Ehrman, 1996).

2. Methods

2.1 Participants

The participants in this study were all sophomores at an engineering university in Northern Japan. There were a total of 47 (N=47) participants of which 36 (N=36) were architecture and civil engineering majors, and 16 (N=16) were information technology, systems engineering, and computational intelligence majors. The two groups were enrolled in separate General English classes, a four-skill elective English class offered as part of the foreign language breadth requirements within the engineering program at their university. The proficiency level of the participants ranged from high beginner to intermediate.

2.2 Data collection and analysis
Data were collected via a Class Evaluation Questionnaire and the Short FLOW State Scale (SFSS) (Jackson, 2009). The purpose of the Class Evaluation Questionnaire was to gather student’s over impressions of the class and its specific units. It included open-ended items asking students their overall impression of the course, which units they liked and disliked and why, and solicited suggestions for design themes students though might be of interest to future class participants. The questionnaire also asked students to nominate their five most preferred, and least preferred, design units, and provide explanations where possible. The Class Evaluation Questionnaire was administered in the fifteenth and final week of the semester and took participants approximately 15 minutes to complete. Data collected from the questionnaire was recorded and open-ended items were coded and analyzed using two-step content analysis to establish broad initial themes then more refined response categories.

The SFSS consisted of nine Likert scale items measuring dimensions of flow after a specific activity. Specifically, the nine items measured: challenge and skill balance, merging of action and awareness, clarity of goals, unambiguity of feedback, concentration on the task at hand, sense of control, loss of self-consciousness, transformation of time, and autotelic experience. The SFSS was completed in the tenth week of the semester following the final portion of the class where students developed their own original designs and shared them with their classmates. As this is an instrument measuring flow state at a specific time, as opposed to more general dispositional measures, its focus was on information pertaining to participants’ flow state at the particular time they took part in a particular design activity.

2.3 Class procedure and design

The Industrial Design-themed ESP class was taught over a fifteen-week period. Each class followed a similar procedure developed around a distinct industrial design theme. Classes began with a schema setting general warm-up activity to activate prior knowledge of the topic, and then proceeded to a “Thinking about design” warm-up activity in which students could consider some general characteristics of design related to that week’s theme. This was followed by technical vocabulary activities to familiarize learners with words necessary to understand a subsequent mini lecture on that week’s design theme. The lecture was followed by comprehension questions, expansion activities, and additional technical vocabulary work with diagrams to provide learners with the lexicon necessary to describe related products within the genre of design being explored. Classes culminated with a design task in which students were provided time to sketch and label an original design which they later described in English to classmates in pairs or small groups.
3. Results

Responses from the first item of the Class Evaluation Questionnaire indicated that learners endorsed the class positively overall. A total of 63 comments were collected from participants of which 88.8% (n=56) were categorized as positive and 11.1% (n=7) were mixed. No expressly negative responses were provided by participants. Across academic major, architecture and civil engineering major comments were 80.6% (n=25) positive and 19.3% (n=6) mixed, while information technology, systems engineering, and computational intelligence majors’ comments were 96.8% (n=31) positive, and 3.1% (n=1) mixed.

Table 1: Preference summary: Architecture and civil engineering majors

<table>
<thead>
<tr>
<th>Positive (n=25)</th>
<th>80.6%</th>
<th>Mixed (n=6)</th>
<th>19.3%</th>
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<tbody>
<tr>
<td>enjoyed</td>
<td>n=9</td>
<td>difficult</td>
<td>4</td>
</tr>
<tr>
<td>designing</td>
<td>n=6</td>
<td>other formats</td>
<td>1</td>
</tr>
<tr>
<td>interesting</td>
<td>5</td>
<td>more grammar</td>
<td>1</td>
</tr>
<tr>
<td>good</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learned design</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>easy to understand</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>class style</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>made me think</td>
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<td></td>
</tr>
<tr>
<td>authentic English</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning English through design</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tasks</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>appropriate level</td>
<td>1</td>
<td></td>
<td></td>
</tr>
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</table>

Table 2: Preference summary: Information technology, systems engineering, computational intelligence

<table>
<thead>
<tr>
<th>Positive (n=31)</th>
<th>96.8%</th>
<th>Mixed (n=1)</th>
<th>3.125%</th>
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</thead>
<tbody>
<tr>
<td>enjoyed</td>
<td>n=9</td>
<td>difficult but novel</td>
<td>n=1</td>
</tr>
<tr>
<td>design tasks</td>
<td>n=5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interesting</td>
<td>n=5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning English through content</td>
<td>n=4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>novelty</td>
<td>n=3</td>
<td></td>
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</tr>
<tr>
<td>learn design</td>
<td>n=3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>good</td>
<td>n=2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The three most frequently cited reasons for positive endorsement of the class across both cohorts of learners was the overall enjoyment students experienced, the design task associated with each lesson, and the over interest the class generated (see Table 1 and Table 2). Examples of these responses came from one student who responded, “I enjoyed every time, it
was different from any English class I have ever taken, for me, English is interesting now” (Student K4). An additional student explained, “it was enjoyable to design on your own, I learned about many new designs, I’m glad I took this class” (Student K9). Also highly endorsed were learning about design and learning English through design content. An example of this type of response was “studying English through learning about design was really interesting. I liked learning about designs and making my own designs” (Student J12). The most frequent type of mixed responses came from students who thought that the class was somewhat difficult, but also positive in particular ways. For example, one students commented “I thought it was hard at the beginning, but even if I wasn’t really interested in a topic, I enjoyed designing and learned a lot of new things, it was interesting” (Student J3). Another student similarly thought it was difficult but enjoyed designing and sharing designs with others, “I enjoyed thinking about my own designs, but it was difficult, then I enjoyed seeing other students’ designs” (Student K13).

Weekly Themes
1 chairs, 2 hats, 3 robots, 4 electric, 5 recycled homes, 6 snack design, 7 cell phones
8 towers & buildings, 9 vending machines vehicles 10 characters, 11 cars, 12 cardboard

Figure 1: Overall preferences across design theme units

Overall preferences of units shared both similarities and differences across majors (See Figure 1). The top 5 preferred unit topic for architecture and civil engineering students
were units 6 (snack design), 10 (character design), 3 (robot design), 5 (recycled homes), and 8 (tower design), while for information technology, systems engineering, and computational intelligence majors the most preferred topic were: 5 (recycled homes), 3 (robot design), 9 (vending machine design), 7 (cell phone design), and 10 (character design). The findings indicate that two of five units were directly related to the civil engineering / architecture major, while three out of five information technology preferences were related to their major.

Results of the Short Flow State Scale were quite similar across majors. The overall mean for all combined items for the architecture and civil engineering group was 3.9 (m=3.9), and the top four endorsed items were time transformation (item 8) (m=4.51, SD=0.80), autotelic experience (item 9) (m=4.37, SD=0.92), loss of self-consciousness (item 7) (m=4.07, SD=1.03), and task concentration (item 5) (m=4.03, SD=0.85). The overall mean for the IT, systems engineering and computational intelligence class was 4.03 (m=4.03) with the four most highly endorsed items being time transformation (item 8) (m=4.86, SD=0.35), autotelic experience (item 9) (m=4.73, SD=0.45), task concentration (item 5) (m=4.66, SD=1.33), and goal clarity (m=4.06, SD=0.72).

<table>
<thead>
<tr>
<th>S-FSS Dimensions</th>
<th>Civil Eng/Arch</th>
<th>IT, Systems, CI</th>
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<tbody>
<tr>
<td>2. Merging of action and awareness</td>
<td>27 3.59</td>
<td>15 3.53</td>
</tr>
<tr>
<td>3. Clear goals</td>
<td>27 3.66</td>
<td>15 4.06</td>
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<tr>
<td>4. Unambiguous feedback</td>
<td>27 3.54</td>
<td>15 3.20</td>
</tr>
<tr>
<td>5. Concentration on the task at hand</td>
<td>27 4.03</td>
<td>15 4.66</td>
</tr>
<tr>
<td>6. Sense of control</td>
<td>27 3.85</td>
<td>15 3.66</td>
</tr>
<tr>
<td>7. Loss of self-consciousness</td>
<td>27 4.07</td>
<td>15 3.93</td>
</tr>
<tr>
<td>8. Transformation of time</td>
<td>27 4.51</td>
<td>15 4.86</td>
</tr>
<tr>
<td>9. Autotelic experience</td>
<td>27 4.37</td>
<td>15 4.73</td>
</tr>
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Figure 1: Results of the S-FSS

4. Discussion

Recent research conducted by the author (Johnson 2012, 2013, 2014, 2015), and others (Gilmore, 2004, 2007; Guariento & Morley, 2001; Henry, 2007; Jarvis & Szymczyk, 2009) have indicated that learners respond to different instructional materials in distinct ways. Results of this particular study are encouraging as they seem to indicate a number of positive outcomes can be associated with the instructional materials examined, in particular industrial design-themed ESP materials, and their use with Japanese engineering students learning EFL.
The overall positive reception of the materials in terms of appealing to student interests and preferred learning styles is encouraging. These positive attitudes were reflected in comments by such as “It was my first time to learn about design in class, I enjoyed making my own designs each week, I enjoyed every week” (Student J14), and “it was very good thinking and designing while learning English” (Student K28). These comments reflect the importance of new or novel content as a means of stimulating interest and promoting positive attitudes towards learning (see Stott, 2004). In terms of learning style preference, student responses elucidated the power of design in promoting English learning, as one student commented, “more than a power point or lecture, through design I could get a feeling for English” (Student K3). Engineering students have been demonstrated to be more actively-oriented learners and to have more kinesthetic-oriented learning styles (Ehrman, 1996), and as such, appear to have embraced these characteristics of the design class. Students also commented that they enjoyed using their own ideas in creating their own designs. This aspect of the materials provided learners an element of control over the lesson content, something that has been further demonstrated to promote engagement (Egbert, 2003; Hart, 2002).

The strong positive endorsement of the S-FSS scale items indicated that the design task measured promoted a state of flow in the classroom. The particularly high endorsement of time transformation, autotelic experience, and loss of self-consciousness indicated that the students found the task both absorbing and intrinsically rewarding. Data collected from the open-ended items of the Class Evaluation Questionnaire support the notion that positive attitudes towards the design content and the nature of the design tasks themselves likely contributed to the high levels of affective and cognitive engagement demonstrated in the S-FSS results. In order for activities to promote a state of flow they must achieve a skill and challenge balance where the individual feels they are optimally challenged (Csikszentmihalyi, 1991). Activities that are either exceedingly difficult, or too easy, fail to meet the optimal challenge condition. In the two classes examined in this study there was a range of proficiency levels, and some student stated that they found class perfectly challenging, while other stated it was too difficult. Finding an optimum proficiency level and task difficulty balance in mixed level classes is certainly difficult. However, instructors who are aware of this condition and the characteristics of their particular learners should strive to challenge learners appropriately to promote flow experiences in the language learning classroom.

5. Conclusion
The goal of this study was to examine the potential utility of industrial design ESP instructional materials on the EFL learning motivation and attitudes of Japanese engineering students. The overall positive endorsement of the class, and positive results of the S-FSS following a design task, indicate that the class design and content appealed cognitively and affectively to the target population of learners. Examination of a wider array of themes within the suite of materials, as well as other engineering majors’ engagement, is necessary to validate and expand upon the preliminary results reported here. It is hoped that this research will ultimately promote the development of Japanese engineers who are more globally-oriented and who positively embrace English as an engaging and necessary tool for their careers.

References


Agglomeration and inequality of educational outcomes:

an initial investigation

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Harvard University

0. Abstract

Is the distribution of the population across space related with the quality of the delivery of government services? In this paper, I explore the hypothesis that the density of the population in a geographic space has an effect on the inequality of school outcomes and find a robust positive relation. By looking at within-commuter zone inequality, I find that denser commuter zones have greater levels of between-district inequality. There are driven by much smaller positive effects of density at districts at low proficiency levels, compared to high proficiency districts. This is consistent with a separating equilibrium where agglomeration allows certain parental groups to benefit more than others. I hypothesize and find support for a mechanism that potentially contributes to this relation: different perceptions and increased pressure for reform from citizens about schools in denser areas.

1 clastraanadon@fas.harvard.edu. I am grateful to Fundación Ramón Areces and the Tobin Project for support in this project and to audiences at Harvard, the Tobin Project, the Association of Public Policy and Management Fall conference and the Hawaii International Conference on Education for helpful feedback.
1. Introduction

Much of the literature on educational policy focuses on the impact of school inputs such as teacher quality, class size, mode of delivery of instruction. In addition, it is well-known that schooling interacts with the social context and the socioeconomic status of students and their families. Card (1999), Hanushek (2015) or specifically for graduation rates, Murnane (2013) surveys these literatures. Another literature studies the consequences of organizational and governance mechanisms such as charters (Epple et al. 2015), school finance (Hanushek and Lindseth, 2009, Jackson et al., 2015), use of vouchers (Chingos and Peterson, 2015) or accountability mechanisms (Deming et al. 2015).

Less explored are the consequences of the spatial distribution of the population and the mechanisms that may relate them to outcomes. Yet, we know that agglomeration economies and more broadly spatial distribution can affect levels of economic growth, subjective well-being, entrepreneurship levels or the quality of hospital care (Glaeser and Gottlieb, 2009 and Glaeser, 2010). The reduction of transportation and information costs (agglomeration economies) that these studies document, however, arguably have an effect on the level of performance of the delivery of government services. However, there surely are countervailing forces, as it is known that many of the most challenged school districts in the United States are urban ones. In related work (Lastra-Anadón, 2017), I study the relation between the density and student performance in standardized test scores using a variety of specifications in an effort. I find that there is a robust relation between density levels and the quality of school performance.
In this paper, I look at whether the spatial characteristics of jurisdictions (for short, the jurisdiction's *geography*) affects the distribution in educational outcomes and hence whether they may affect inter-generational mobility. I find that in fact, metropolitan areas that are more densely populated have greater average levels of performance but also higher inequality levels across different groups. I test a mechanism that may be driving this through the greater accountability afforded by facilitating the flow of information, which in turn would ensure greater responsiveness from the public entities in charge of the delivery of services. I also find some evidence for the view that policy preferences are different in denser areas, in accordance with the accountability view. Moreover, denser metropolitan areas are also ones with more choice of school districts for parents and greater density also facilitates the sorting of families between some high accountability/high information ones and the rest. I find support for the hypothesis that denser commuter zones are in fact ones with, as a result of the simultaneous greater choice and greater inequality.

The role of information and accountability potentially provides part of the explanation of the origin and upholding of high performing districts and results in a separation of districts between high performing and lower performing districts.

2. Theory and main predictions

My hypothesis is that density may be related to education levels but also responsible for higher levels of inequality across districts. Denser commuter zones will have more sorting among schools, through a larger number of schools and
possibly districts and may result in more sorting across districts. This is motivated by the fact that denser commuting zones or metropolitan areas allow for more choice of districts for families, since given an anchoring job or set of jobs there are more districts within driving distance from it. Moreover, under the mechanism of information and accountability here postulated, even if overall higher density levels have a positive effect, the costs of being disconnected may also rise. Certain districts within denser commuter zones may be initially highly effective for exogenous reasons. Limits to school sizes necessarily restrict the availability of high performing districts. This then may result in the sorting within the commuter zones or metropolitan areas of more involved and informed parents and a group that does not hold schools equally accountable or have the same amount of information areas to choose and join better schools.

If these interactions are indeed a first order driver of outcomes, we would expect then that geographic density to be positively associated with student outcomes. But since denser metropolitan areas or commuter zones are also ones with more districts accessible from a central location, this information and accountability mechanisms may lead to inequality across school districts, given the effort that is still required to obtain information or exercise accountability. While there may be some benefit from the lowering of costs of information or accountability that is common to all districts, the presence of important information and accountability mechanisms that favors some districts, would lead to an overall increase in inequality. In summary, those parents who exerce effort reap a large share of the
benefits of better outcomes and, inequality in outcomes is thus generally increasing on the density of commuter zones.

3. Data and empirical strategies

Data and empirical strategy on density and district outcomes

I take as my primary independent variable of interest the density of enrollment, i.e. the enrolled K-12 students per square kilometer. This continuous variable is used as a convenient proxy of the relation we are trying to get at where parents drive schools. This is akin to the standard measure of agglomeration used in the urban economics literature, which uses population density or labor force density as a primary measure of agglomeration of population (see e.g. Glaeser (2010), Introduction). Alternative specifications with the US census-defined bins of urban, suburban and rural districts are possible and carried out, as well as the same analyses using alternative variables such as population, geographic area or distance to capital city.

Using data from school districts in the United States, I study whether these density measures are systematically related to performance in 8th grade standardized tests in math and reading, using No Child Left Behind (NCLB) mandated state tests that all students have to take, adjusted by a measure of relative difficulty of the state exams. The outcome data comes from Greene and McGee’s George W. Bush Institute’s Global Report Card (Greene and McGee, 2011). They do a crosswalk between NAEP and state tests report the relative standing of districts on a national scale.
In order to test this relationship more systematically, I firstly study the relation at different deciles of the distribution of districts within commuting zones, noting that there are an average of 14 districts by commuter zone. We use quantile regression, which allows us to estimate the effect of commuter zone density at different deciles of the distribution of performance. In essence, the quantile regression estimator weighs the observations centered around the specified quantile in a regression framework and linearly decreasing away from the center, introduced by Koenker and Bassett (1978).

In regression form, the link between student density in enrollment and outcomes, by running a series of regressions of the form at two different levels:

\[ Y_{\theta i} = \alpha \log d_i + \beta X_i + \text{State}_s + \varepsilon_{is} \]

Here \( d_i \) is the enrollment density variable and indicates enrollment in K-12 education per square kilometer in the commuter zone, \( X_i \) are district level controls and \( \text{State}_s \) are state fixed effects. I run this for the 2009 cross-section of district level student outcomes (the \( Y_i \)), the latest one for which data is available from the Green et al. dataset. Error terms are clustered at the state level. \( \theta \) is the quantile level of performance.

*Data and empirical strategy on the accountability and information mechanisms*

In order to assess mechanisms, we introduce an additional dataset of dependent variables. I use the PEPG EdNext survey, a nationally representative survey on

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2 For an analysis of the effects of density on district finances and efficiency of the delivery of services, please see the companion paper, Lastra-Anadón (2017).
issues of education, with oversamples for teachers and parents and done via computer, with data for each year in 2007-2015.

Analogously to the analyses of student outcomes and log-density, I implement regressions of the following form:

$$\text{Outcome}_i = \alpha \log \text{density}_{cz} + \beta X_i + \gamma Y_d + \text{year}_y + \varepsilon_{kzy}$$

4. Results

Inequality: reduced form

In the specifications reflected in Figure 1 at the commuter zone level that relate the commuter zone (CZ) density to the level of inequality in outcomes between districts within the CZ, we observe that density is positively associated with rising inequality and especially to greater differences between the top and bottom school districts. In so far as I associate the finding with a mechanism of differential information flows, it may contribute to explain the sorting observed even when controlling for funding differences.

Figure 2 plots the coefficients from a series of quantile regression and shows that the increased inequality is the result of the different effect of density at different levels of the performance distribution, increasing in the position of the distribution. In particular, we see a positive effect of density throughout and higher as we move up in the distribution of outcomes. It is more than twice as large at the 90th compared to the 10th percentile.

Attention levels, support for reform and information levels
We find the following associations that are broadly consistent with a differential attitudes and perception levels in denser commuter zones from the rest:

**Perception of school system:** In Figure 3, we see that perceived spending (overall and salaries) is much higher for denser districts, but similar to the real spend difference. However, in Figure 4, when respondents are asked about the quality of the schools on an A-F to scale, there does not seem to be a significant effect. Local schools are perceived to be roughly the same as in less dense districts, either in absolute terms or adjusting by their quality in terms of their performance in standardized tests in math and reading. They also do not perceive national schools to be significantly different.

**Support for school reform:** consistently, as shown in Figure 5 respondents in denser districts are significantly more likely to support vouchers, charter schools or variable pay for teachers. No significant effect is apparent on other indicators of school, such tenure and teacher pay increases. A summary index of reform also captures this positive association of density, which is even more pronounced for the measures that would more visibly change the educational opportunities of respondents, such as the use of vouchers and charter schools.

**Voting behavior and attention paid to education:** in Figure 6, we see that there is no significant effect on voting (although the association is negative) or on attention paid to education issues.

5. Conclusion
I have presented an initial exploration of the relation between the agglomeration of school-age children and inequality of school outcomes. While a fairly strong and robust positive relation holds at both at the district and the commuter zone level between density and average outcomes, I document that density is associated not only, on average, with better outcomes but also with greater inequality in those outcomes. This seems to be driven by greater beneficial effects of density for higher performing districts within commuter zones: while density is associated with higher performance throughout the distribution, high performing districts seem to benefit more. Districts at the 90th percentile of performance gain from increases in density about twice as much as those at the 10th percentile. There is some evidence that the views and attitudes towards the school system of citizens are different. Since we can expect that reaping this information and acting upon it requires some effort on the part of parents and that this will be differ, if a principal channel of the relation between density and outcomes are indeed attitudes and information or perception of schools, we would expect the results to be consistent with density being both positive for outcomes on average and inequality-increasing. This constitutes the beginnings of a potentially fruitful research agenda that roots education inequality on persistent jurisdictional characteristics, such as geography, which have been largely overlook from the literature.
6. References


7. Figures

Figure 1: Plot of coefficients from the regression between measures of within CZ inequality in test scores and CZ log density, controlling for inequality levels in free and reduced lunch share and for district numbers.

Figure 2: Plot of coefficients from a series of quantile regressions between reading zscores and district log density, with demographic controls. Red line is the average effect.
Figure 3: Plot of coefficients of log density in the regressions with $ amount as dependent variable, with full controls.

Figure 4: Plot of coefficients of log density in the regressions with z-score of performance as dependent variable, with full controls.
Figure 5: Plot of coefficients of log density in the regressions with support as a dependent variable, on 1-5 scale, where 1: Strongly support and 5: Strongly oppose.
Figure 6: Plot of association between log student density, attention paid to education and recall of voting in school board election. Each of the 20 dots represents in the y-axis the average of the closest values.
**Title of Submission:** Living our Learning: The Efficacy of Living Learning Communities on an Undergraduate Residential Campus

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**Abstract**

Placing learning first requires faculty and staff to work side by side developing similar goals and objectives to create a maximum learning environment. Learning communities and orientation courses are known as “Best Practice” in higher education. This article describes a linked learning community organized alongside a living learning community composed of students, faculty, and staff at a small private college in the Midwest. The purpose of the article is to describe a brief history of a Midwest private college’s current learning communities and examine the student’s perceptions and assessments of their experiences. Recalling the work of early proponents of experiential learning, and
employing an engagement scorecard, this piece illustrates the use of embedded, spiral curriculum in an undergraduate liberal arts program and its attempts to quantify student learning and codify engagement using a campus-specific engagement “scorecard.”
Abstract

In recent years, there has been an emphasis placed on the academic language and vocabulary used in the classroom. Vocabulary and syntactic knowledge in oral and written language embodies specific skills that allow students to meet academic demands across the curriculum. Academic language often represents a range of knowledge of word definitions, understanding of word parts, and the nuances of vocabulary meanings. Proficiency in academic language helps students acquire new vocabulary and comprehend academic content material. In order for students to be properly exposed to academic language and vocabulary in the classroom, teachers must have a sophisticated ability to teach academic language and vocabulary. This means teacher preparation programs must be preparing pre-service teachers to handle the complex and dynamic demands of teaching academic language and vocabulary.

Introduction

The number of students entering college underprepared to handle complex text continues to rise (Baker et al., 2015). Many students lack strong reading-comprehension skills due to a deficit in vocabulary knowledge and understanding of academic language structures, which can ultimately impact success in academic settings and professional workplaces (Baker et al., 2015). Vocabulary and syntactic knowledge in oral and written language embodies specific skills that
allow students to meet academic demands across the curriculum. Academic language often represents a range of knowledge of word definitions, understanding of word parts, and the nuances of vocabulary meanings. Proficiency in academic language helps students acquire new vocabulary and comprehend academic content material. The characters of academic language, include:

- Morphologically complex words (words with multiple parts, including prefixes and suffixes) e.g., prediction, underlying, strategically
- General academic words that are high frequency and may be abstract or have multiple meanings, e.g., response, provide, focus, incorporate
- Discipline specific words e.g., inference, schema, analyze

Many students struggle because they are unable to use academic language successfully in school settings, often leading to early dropout or failure (Zwiers, 2014). Academic language is often composed of sophisticated vocabulary. Students who master academic language are more likely to be successful in academic settings and professional workspaces. Vocabulary knowledge, specifically academic vocabulary knowledge is critical to ensure students are college and career-ready. The College and Career Readiness Anchor Standard (National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010) states students must “acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.”

Vocabulary plays an important role in students ability to understand the language used in academic readings and assessment. Most people tend to infer teachers have the knowledge and capacity to properly teach academic language, including academic vocabulary. Independent use of academic language requires teacher support and gradual release of responsibility so students
learn how to use academic language independently. However, many pre-service teachers have not had adequate exposure or preparation to acquire and in turn teach academic language, even though academic language has been identified as a critical element associated with academic success (Neal, 2015, as cited Zwiers, 2008). Therefore, the purpose of this study is to examine the knowledge, attitudes, and perceptions pre-service elementary teachers at Auburn University have toward academic language and vocabulary.

**Academic Language**

Academic language is language that is used in the classroom and workplace, it is the language of context, text, discourse, and assessment. Academic language is the ability to not only understand content vocabulary, but also be able to understand the discourse, syntax, and structures involved when reading complex text or participating in academic conversations. Zwiers (2014) defined academic language as “the set of words, grammar, and discourse strategies used to describe complex ideas, higher-order thinking processes, and abstract concepts.” Vocabulary then, is only one component of academic language. Academic language is crucial for success in reading comprehension, which transfers to success in all areas of literacy. Knowing learning happens when the academic language needs of students are being met, makes it crucial for pre-service teachers to understand the importance of examining academic language and the functional use of academic language within each lesson, assignment, task, and discussion. Lucas et al. (2008) postulated pre-service teachers need to have the “willingness and the skills” to examine academic language and identify that language and learning cannot be separated. It is ongoing, systematic instruction used to expand academic vocabulary.
**Academic Vocabulary**

Vocabulary knowledge is our ability to understand and comprehend the meaning of words. Vocabulary knowledge plays an important role in the student's ability to understand and apply the language used in academic settings. Academic vocabulary refers to the knowledge and understanding students have of words in order for them to successfully engage with and have discussions around text (Brozo & Simpson, 2007). Beck (2013) refers to these as Tier two and/or Tier three words. Beck, McKeown, & Kucan (2013) positioned the organizational framework for categorizing words into three separate tiers. Tier one words contain words used in everyday speaking and should not require explicit teaching when students begin school. Tier one should be part of students everyday vocabulary. Tier one are words used in everyday conversation. Tier two words are more complex vocabulary; words students are most likely to see more frequently across content areas in various texts. These words are crucial for students to learn in order to develop academic success. Tier two words are general academic words which have a high utility across a multitude of topics. For example, *justify* or *predict* can be used in reading to predict the outcome of a story or to justify word choice. Whereas in science predict is a quantitative statement in which one might predict what might happen under certain circumstances and then justify why. Tier three words are extremely complex and domain specific vocabulary. They are often specialized words that appear in specific fields or content areas. Students would only need to know these words when studying a specific content. An example would be the word, metacognition. Pre-service teachers would require vocabulary knowledge of metacognition as they plan and develop lessons for their students (Beck, McKeown, & Kucan, 2013).

Beck (2014) explains the only criteria for teaching complex vocabulary is the student must know the underlying concept of the word. For example, if pre-service teachers know the vocabulary word *support*, they can be taught the more complex term *scaffolding*. According to
Beck (2014), teachers must be able to explain the word in everyday English, using words that are less complex than the word being taught. This is increasingly more difficult as pre-service teachers must acquire the language in a brief period of time (one semester), take ownership of the academic vocabulary (academic discourse), and use it as a complex term (professional writing) and be able to explain the word in simpler terms for students (lesson plans). It is important to understand the vocabulary gap and, not only why vocabulary should be used but what vocabulary words should be taught. In order to adequately address the academic vocabulary students need to encounter to be successful in school, pre-service teachers need to have a strong foundation in their preparation of academic vocabulary, so they are able to apply this knowledge when they enter the teaching profession.

**Literature Review**

Student vocabulary skills are directly linked to economic backgrounds (Hart & Riley, 1995). Therefore, teachers must advocate for equity. The vocabulary gap can no longer be ignored. This is a critical aspect of literacy for students who have fallen behind in the conceptual development of language. The Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers [NGA & CCSSO], 2010), recognized the importance of academic language and vocabulary postulating “Closely related to text complexity and inextricably connected to reading comprehension is a focus on academic vocabulary: words that appear in a variety of content areas (such as *ignite* and *commit*)” (n.a.). Consequently, these standards are expected to be met by all students, making it difficult to ignore the importance of teaching academic language and vocabulary in the classroom. For this reason, teachers must have a strong working knowledge of the complex language demands and content-specific vocabulary students need to engage with to find success in education. This means
teacher preparation programs need to be diligent and successfully produce pre-service teachers who can meet the instructional demands of the classroom.

Using a variety of research based teaching methods such as concept maps, read alouds, and word learning strategies will help to advance educational equity. Therefore, preparation is critical in teacher preparation programs. Pre-service teachers need a variety of research based teaching methods to support and scaffold the acquisition of new vocabulary. Pre-service teachers need to know the best instructional techniques for teaching academic language and the corresponding vocabulary, especially interventions for the lower-performing students, if we are going to see a change in the current trends.

In a recent article, Galguera (2011) stated fluency in Standard English does not equate to academic success. The article also explained the challenges of students needing to be able to recognize and use the features and functions of academic language in order to be successful. Galguera (2011) continues to express the need for teacher preparation programs to emphasize teacher’s knowledge and understanding of teaching techniques needed for the expansion of language development and the academic purpose of language in all forms.

Studies are showing lower performing students are starting kindergarten so far behind their average-to-high performing peers that not only are they unable to “catch up”, they are falling further and further behind (Biemiller, 2003; Biemiller & Slonim, 2001). According to Biemiller (2003), considerable differences in the amount of words students know, is apparent by the end of second grade. In one of his many studies on vocabulary acquisition, high performing students knew an average of 7,100 root words by the end of second grade (Biemiller, 2003). In contrast, the low-performing students knew an average of only 3,000 words- a difference of about 4,000 words less than their high performing peers (Biemiller, 2003). Consequently, by the
of end of fifth grade, the lower-performing students had still not learned 7,100 root words—the amount of words already reached by high-performing children at the end of second grade (Biemiller & Slonim, 2001).

There is potential for the vocabulary gap to become disastrous for students who are missing the foundational word knowledge necessary to find success when encountering complex curriculum (Flanigan, Templeton, & Hayes, 2012). Some suggest this “gap” between lower-performing students and higher-performing students must to be addressed and corrected before third grade for students to find success throughout school and their future careers.

Neal (2015) claims students enter college with language resources that have sufficiently gotten them through past educational experiences and various social situations. Neal goes on to write that many of these students are not prepared in terms of academic language proficiency for the vast majority of disciplines they will begin to encounter (Neal, 2015). This is important to consider in the education field because pre-service teachers will need to have proficient academic language knowledge to find success in teaching. Additionally, making the matter more complex, pre-service teachers will also need to be successful at teaching academic language.

Teachers must be creating settings to prepare students for the future and the classroom should create an environment which engages students in problem-solving, creative activities (Boyd-Batstone, 2013). In order to ensure teachers are able to meet the instructional demands needed to teach academic language and vocabulary, it is imperative teacher education programs are preparing pre-service teachers in these areas.

Theoretical Framework

Bruner (2006) believed learning was an active process from which humans built new knowledge from their current and past knowledge. This theory relied heavily on the idea that
complex cognitive structures provided the schema, experiences, and awareness humans needed to construct meaning. This active construction of meaning leads to new learning and new ideas.

For the purpose of this study, knowledge of academic language and vocabulary will be looked at through the lens of how pre-service teachers are able to construct new levels of knowledge about the complex language structures based on current and previous knowledge. As pre-service teachers engage in the active process of learning complex language structures and content-specific vocabulary they should be actively constructing knowledge rather than passively acquiring words. As Bruner (2006, p.175) theorizes, it is “the art or science of arranging cultivated knowledge so that it may more easily be grasped and more easily be used in thought” which drives the pre-service teachers’ contextualization of learning academic language, including academic vocabulary.

Over the course of the semester, pre-service teachers are expected to acquire complex language structures in order to effectively engage in academic discourse, including being able to use this knowledge to engage in academic writing. They must also take this one step further and transfer their knowledge of academic language and vocabulary to a classroom setting, where they appropriately scaffold the language to meet the needs of their students, while also providing opportunities for their students to engage in academic conversations using the complex language structures and content-specific vocabulary. The actions described are grounded in Bruner’s theory of constructivism. Bruner (2006, p. 115) writes in his collection of essays titled, “In Search of Pedagogy:

“It is only in a trivial sense [he wrote in 1965] that one gives a course to ‘get something across,’ merely to impart information. There are better means to that end than teaching. Unless the learner also masters himself, disciplines his taste, and deepens his view of the world, the ‘something’ that is got across is hardly worth the effort of transmission.”
This study sought to explore the knowledge, perceptions, and attitudes of pre-service teachers in order to better understand how pre-service teachers are acquiring and mastering the academic language of their field and deepening their view of how to engage students in the complex academic discourse needed to be successful in academic and professional settings.

**Methodology**

This study used a mixed method case study methodology (Stake, 1995) to identify and describe the changes that took place over the course of a teaching semester as pre-service teachers developed academic language and academic vocabulary for professional writing assignments, academic discourse and the construction of lesson plans. The participants for this study were pre-service teachers in their second reading course in the Elementary Education Program in the Southeastern United States. Participants were predominantly female, with one male pre-service teacher. All pre-service teachers maintain academically sound grade point averages and were expected to meet the expectations of their program, including all coursework assigned by their professor, which were examined for this study. Pre-service teachers signed consent forms to participate and had the option to withdraw at any time during the course of the study.

Our analysis of data indicated a wide range of academic language and vocabulary typical of many pre-service teachers. Hannah, Lillie, Sophia, Cindy, and Holly (pseudonym) served as case studies within a larger teacher development research project. These five pre-service teachers represent a broad sampling of the larger population (n=38). Data collection for this research project includes the following: Pre and post surveys, lesson plans, discussion postings, and analysis of student learning writing assignments.
Our data analysis consisted of three iterations. First we focused on identifying pre-service teacher’s perceptions and attitudes toward academic language and vocabulary. We sought to see what changes, if any, could be identified over the course of a semester. We drew from the larger population (n=38) of pre-service teachers and then narrowed down our results to identify five students to tell a deeper story. Second we sought to identify levels of understanding as students acquired language and vocabulary to apply complex vocabulary and language within professional writing assignments, academic discourse and the construction of lesson plans. Third we sought to determine if there was any direct correlation between student attitudes and perceptions of academic language and vocabulary to the changes identified over the course of a semester.

The following questions were used to explore the relationship between student’s attitudes and perceptions of academic language and vocabulary and the changes that took place during the academic semester.

1. How do the knowledge pre-service teachers have of academic language and vocabulary change over the course of an academic semester?
   a. How do the perception pre-service teachers have of academic language and vocabulary change over the course of an academic semester?
   b. How do the attitudes pre-service teachers have of academic language and vocabulary change over the course of an academic semester?

Data Sources.

The data sources are designed to produce a snapshot or picture of pre-service teachers as they acquire the academic language and academic vocabulary. To determine attitudes and perception a survey was administered to gain a baseline to determine if there were any changes
over the course of an academic semester. Additional data sources included: lesson plans, discussion postings, and analysis of student learning writing assignments.

Results

Using the three iterations listed above we sought to explore the relationship between students’ attitudes and perceptions of academic language and vocabulary and the changes that took place during the academic semester. Throughout the study the researchers collected and evaluated artifacts and data to support change over the course of an academic semester. A pre-survey was administered to develop a baseline measurement of students’ knowledge, perceptions, and attitudes of academic vocabulary and language. The survey consisted of nine questions which included six Likert-rating scale questions and three open ended text-response. The Likert questions ranged from 1 being extremely uncomfortable to 10 being extremely comfortable. To show the overall tendency, statistical descriptions of the reported comfort levels, preparation to teach, and importance are shown in Table 1. The mean score (M) and the standard deviation (SD) of the overall responses of these six items are shown below.

Table 1. Pre-Survey Results

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>M</th>
<th>SD</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>How comfortable are you with teaching academic language?</td>
<td>5.18</td>
<td>1.35</td>
<td>57.9%</td>
</tr>
<tr>
<td>How comfortable are you with teaching academic vocabulary?</td>
<td>5.76</td>
<td>1.53</td>
<td>44.73%</td>
</tr>
<tr>
<td>How do you feel the education courses at Auburn University prepared you to teach academic language?</td>
<td>5.66</td>
<td>1.75</td>
<td>39.47%</td>
</tr>
<tr>
<td>How do you feel the education courses at Auburn University prepared you to teach academic vocabulary?</td>
<td>6.00</td>
<td>1.85</td>
<td>39.47%</td>
</tr>
<tr>
<td>How important is it to teach academic</td>
<td>8.18</td>
<td>1.54</td>
<td>100%</td>
</tr>
</tbody>
</table>
To identify pre-service teacher’s perceptions and attitudes toward academic language we looked at the group as a whole and then focused on five individuals with varying perspectives. Overall 60.53% of students felt they were ill prepared to teach academic language and 60.53% of students felt ill prepared to teach academic vocabulary although they found both to be incredibly important. Pre-service teachers stated in the open ended questions of the pre-survey that "Academic Language is incredibly important “[it] is a broad overview that takes larger concepts and condenses them into content specific words” or it is “[the] professional language used in the classroom to facilitate learning and help students learn correct terms.” Overall the need for academic language and academic vocabulary was clearly articulated as important. Post survey results indicated an improvement in comfort and preparedness (see Table 2).

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>M</th>
<th>SD</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>How comfortable are you with teaching academic language?</td>
<td>6.32</td>
<td>1.63</td>
<td>89.29%</td>
</tr>
<tr>
<td>How comfortable are you with teaching academic vocabulary?</td>
<td>6.71</td>
<td>1.75</td>
<td>92.87%</td>
</tr>
<tr>
<td>How do you feel the education courses at Auburn University prepared you to teach academic language?</td>
<td>6.5</td>
<td>1.48</td>
<td>96.43%</td>
</tr>
<tr>
<td>How do you feel the education courses at Auburn University prepared you to teach academic vocabulary?</td>
<td>6.71</td>
<td>1.46</td>
<td>96.43%</td>
</tr>
<tr>
<td>How important is it to teach academic vocabulary?</td>
<td>8.14</td>
<td>1.64</td>
<td>100%</td>
</tr>
</tbody>
</table>
How important is it to teach academic language?

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Pre- M</th>
<th>Post- M</th>
<th>Pre-SD</th>
<th>Post-SD</th>
<th>Pre- %</th>
<th>Post- %</th>
</tr>
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</tr>
</tbody>
</table>

Note. M=Mean; SD= Standard Deviation; %= Percentage of scores 5 points or more

Comfort levels increased by 31.39% for comfort level of academic language and 48.14% for comfort level of academic vocabulary. In addition, preparedness increased the most with both academic language and academic vocabulary improving by 56.96% each. Overall student attitude and perception improved (see Table 3) over the course of the semester. Pre-service teachers improved in both comfort level and preparedness to teach both academic language and academic vocabulary. These statistics indicate a change in student perspective and attitudes and guide us in answering the following sub-questions.

a. How do the perception pre-service teachers have of academic language and vocabulary change over the course of an academic semester?

b. How do the attitudes pre-service teachers have of academic language and vocabulary change over the course of an academic semester?
How important is it to teach academic vocabulary? | 8.14 | 8.18 | 1.64 | 1.54 | 100% | 100%
---|---|---|---|---|---|---
How important is it to teach academic language? | 8.32 | 8.47 | 1.49 | 1.55 | 100% | 100%

*Note. Pre= Pre survey results; Post=Post survey results; M=Mean; SD= Standard Deviation; %= Percentage of scores 5 points or more*

To further expand on these two questions and to draw conclusion for our main question: How does the knowledge pre-service teachers have of academic language and vocabulary change over the course of an academic semester? We will look at five individuals of varying levels of both comfort level and preparedness. All five pre-service teachers were in their first methods course which means they were in their second semester of the education program. They range in age from 21-23 and are all Caucasian female from a southern region.

*Hannah.*

Hannah felt academic language was foundational to learning. She stated “it is important for me to consider that this task will be much more difficult without foundational knowledge of the subject-specific academic language included in the passage.” Reviewing her work samples and artifacts it was clear to see that Hannah not only felt it was important for students to develop academic language she also intentionally used academic language in her writing assignments. Pre-service teachers were asked to reflect upon how their understanding of their students’ prior academic learning and personal, cultural, and community assets guided their choice or adaptation of learning tasks and materials. They were asked to make connections between the learning tasks and students’ prior academic learning, and research and theory. The following is an extrapolation of Hannah’s reflection used to explore the academic language and academic vocabulary:

My decision to include the scavenger hunt in this lesson was informed by Lave and Wenger’s Situated Learning Theory (academic language). This theory (academic vocabulary) states that the acquisition of knowledge (academic vocabulary) is a result of
activity and the context in which it occurs. The scavenger hunt [was used] to look at informational (academic vocabulary) texts turns the content into an engaging activity (academic vocabulary) for the students. It is also a culturally relevant (academic language) task because the topic is focused on Auburn University and the historical value of Auburn, Alabama as a whole. The context of learning (academic language) occurs in Auburn, where many of the students are from; the informational texts (academic vocabulary) selected are rooted in the culture and values (academic language) of Auburn University. For example, the students will look at a menu from Toomer’s Corner and will analyze (academic vocabulary) its parts, such as the headings, prices, extra information, and historic background section (academic vocabulary). Looking at menus is something that is relevant to students’ lives, a task they will do. This decision was informed by the constructivist theory (academic language) that suggests students should be given time to explore (academic vocabulary) materials and make discoveries (academic vocabulary) on their own. By allowing time for predictions (academic vocabulary) the students will engage in critical thinking (academic vocabulary) and be making discoveries (academic vocabulary) and connections (academic vocabulary) both independently (academic language) and with their peers (academic language).

Evaluating the above paragraph for academic language and vocabulary, one can identify several instances as noted in the annotation in the paragraph above. Hannah clearly addressed all components of the assignment, identifying and strongly justifying a theory to support her academic decisions. Although Hannah displayed high levels of academic language and vocabulary her post survey scores for comfort levels for teaching academic language and vocabulary were a 5 indicating she is neither extremely uncomfortable or extremely comfortable about teaching academic language or vocabulary. In addition, her scores for how prepared she is to teach both academic language and vocabulary also were a 5 indicating she is neither extremely uncomfortable or extremely comfortable with the preparation she has received to teach academic language or vocabulary. Hannah did indicate on the survey the importance of teaching both academic language and vocabulary as she scored each one a 7 indicating a stronger importance. Hannah was a strong student who was very reflective and intentional with language and vocabulary. As noted above Hannah has an equal balance of both academic language and vocabulary.
After reviewing Lillie’s work samples and artifacts it was clear to see that Lillie often uses simplistic vocabulary and simplistic language although she felt both academic language and academic vocabulary are extremely important. She indicated a score of 10 for how important do you think it is to teach academic language and a 10 for how important is it to teach academic vocabulary. Lillie stated “Academic language is the language students must have in the classroom to succeed, while academic vocabulary encompasses the words in texts students read that help them further their content knowledge and can be more challenging to acquire.” It is also the academic language and vocabulary needed for our pre-service teachers to succeed.

Reviewing an assignment submission there is evidence of simplistic vocabulary in her writing as indicated in the following artifact:

Students will analyze multiple texts (academic language) throughout the week and there is a specific day when videos on the civil rights movement (academic vocabulary) will be presented. While they are being presented, the students are having to write down what they believe to be similar as well as different between the two. I think throughout this activity, the students have to ask themselves “how do these subjects connect?”, “where in this text is there a supporting statement (academic vocabulary) in another text?”, etc. To make these connections (academic vocabulary) and to thoroughly find the blend between the multiple sources (academic vocabulary), the students have to generate questions (academic vocabulary) and think outside of the standard box.

To expand her academic vocabulary there are several areas in which she could look at academic language and the development of more specific academic vocabulary. For example: While they are being presented, the students are having to write down what they believe to be similar as well as different between the two. In this statement taken from her assignment submission Lillie could have used the academic vocabulary or language as follows: While students are analyzing multiple text and or videos, students will identify similarities and differences across multiple text. To make these connections and to thoroughly find the blend between the multiple sources,
the students have to generate questions and think outside of the standard box. Students will analyze multiple text as they look for textual evidence to support similarities and differences. These simple changes would increase the intentional use of academic vocabulary and language. Lillie identified academic language stating “Academic language is the syntax, vocabulary, grammar, etc. that students must acquire to have success in the classroom.” and “Academic vocabulary is the word usage in academic texts that students need to have to understand a text.” In her post survey Lillie stated she felt less comfortable teaching academic vocabulary (scored a 4) then teaching academic language (scored a 5). She also indicated on her post survey that she felt extremely prepared to teach both academic language and vocabulary (scored each a 9). Although Lillie felt prepared she really wasn’t comfortable using the language in her own writing. Pre-service teachers were asked to reflect upon how their understanding of their students’ prior academic learning and personal, cultural, and community assets guided their choice or adaptation of learning tasks and materials. They were asked to make connections between the learning tasks and students’ prior academic learning, and research and theory. The following is an extrapolation of Melissa’s reflection used to identify the use of academic language and academic vocabulary in her writing:

Grasping the diverse needs and learning styles (academic language) of the students in my classroom, I rooted my instruction in the educational theory of constructivism (academic language). Constructivist teaching (academic vocabulary) is based on the belief that learning occurs as learners are actively involved in a process of meaning (academic language) and knowledge construction (academic language) rather than passively receiving information (academic language), in other words, students are the makers of meaning and knowledge (academic vocabulary). My students’ learning needs are embedded in their backgrounds, experiences and practices (academic vocabulary) and my goal was to select materials and learning tasks that met the students at their roots and enhanced their learning. I took note that some of my students were visual, active, kinesthetic (academic language) learners while others adapted to literacy strategies (academic language) that were centered on intrapersonal and spatial styles of learning (academic language). To meet the objective, I selected a graphic organizer (academic vocabulary) the students were responsible to create themselves. After analyzing
I wanted to modify my lesson to enable all my students to turn into active participants that comprehend the information presented from the multitude of nonfiction texts they looked at this week, rather than being a passive recipient. Knowing this, I selected the organizer so that students could see the main targets used in the creative lesson, to encourage metacognition and enhance collaboration between students as well as teacher and student.

Evaluating the above paragraph for academic language and vocabulary there are several instances of academic language as noted in the annotation in the paragraph above. Lillie responded to this assignment using academic language. The academic vocabulary used is minimal and often disconnected to the academic language. The above paragraph displays an attempt to make some connections between her academic language and vocabulary but often relies heavily on the simplistic academic language that is often generic rather than content specific.

Sophie.

Sophie originally defined academic language as “the broad concepts that encompass all the different concepts and ideas using content specific words.” She revised her definition after the semester to define academic language as consisting “of content specific terms that should be used in professional speech and lessons.” This shows development of the understanding of academic language, but still lacks a clear, concise definitional use of the term. From the very beginning of the study, Sophie showed understanding of academic vocabulary being the content-specific terms needed to teach a lesson. Reviewing her work samples and artifacts it was clear to see that Sophie has the capacity to use academic language in some areas of her writing, but does not seem to consistently use the academic vocabulary commonly used in the teaching profession. For example, she often writes about adapting her lessons when many educators would use the word scaffold. Pre-service teachers were asked to reflect upon how their understanding of their
students’ prior academic learning and personal, cultural, and community assets guided their choice or adaptation of learning tasks and materials. They were asked to make connections between the learning tasks and students’ prior academic learning, and research and theory. The following is an extrapolation of Sophie's reflection:

While working with student 1 I noticed that he is a very dedicated, capable student; however, he often asks for help even when he understands the concept at hand. This could potentially coincide with a semblance of learned helplessness (academic language). I pushed this student to work independently, and to embrace productive struggle in order to see academic growth.
While working with student 2 I noticed that he is very disengaged in activities that he does not want to do. He exhibited incredible intelligence; however, keeping him on task proved to be nearly impossible. I had to adapt my lesson in a way that kept him engaged, even when participating in activities that he would rather not take part in.
While working with student 3 I noticed that he is a very active student. Providing him with hands-on activities (academic vocabulary) gave him an outlet to exhibit his intelligence while also enjoying the work at hand. These hands-on activities were an adaptation (academic language) to my lesson based on research showing that many students learn better when they remain actively engaged (academic language) throughout.

Evaluating the above reflections there is little evidence of depth of either academic vocabulary or vocabulary, many statements are I statements which indicates a focus on her perception rather than a focus on student’ prior academic learning connected to research and theory. Her reflection shows some semblance of academic language yet it is often simplistic and content generic. Her reflection lacks connections between the learning tasks and students’ prior academic learning, and research and theory.

Sophie showed little change in her answers from pre-survey to post-survey in terms of her comfort level teaching academic language and academic vocabulary. However, she did show a change in her perception of the importance of teaching academic language. In the pre-survey, she rated both the importance of teaching academic language and academic vocabulary with a 9, indicating she felt it was fairly important to teach academic language and vocabulary. In the
post-survey, she felt academic language was neither extremely important to teach nor was it not important to teach at all, scoring this question a 5. She also dropped the importance of teaching academic vocabulary down from a rating of 9, to a rating of 8. When examining Sophie’s work, the lack of academic language and vocabulary is apparent. However, Sophie did change her rating from a 5 (neither extremely prepared or extremely prepared) on the pre-survey to a 7 (closer to extremely prepared than not prepared) on the post-survey when asked to rate how she felt the elementary education program at Auburn University prepared her to teach academic language. This indicates that while she feels more prepared although she sees the importance in teaching academic language, or vocabulary she is not taking ownership or application of this skill in her own work.

Cindy.

Cindy originally defined academic language as, “Academic language is a broad term that encompasses content specific words called academic vocabulary” Her definition focused mostly on vocabulary and lacks clear understanding of the structure, discourse, or syntax included in academic language. Cindy’s original definition of academic vocabulary was, “Academic vocabulary are content specific words.” On her post-survey, Cindy defined academic language as “Language needed to do well in school, work, and life” and academic vocabulary as “Words that are not common in casual setting but commonly used in professional or academic setting.” Her post-survey results indicated she felt comfortable in both academic language and academic vocabulary (scored 8 on both) and on the post-survey when asked to rate how she felt the elementary education program at Auburn University prepared her to teach academic language she scored a 7 related to academic vocabulary and an 8 for academic language. This shows only a slight change in perception as she originally scored these both of these items with a score of 6.
These scores indicate that she feels prepared to teach academic language and academic vocabulary although she gave no written response when asked to differentiate the difference between academic language or academic vocabulary. This is interesting considering her original definition in the pre-survey was, “Academic language is a broader term that covers academic vocabulary. Academic vocabulary is content specific and are words students need to know in order to learn.”

Pre-service teachers were asked to reflect upon how their understanding of their students’ prior academic learning and personal, cultural, and community assets guided their choice or adaptation of learning tasks and materials. They were asked to make connections between the learning tasks and students’ prior academic learning, and research and theory. The following is an extrapolation of Cindy’s reflection:

After being exposed to my students’ prior academic learning (academic language) and personal, cultural, and community assets (academic language) I was able to measure their academic reading level. While working with focus student 1 I was able to see that he is very interested in being active, so I was able to incorporate more active learning to keep him engaged. When I was working with focus student 2 he was a very eager student, but he really wanted help from a teacher at all times. He thrived on reassurance and was not confident in his ability to solve problems (academic language) on his own. As I worked with him I did my best to reassure him on his work as well as to not just give him the answers. Through working with student 3 I noticed that she was very excited and wanted to be heard. Throughout playing the board game I tried to allow everyone to voice his or her thoughts on what the answer was so that she was able to say what she wanted while staying engaged (academic language).

After reviewing her work samples and artifacts it was noted Cindy attempts to use academic language, although the language chosen is often generic in terms (i.e., engaged, academic learning, and solve problems). Cindy placed a high level of importance on both academic language and academic vocabulary but often lacked usage in her own writing.
One interesting finding when examining Cindy’s surveys was the importance she places on teaching academic language and academic vocabulary. On her pre-test she rated both areas with a 10 indicating a high level of importance. On the post-survey, she dropped both of her scores on the importance of teaching academic language and academic vocabulary to an 8. While Cindy felt more comfortable and more prepared to teach academic language and vocabulary by the end of the semester, she actually felt it is less important to teach academic language and vocabulary.

Holly.

Holly began with a very weak definition of academic language, “Academic language is the vocabulary that is used in a classroom to promote learning and further thinking among students in the classroom.” Her definition focused on the need for academic vocabulary as the only component in academic language. Throughout the semester Holly worked on both academic language and academic vocabulary and often tried to apply it within her own writing. Toward the end of the semester Holly modified her definition of academic language substantially showing growth in her understanding. Her end of semester post-survey definition defines academic language as, “Academic language is the language students need in order to perform well in school. This includes domain specific vocabulary, grammar, and other language conventions.” Her definitions grew from only including vocabulary to including domain specific vocabulary, grammar, and other language conventions. Holly does not show this same growth in her definition of academic vocabulary. Originally, Holly defined academic vocabulary as, “Academic vocabulary is specific words that are used in a classroom that help students receive a better understanding of the material they are learning.” Her pre-survey definition is much weaker than her final definition of academic vocabulary. However, her final definition is lacking academic language structure. On the post-survey, Holly defines academic vocabulary as, “The
words that aren't normally used in casual conversation, but rather used in an academic environment or context.” When distinguishing between academic language and vocabulary, Holly originally wrote, “I am not sure on the clear difference between the two except for the fact that language promotes further learning while vocabulary helps students understand concepts.” Holly herself, admits confusion surrounding the two concepts. Her explanation of academic language at the end of the semester was “Academic language is a broad category, and then academic vocabulary falls within it.” This distinction is more clear than her original response, but it seems she is still not fully able to distinguish between the two. Interestingly, reviewing her work samples and artifacts it was clear to see that Holly was still struggling with the written expression of academic language but was able to use the academic vocabulary of the topic with more ease. It is evident Holly is knowledgeable about the concepts in her assignment. Pre-service teachers were asked to reflect upon how their understanding of their students’ prior academic learning and personal, cultural, and community assets guided their choice or adaptation of learning tasks and materials. They were asked to make connections between the learning tasks and students’ prior academic learning, and research and theory. The following is an extrapolation of Holly’s reflection:

Some of these students are rising fourth graders, while others are rising fifth graders. This means that my students will have very different academic backgrounds and experiences. After familiarizing myself with the Alabama State Standards, I know that the rising fifth graders will have already been introduced to the Civil Rights movement; however, this topic will be brand new for rising fourth graders unless they have been taught about the subject away from school. It is this reason that we decided to focus on just two civil rights activists for the student’s final project. My co-teachers and I will also evenly distribute the fifth graders among the two project groups to be leaders. My overall goal is to provide my students with a lesson, which is at their zone of proximal development (Vygotsky) (academic language). This means that the tasks they are asked to perform will provide them with a challenge they will need additional support to overcome. I hope to promote productive struggle (academic vocabulary) as the students learn how to apply the FQC and Tackle the Text strategy on their own.
Since this class has a very diverse student population, I hope to lead discussions that make all students feel safe to share their unique cultural perspectives (academic vocabulary) on the movement. I also will try to include Asian Americans into the discussion, asking them questions such as “why do you think they segregated (academic vocabulary) white people and black people if those lines are blurry and the U.S. had other nationalities (academic vocabulary) as well”? I aim to embrace the diversity of our class as we dig into the topic of the Civil Rights movement as well as make sure that each student knows this historical movement impacts each of them in many ways today in regards to how they treat others.

In the same way, Lave & Wenger’s Situated Learning Theory (academic language) claims that the attainment of information (academic vocabulary) is a product of the activity, context, and culture in which it is presented. With this knowledge I have chosen learning materials that have engaging content that is relevant to my students’ lives, and which reflect their individual cultures.

Since these students are in elementary school, they fall into Erikson's Industry vs. Inferiority stage of development (academic language). During this Latency stage (academic vocabulary), children are capable of learning, creating, and achieving various new abilities and understanding, therefore developing a sense of industry (academic vocabulary). This is also a quite social stage of growth, and if school-age children experience unsettled feelings of insufficiency and inferiority among their peers, they can suffer serious problems in regards to academic and personal capability and self-esteem (academic language and academic vocabulary). Having this knowledge, I chose to explain and model each strategy for the students before having them try them on their own. Easing them into independence like this will give them confidence and a sense of understanding. For the FQC strategy I will even show them the sticky notes that I wrote all my facts, questions, and connections on prior to reading it to them. This way the students will feel comfortable sharing their thoughts during the read-aloud since I have already shared some of mine.

Gardner’s Multiple Intelligence theory (academic language) which suggests that different people have different ways of thinking and processing [9 intelligences] also guided my choice of learning tasks and materials for this lesson. The FQC hand gestures and color-coding will help kinesthetic learners (academic vocabulary), while the read-aloud and class discussion will cater to auditory and linguistic learners (academic vocabulary). The independent practice caters to those learners who are intrapersonal (academic vocabulary), while the small group activities and turn and talks will accommodate the interpersonal learners (academic vocabulary). The video sources, document camera, and color code will help the students who learn best visually.

It is evident in Holly’s writing, she is developing her academic language, while she has a strong use of academic vocabulary. Much of her weakness comes in the structure of her writing. In her pre-survey comfort levels teaching academic language and vocabulary, she rated herself fairly low with score of 3 on academic language teaching comfort and a score of 4 on academic
vocabulary teaching comfort. Holly rated her post-survey feelings of comfort teaching academic language and academic vocabulary with a score of 7 for both, indicating she feels more comfortable than not, teaching academic language and vocabulary. While this does show growth, she still does not feel extremely comfortable. Holly began the semester with the perception of feeling fairly low preparedness in her course work at Auburn University to teach academic language (rated a 4) and academic vocabulary (rated a 3). By the end of the semester, she showed changes in her perception of preparedness rating teaching academic language preparation at Auburn a 7, and teaching academic vocabulary preparation at Auburn an 8.

Holly’s use of academic vocabulary is evident in her writing. Holly’s greatest change in her attitude toward academic language and vocabulary occurred in her ratings of the importance of teaching academic language and vocabulary. In the pre-survey, Holly rated both the importance of teaching academic language and vocabulary with a 6. This indicates she felt it only slightly important. However, by the end of the semester, she rated both academic language and vocabulary with a 10. Her attitude at the end of the semester indicates she feels academic language and vocabulary are extremely important to teach.

Limitations

Although this research brought to light some key findings and insights, several limitations have been identified through the course of this study. One limitation is the lack of current research focusing on teacher preparation programs in connection with the academic language and vocabulary needed for pre-service teachers to be successful in the classroom. This creates a need for further research in this area in order to prepare teachers for the academic language and vocabulary demands needed to be successful in the classroom. Another limitation of the study was the sample size of the participants. At this time, the classes consisted of almost
completely female students, in their junior year of college. For the purpose of this study, the small sample size was adequate to provide enough information about the general knowledge, attitudes, and perceptions of pre-service teachers. Further research on this topic is warranted.

Finally, another limitation in the design of the study was the time frame of the summer semester. The summer semester was much shorter than a fall or spring college semester, so showing changes or growth over time may have been impacted. Future studies should be done over the course of an entire semester or the entire degree program to gain more understanding on this topic.

**Conclusion**

Academic language and vocabulary are complex systems in which sophisticated language, skills, and grammar structures are derived to develop a deeper level of learning. This research identified several layers of knowledge, perceptions and attitudes toward academic language and vocabulary. What we found are classrooms that support the acquisition of academic language and vocabulary prepare students to address the complexities of the English language. Our classrooms provided pre-service teachers the opportunities to practice the language used in the context of learning to prepare and scaffold academic success. We found that students who master academic language are often more likely to be successful in academic professional settings. Whereas students who struggled with academic language and or vocabulary struggled academically to convey professional discourse in their writing. We found preparation increased confidence and impacted perception of both concepts. Pre-service teachers were given multiple opportunities to practice both academic language and vocabulary honing in on both skills. Pre-service teachers (most) needed ongoing systematic instruction in both academic language and vocabulary to increase their confidence and comfort level of application.
of academic language and academic vocabulary. By the end of the semester, there were
significative differences in students pre and post perceptions of preparedness to use, apply and
teach both academic language and vocabulary.

References


1. Title of the submission

The Effectiveness of Compensatory Cognitive Training for Patients with Breast Cancer Undergoing Chemotherapy

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ABSTRACT

The Effectiveness of Compensatory Cognitive Training for Patients with Breast Cancer Undergoing Chemotherapy

Purpose: Chemotherapy-related cognitive impairment is an adverse effect experienced by some patients during and after chemotherapy treatment for cancer. It is characterized by difficulty with thinking, remembering, concentrating and word retrieval. Chemotherapy-related cognitive impairment can have a significant impact on quality of life. Although compensatory cognitive training for patients with cognitive dysfunction has been developed, few studies on the subject have focused on cancer patients. This study was attempt to
determine the effects of a compensatory cognitive training in improving cognitive function for breast cancer patients receiving adjuvant chemotherapy.

Methods: The participants were 54 patients who were assigned to a compensatory cognitive training or control group. The participants were assessed at the baseline (T1), the completion of the 12-week intervention (T2), and 6 months after completion of intervention (T3). Outcomes were assessed with the standardized neuropsychological tests and the Functional Assessment of Cancer Therapy-Cognitive Function (FACT-Cog) version 3. Data were analyzed using repeated-measures ANCOVA with adjusting for age, intelligence, depression, and treatment.

Results: The results showed that the intervention group improved significantly over time compared with the control group on objective measures of attention (p=.026, d=0.29), immediate memory (p<.001, d=0.91), delayed memory (p=.008, d=0.61), verbal fluency in category (p<.001, d=0.74), and verbal fluency in letter (p=.001, d=0.38) at T3. The intervention group also significantly improved on total FACT-Cog (p=.044, d=0.59) and perceived cognitive impairments (p=.006, d=0.72) at T3.

Conclusion: Results suggest that compensatory cognitive training has the potential to improve not only objective cognitive function, but also subjective cognitive function and quality of life in patients with breast cancer. Because this study is small study, further research in a larger sample and over longer follow-up periods is needed.

Keywords. Compensatory cognitive training, Breast neoplasms, Chemotherapy, Cognition, Attention, Memory.
What You Never Knew about the Flipped Classroom

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ABSTRACT

This paper is a relevant and recent review of the literature that attempts to explain and document the literature on the flipped classroom. It examines 49 studies that explain the flipped approach in the classroom. This paper, particularly, delineates the history, the theory, benefits, criticisms, recommended practices, and what the research on flipping reveals. After reviewing the literature, the author concluded that there is a resurgence in the use of the flipped classroom. This body of information representing the work of teachers, principals, and college professors will serve as a useful source in deciding whether or not to execute the flipped classroom as a viable teaching methodology.

Keywords: benefits of flipping, recommended practices in flipping, flipping research, flipping history, Khan Academy and flipping, criticism and flipping
INTRODUCTION

The flipped classroom is experiencing the most successful resurgence of any method for delivering content in the classroom (Hennick, C., 2014; Strayer, J. F., 2012; Kim, M.K., Kim, S. M., Khera, O., & Getman, J., 2014; Sparks, S. D., 2011)). There is certainly a renewed interest in implementing this digital approach for teaching today’s students. Khan Academy has been at the forefront of this overnight sensation (Hennick, C., 2014; Sparks, S. D., 2011)).

PURPOSE

The purpose of section one of this paper is to examine a definition, some history, and the theoretical basis for the flipped classroom. Other areas located in section two will examine the lecture method, today’s students, and teaching pressures. The third section of the paper discusses the benefits, advice, criticisms, and the research. There is a summing up section and finally it concludes with a closing.

SECTION ONE- Definition, History, and Theory

The flipped classroom can be described as individual video-based learning outside the classroom and group learning inside the classroom (Bishop & Verleger, 2013). The classic definition is about videos taking the place of direct teaching with more individual time for students during class time. Homework is no longer done at home, but in class, thus the term flipped or inverted classroom (Bergmann, Overmyer & Wilie, 2013).

The flipped classroom should not be described as a series of online videos that take the teacher’s place and leave the students with no sense of direction (Bergmann, Overmyer & Wilie, 2013). Flipped classrooms that are successful embody these traits (Bennett, Kern, Gudenrath & McIntosh, 2012; Cohen & Brugar, 2013):

1. Students lead discussions in class of outside content studies and gain more knowledge.
2. Students demonstrate high order thinking skills.
3. Students apply content to contextually real situations.
4. Students mentor and collaborate with one another and own the learning and can review videos as needed.
5. Students ask deep questions and motivate one another and get to really build a relationship with the teacher.
6. Students engage in active learning and move from just sitting.

The idea of flipping the classroom has gleaned lots of media attention from USA Today, The Globe, Washington Post, and CNN, though it has been around for over a decade (Johnson, 2013). The Khan Academy has been useful because of its free offerings of materials (Baker & Settle, 2013). The academy is about the work of Salman Khan who created a collection of online videos covering a plethora of subject areas known as the Khan Academy. Salman Khan was a hedge-fund analyst who quit his job in 2006 and has since received backing from Bill Gates and Google. Many people partially credit him with the popularity of the flipped classroom (Ash, 2012). The term flipped actually came from a man called Karl Fisch, teacher and technology expert, who first called it the Fisch flip but he credits Bergmann and Sams with it all (Sams, 2011). Some view flipping as an exchange of classwork for homework. It is also called backwards classroom, reverse instruction, flip teaching, and reverse teaching (Siegle, 2014).
There is no one way to flip and some describe as a mind-set or an ideology but not a method (Siegel, 2014).

Two rural secondary teachers of chemistry, Jonathan Bergmann and Arron Sams are considered as the ones who popularized the flipped classroom (Handen, McKnight, P. McKnight, K. & Arfstrom, 2013; Siegle, 2014). Apparently, they noticed that students were missing class to attend competitions, games, or other student activities, and there were other students who had trouble with certain concepts which hindered completing homework until they got help in class the next day. This led to using videos to record lectures, demonstrations, and presentations that they decided to post on YouTube for students to view (Handen et al, 2013; Siegel, 2014).

Bergmann and Sams started a non-profit Flipped Learning Network (FLN) in 2012. It is known as the FLN Ning which is a free website offering information, resources, and what one needs to know when flipping a classroom. It has now reached 12,000 educators (Handen et al, 2013). Since the growth is expanding, the researchers at George Mason University with the Support of Pearson wrote a white paper to further explain the model (Handen et al, 2013).

In 2012, Jonathan Bergmann and Aaron Sams introduced their book, *Flip your classroom: Reach every student in every class every day*. The book is useful in that it is a non-traditional way of teaching (Hantla, 2014). The authors, for instance, recommend that teachers create their own content videos. These teacher-made videos should contain humor, fun, and animation. Having another co-worker teach on the same content topic is recommended. The authors have moved away from the laborious lectures but instead recommend short videos with an offering of many ways to assess student learning. They discuss how paper work for teachers can be cut in half. There is a section of the book for experienced flippers who need additional challenges. The importance of following the guidelines for copyrighting is discussed.

Social constructivism is at the root of the flipped classroom (Jarvis, Halvorson, Sedeque & Johnson, 2014). The flipped classroom is often linked to problem solving, inquiry learning, and active learning plus interpersonal communications (Jarvis, et al, 2014). In the flipped classroom, students learn new knowledge that they must connect to past learning, and this causes them to realign their view of the world. They converse with peers in the classroom that ultimately lead to deeper learning. The process of learning as Piaget and Vygotsky explain it, is apparent. But isn’t that what an education should do, push us to probe and compete with others while adapting to the world around us and simultaneously being influenced by parents and friends in our immediate circle? The social constructivist theory undeniably fits with the benefits of the flipped classroom.

**SECTION TWO- Lecture Method, Today’s Students, Teaching Pressures**

The lecture method is still number one in most classrooms (Roehl, Reddy, Shannon, 2013). Educators need to get beyond memorized learning to higher-level thinking processes, thus the flipped classroom, which offers active learning. Active learning approaches include small groups, individual, and cooperative groups where students collaborate, brainstorm, role-play, peer-tutor, map, or produce projects (Roehl et al, 2013). The lecture method is described as a scripted speech to students with the hope that the learning of all the information will be regurgitated (Mazur, Harvard Professor, 2012).

Donald Clark (2007), an educational blogger, described the lecture in negative terms as one that creates passive students who are dependent on writing good notes when their attention
span is lost after 10-20 minutes. He goes on to explain that lectures deliver too much content for students to process. He questions why they are presented on a specific content area at only one specific time and place. Often, when presenters are boring, it is because they are not trained in how to keep and maintain the attention of the audience. He concludes with a note of hope when he says that lectures can be worthwhile if they are timely and if the presenter can get students engaged in the delivery.

Students of today have been referred to as digital natives or millennial students (Prensky, 2001). They have experiences with technology at an early age unlike other students in other generations (Prensky, 2001). These students learn differently because the social media that they use often is a way of life (Roehl, Reddy, Shannon, 2013). They need collaborative learning experiences (McMahon & Pospisil, 2005). Mark Prensky (2001) discussed how these digital natives learn differently than those before them. They have different desires and not the same kind of patience with learning (Prensky, 2010) They have information at hand and are familiar with participating in environments calling for involvement and reaching out to peers (McMahon & Pospisil, 2005). Through the internet, they can ultimately connect with others around the world (McMahon & Pospisil, 2005). Flipped classrooms emphasize students as the center for learning and not the teacher as the lead act on stage but a facilitator in the background (Siegle, 2014).

In training pre-service teachers, faculty is highly encouraged to teach pedagogical methods utilizing technology because their future students will be digital natives (Vaughn, 2014). Pre-service teachers will need to prepare to teach students who have already participated in online learning and using technology daily (Vaughan, 2014). Statistics report that 97% of classrooms have computers and 93% have the internet available in classes daily (U.S. Department -National Center for Educational Statistics, 2011). Meanwhile, universities and school systems are looking for ways to save money on strained budgets (Berrett, 2012). In larger research universities the lecture method is not going to cease. Economically, it is more practical to have larger bodies of students in a course with one instructor (Berrett, 2012). The flipped classroom can be a more productive way to teach to large class loads (Berrett, 2012 p.2). Faculty members could use their time differently and serve as part of the new transition in teaching and learning (Berrett, 2012). Flip classrooms utilize video lectures from renowned educational speakers. Politicians, policy persons, and other groups want to see how technology is tied to the education of students in colleges. After all, Noam Chomsky, an American linguist and philosopher, was accurate when he retorted that education’s purpose is to train students to grow to the stage where they can learn on their own (Elets News Network, 2014).

SECTION THREE– Benefits Using Specific Cases, Advice, Criticisms of the Method and the Implementation, and the Research

There is a wide spread degree of curiosity about using the flipped classroom (Hennick, 2014). It is an approach implemented in Spanish, science, math, elementary, middle, high school, and it is used with older adults (Patel, 2013). It is imperative that possible benefits are explored here. Morgan (2014) declares that the flipped classroom allows for self-pacing yet students are assured of feedback from the teacher thus keeping the teacher aware of any misunderstanding of the content. Other advantages include students having access to the video to view whenever they need to. Another aspect deals with the fact that the teacher is free to create videos that can be challenging and can involve other co-workers with whom they can exchange views.
Parents can view the videos and can help with homework. At Byron High School in Minnesota, the district was able to save some money on textbooks when flipping started (Morgan, 2014). Teachers created lessons and posted to You Tube with the creation of a free Moodle site. Students also showed improvements academically and others wanted to partake in the flip, for example science, social studies, and language arts faculty (Morgan, 2014). Byron High was able to attract an even better caliber of educators and received a national award in math called the Intel School of Distinction in 2011 (Fulton, 2012, April). The flipped classrooms used the Khan Academy videos created by a Harvard business school graduate who was trying to aid his cousin in math and decided to place steps on You Tube, which marked the beginning of the successful Khan Academy.

In Los Altos, California in 2010, the district experimented with math for 5th graders and utilized Khan Academy. With success of the program, they branched out to all 5th, 6th, and 7th grades. This program allowed teachers to keep up with how well students were doing and how many they got correct or not correct and how much time was spent per problem. Teachers could see if students got the problems correct when hints were given.

Roehl, Reddy & Shannon (2013) explicated on how students got to reflect on their learning and how teachers gave immediate feedback. Teachers used voiceovers for videos, screen capture software and gave instructions with visual aids. Students asked questions at class sessions instead of interrupting a lecture. The class did not slow up because of students not attending due to sports, participation in competitions, or other extra-curricular activities. Teachers made changes to videos as needed.

There were 15,000 members surveyed through the National Center for Case Study Teaching in Science List-Serve which reported (Herreid & Schiller, 2013) that teachers could spend more time on research projects with students, teach science equipment, allow students to interact through activities (i.e., games, paragraphs, contests, problem solving). Students had time to think in and out of class. Students seem to enjoy participating in the flipped classroom. A physics teacher commented on how students viewed the podcast at home and when class sessions met, students did meaningful assignments applying what they learned from viewing (Herreid & Schiller, 2013). It seems that 86% of science faculty use lecture as main method for explaining (Gates & Mirkin, 2012).

Fulton (2012, October) discussed a survey from parents in the Byron School District in Rochester, Minnesota where 84% agreed that the flipped approach was number one method for teaching content. She continued with benefits such as how teachers could spend more time with what students did not comprehend. Teachers could provide many other sources for teaching and were able to chunk the content as needed and not overload students. It is important to note that there is no one way for classroom flipping (Jarvis, Halvorson, Sadeque & Johnston, 2014).

The advice or recommended practices offered here should help get the maximum out of this teaching strategy. First, educators must prepare motivating, in-class activities so students can use content information in real-life situations and will not waste class time (Spencer, Wolf & Sams, 2011). Second, educators who choose to record their own videos should choose a recording spot carefully, organize content ahead of time, record as though talking to students, and repeat as many times as needed for the course (Seigle, 2014). Teachers who choose to use available videos should select from videos, such as, Khan Academy, You Tube EDU, and PBS (Seigle, 2014). Videos should be short and simple and specifically connect to assignments (Patel, 2013).
Third, educators should prepare students for this process by discussing the benefits, making a list of what and why students need to know the content from the video; setting deadlines for students; offering a time for them to watch the video, and preparing worksheets, quizzes, questions to answer after watching the video (Siegle, 2014; Miller, 2012; Ash, 2012). Fourth, educators must give feedback that is immediate and on target while figuring out early which steps in the process are working for students (Berrett, 2012). Fifth, flipping does not replace the teacher but the teacher becomes more of a mentor or facilitator who still gets to experience the light bulb moment (Hennick, 2014). Teachers who create their own videos must make time for carrying out the process (McLean & White, 2009). Additionally, do not assume students are comfortable with the technology (McLean & White, 2009). A survey from Harrison Group 2006 (McLean & White, 2009) found that students spent more time downloading music, 85%, videos 10% and podcast and audio texts under 5%. Another important concern is that small schools often do not have the resources or power needed to integrate technologies as larger universities do (McLean & White, 2009).

Before transitioning to the research studies, it is essential that the criticisms of the method and the pitfalls in implementation are reviewed. Herreid, Schiller, Herreid & Wright (2014) criticize the method when students tend to resist this process and may attend class ill-prepared. This can be averted with the use of short online quizzes or in class quizzes or required assignments tied to information covered from reading or videos from the night before. Another problematic area may be locating quality videos.

In criticizing the implementation of the method, teachers must choose carefully when producing videos (Siegle, 2014). Siegle encouraged the use of Camtasia Studio, Papershow, or ShowMe software programs or apps on the iPad like Educreations and Explain Everything. Teachers should post videos on YouTube, iTunes U or Podcasts (Vodcasting) or management systems like Blackboard or Moodle. Creating classroom videos is extremely time-consuming (Siegle, 2014). Siegle (2014) recommends Jing as the most popular software program. Lectures and videos of no-cost are available on Apple’s iTunesU, YouTube, TedTalks and Screencast-o-matic website (http://www.screencast-o-matic.com).

Morgan (2014) takes issue with the method when he refers to the flipped method as a high tech method of the lecture unconcerned about how students really learn. Andrew Miller, ASCD Educational Consultant in Virginia, describes it as an old-fashioned approach or a better version of a terrible teaching strategy (the lecture). Khan Academy has encouraged inflated goals too exorbitant to accomplish because the problems of k-12 will not dissipate through digital transactions.

Talbert (2012) finds fault with the method because he uncovers students’ feelings of being alone in learning with a form of cultural shock at this opposite way of participating in a classroom. Instructors must ultimately collect numerous formative activity results to demonstrate student learning and to convince students of their progress. Instructors must diagnose and delineate areas of concern about what students are not learning as well. Handen, McKnight, McKnight & Arfstrom, (2013) digress on to a loss of the most loved, Socratic, in- your-face method of teaching. There is a fear of hiring poor, low-level teachers who would take the positions of the highest paid experienced teachers.

Some of the criticisms of the implementation are explained here. It is not fair to expect students to view videos for every class every evening. Videos must be short, 5 to 10 minutes for viewing outside of the classroom (Siegle, 2014). Teachers do not possess the skills to make all of the videos needed to teach the content for lessons. Educators will be forced to become more tech
savvy than ever before as technology continues to grow (Roehl, Reddy & Shannon, 2013). Bergmann and Sams, the founders, explained (Roehl, Reddy & Shannon, 2013) how they checked students’ notes every day from video watching the night before. Each student brought a question to class. They gave students time to adjust to the process and in time, saw improved questions brought to class. There was a change in thinking to a more deeply-fashioned as the school year progressed. There were financial considerations to ponder in the public schools and whether or not if students have the technology outside of school before deciding about this endeavor (Roehl, Reddy & Shannon, 2013).

Implementation presents problems because the method relies on online materials and will be problematic unless there is a suitable technology infrastructure (Sparks, 2011). This method is still in its early stages, still developing (Sparks, 2011). The top-down implementation (making it a requirement for all) will not work, but teachers who want to flip and believe in flipping will make a difference (Hennick, 2014). Labs may not be open after school for students to work in, but they will need this time. Flipping should be for certain classes. Berrett (2012) reminds us that professors must answer questions at a minute’s notice and this means additional preparation/planning time before class.

Education Next (2013) suggested that the flipped classroom method is problematic since it may only work for upper-income, suburban, or private schools. Parents are expected to provide the technology and it may cause students to get behind. Perhaps this will just highlight the inequities from district to district. It is questionable that the charter schools (KIPP, Rocketship, Alliance, and Summit) that demonstrate success for low-income students are not jumping on board with the flipping trend. This method will not likely result in massive improvements needed in learning in our country. Most students will continue to matriculate in the rectangular school houses that have adapted some form of technology for learning (Education Next, 2013).

Johnson (2013) sums up criticisms in the method with these points: 1.) It frees students from physically attending class. 2.) It is a showdown of division-those who have the technology and those who do not. 3.) It makes the teacher seem pretty much unnecessary. 4.) It does away with a real-life teacher bringing a good in-person lecture.

Now we examine the research available on this method. While there are limited empirical studies on the impact of the flipped approach on learning, there are research reports from teachers on the use of the approach. This section will summarize research from k-12 and higher education.

In Minnesota, at Byron High School (Fulton, 2012, June-July) the teachers decided to flip the curriculum in the math department. The teachers rewrote lessons, located materials on the internet, and created their own short videos, 10 or 15 minutes that students could watch at home. They saw a mastery from 29.9 percent in 2006 to 73.8 percent in 2011 on Minnesota Comprehensive Assessments and saw a rise on ACT scores from 2006 (21.2 on scale of 36) to 2011 (24.5). The school received the National Blue Ribbon School in 2010 by U.S. Department of Education. They were given the Intel’s School of Distinction Award in high school math in September 2011.

At Clintondale High School in Michigan where majority were inner city kids (Johnson, 2013; Handen, McKnight, McKnight & Arfstrom, 2013), the school decided to flip all of its ninth grade classes in 2010. They saw failure drop close to 33 percentage points and the number of discipline cased went from 736 in 2009 to 249 in 2010 to 187 in 2011-74% drop in two years (Green, 2011). Parental complaints dropped (200 to 7). The school went to a flipped model in fall of 2011.
Musallam in 2010 wanted to determine the use of screencasts (a video recording of computer screen) as a pre-teaching approach for instructing an AP high school chemistry course. In examining pre-and post-assessments, he saw an increase in performance on assessments (Johnson, 2013).

Strayer (2012) compared the traditional introductory statistics class to a flipped statistics course through the use of field notes, interview focus groups, and the University Classroom Environment Inventory. The flipped classroom students were less satisfied with the structure of the classroom but became more open to newer approaches to teaching. Leicht, Zappe, Litzinger, and Messner (2012) decided to flip an architectural engineering course of freshmen. The results on the Student Assessment of their Learning Gains (SALG) showed that the flipped class of students outperformed the traditional classes with higher final exam scores and overall success in the class. Comments on the survey revealed more interest in the course, less intimidation of chemistry, and how useful the videos and powerpoints were.

Day and Foley (Bishop & Verleger, 2013) used the flipped approach in a senior-level computer interaction course. In comparing the experimental and control group, the students in the experimental section scored higher on all homework assignments, projects, and tests. At the University of California at Irvine, an introductory biology course used the flipped classroom. The results showed an increase on the average of 21% better on exam questions that were usually taught through traditional lecture. Professors reported (Papadopoulos & Roman, 2010) that students in an electrical engineering class after using the flipped method moved faster and helped their peers with learning. The test scores were well above those in the traditional courses.

Summing Up

According to Handen, McKnight, McKnight & Arfstron’s Whitepaper (2013) there are few quantitative and qualitative studies on the flipped approach but there is research that substantiates student achievement after using the approach. Surveys from principals and superintendents interested in the model as well as positive comments from parents exist. The flipped classroom: A survey of the research (2013) authored by Bishop & Verleger concluded that students rate the approach positive but a few students are not happy with the model. It goes on to say that if a quiz is given after viewing videos, prior to the class meeting, it works best. In addition, students like face-to-face teacher lectures but prefer the activity-based class meetings. Also, students want short videos over longer ones. In higher education classes in the United States, Vaughn (2014) examined a number of studies that demonstrated improvements in student engagement, preparation, and achievement for the flipped approach. From participating in the writing of this paper three ideas for future studies were shared. Johnson (2013) shared in his dissertation a lack of studies on student perceptions of the flipped classroom. Jarvis, Halvorson, Sadeque, & Johnson (2014) discussed a need for a guide to best practices, and finally Vaughn (2013) discussed how little is known about the flipped approach and the infrastructure across university campuses.

Closing

The flipped approach is not for every class or every teacher. Teachers would benefit from training in how to actively get students involved in the approach. There must be a change in
thinking if this approach will work for teachers and students. What we can learn from this approach is how powerful active teaching is in the classroom. Trying to encourage students to come to class prepared is not a new battle for teachers because teachers understand the effect prepared students can have on how much can be learned. The most important feature in this approach is still the teacher who understands the learners and has a repertoire of many teaching methods. Bergmann and Sams, the founders, believe that teachers should use the videos they create and offer other sources as alternatives. In this digital age of differentiation, teaching will continue to evolve.

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Abstract

As science grows in complexity, science teachers face an increasing challenge of helping students interpret models that represent complex science systems. Little is known about how teachers select and use models when planning lessons. This mixed methods study investigated the pedagogical approaches and visual models used by elementary in-service and pre-service teachers in the development of a science lesson about a complex system (e.g., water cycle). Sixty-seven elementary in-service and sixty-nine elementary pre-service teachers completed a card sort task designed to document the types of visual models (e.g., images) that teachers choose when planning science instruction. Quantitative and qualitative analyses were conducted to analyze the card-sort task. Semi-structured interviews were conducted with a subsample of teachers to elicit the rationale for image selection. Results from this study showed that both experienced in-service teachers and novice pre-service teachers tended to select similar models and use similar
rationales for images to be used in lessons. Teachers tended to select models that were aesthetically pleasing, simple in design, and illustrated specific elements of the water cycle. The results also showed that teachers were not likely to select images that represented the less obvious dimensions of the water cycle. Furthermore, teachers selected visual models more as a pedagogical tool to illustrate specific elements of the water cycle and less often as a tool to promote student learning related to complex systems.

**Keywords**

Visual models, modeling, systems thinking, in-service elementary, pre-service elementary
Title: Teaching Figurative Language to Exceptional Learners

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Abstract

Figurative language is a concept that should be taught to all students, no matter the students’ ability level. However, this is not consistently happening in classrooms.

English language learners (ELL), and students with learning disabilities struggle with the abstract concept of figurative language. Rather than being ignored, figurative language needs to be addressed by teachers. Figurative language is a critical concept that all students need to be taught to be proficient readers and writers in the 21st century. This
paper discusses the research explored in a case study that focuses on four main ideas which included (1) figurative language in communication; (2) teaching exceptional learners; (3) challenges; and (4) processes. The purpose of this research is to explore how figurative language is taught to different students, including those who struggle understanding the concept of this complex type of language. The importance of figurative language in an individual's life, and how classroom teachers can help foster language development are crucial steps in a student’s understanding of communication. The study incorporated open-ended surveys, Iowa Core, and information-gathering interviews; allowing the researcher to gain insight about students’ learning experiences. The information gathered will enable others to modify education programs leading to more successful initial teaching experiences.
The Role of Motivation in Second Language Acquisition

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ABSTRACT

Second language (L2) learning occurs for a variety of reasons, be it as a required subject in school, as a means of integration into a new environment after immigration, for work purposes, or as a matter of personal interest. Regardless of reason for why the learning of a second language is pursued, one of the most important factors for succeeding in L2 learning that must be present in the learner is motivation. The purpose of this research paper is to provide insight into the topic of language-learner motivation by defining the term, examining in some detail the three predominant phases of language learning motivation theories, and by outlining current research. The paper closes with a brief discussion of the implications language-learning motivation has on future research and application in the L2 teaching profession.

Keywords: education, EFL, ESL, higher education, language-learner motivation, motivation, second language acquisition
MOTIVATION DEFINED

Motivation as a contributing factor to second language learning has been variously defined as “the learner’s orientation with regard to the goal of learning a second language” (Norris-Holt, 2001, para. 1); the factor that “explains why people select a particular activity and how long they are willing to persist in it and what effort they invest in it” (Kormos, Kiddle, & Csizér, 2011, p. 496), and as the “primary impetus to initiate learning the L2 and later driving force to sustain the long and often tedious learning experience” (Dörnyei, 1998, p. 117). Dörnyei (1998) writes that while the term is frequently used in second language learning research and researchers largely agree that motivation is the driving force behind human behavior by providing direction, there is little agreement on how exactly motivation works. As a result, numerous language learning theories have sprung up over time, the perspectives of which can be roughly divided into three main phases: The social psychological period, the cognitive-situated period, and the process-oriented period.

This research paper will examine the three traditions in some detail, with preferential treatment being given to Gardner’s socio-educational model. While for the expert of the field, readings on the social psychological period, which was dominated by Gardner’s work, is likely to elicit feelings of nostalgia at best and boredom at worst, this paper, which is primarily aimed at those new to the field of language learner motivation, seeks to provide the foundation and background on which to build upon - not unlike the many researchers who, while voicing criticism over Gardner’s model, nonetheless utilized its core tenets as the foundation for their own frameworks.

LANGUAGE LEARNER THEORIES: THE SOCIAL PSYCHOLOGICAL PHASE

The first phase, the so-called social psychological tradition, saw its beginnings with the research Robert C. Gardner conducted for his Masters thesis with the help of his colleague, Wally Lambert (Gardner, 2009). Gardner, who was to a large extent influenced by the American psychologist Orval Hobart Mowrer, developed what is now known as the Socio-educational Model of Second Language Acquisition in Canada, where English and French speaking communities exist side by side in the socio-political context (Norris-Holt 2001; Apple, Da Silva, & Fellner, 2013).
In the original model, Gardner established connections between four predominant aspects of second language acquisition: The “social and cultural milieu of the speaker,” “individual learner differences,” “the context in which learning takes place,” and “linguistic outcomes” (Norris-Holt, 2001). Built on a foundation of empirical research conducted solely in the L2 classroom environment, the socio-educational model’s “central theme” is the notion that the cultural environment of the learner determines to a substantial degree how successful he will be in acquiring the L2 (Gardner, 1985). For example, in a setting where second language learning is highly encouraged and valued, L2 learners can be expected to be more successful with their learning outcomes than in a community where learning a second language is perceived as difficult or even a waste of time. The second theme of the model addresses individual differences, which Gardner (1985) divided into the four types (or classes) of “intelligence,” “language aptitude,” “motivation,” and “situational anxiety.” Each of the four classes, so Gardner (1985) explains, are important for different, unique reasons; however, they have in common the fact that they play an instrumental role in influencing learners anytime they engage in learning about or working on becoming more proficient in the chosen L2. These learning/acquisition contexts are unique to each learner but can, according to Gardner (1985), be divided into the two general categories of “formal language training” and “informal language experience” – albeit with the caveat that it is not always possible to definitively place a learning context into one of the two categories. The final component of Gardner’s original socio-educational model is divided into two outcomes that are the result of learning a second language: Linguistic and nonlinguistic outcomes. Elements of the former revolve around L2 proficiency, while those of the latter refer to the speaker’s “attitude and values, etc.” that are likely to form as a result of engaging in learning a second language (Gardner, 1985).

Gardner’s socio-educational model, over time, underwent a number of revisions. In 1985, Gardner further sub-divided the individual differences class of motivation into what Liuolienė and Metiūnienė (2006) describe as two “distinct orientations” for language learning: Integrative and instrumental orientation. “Goal-directed,” the two orientations are “part of the learner’s motivation at the goal level and affect the learner’s core motivation” (Liuolienė & Metiūnienė, 2006, p. 94). A third orientation in this sub-division comprises attitude, with Gardner (1985) stating that a learner’s positive attitude towards language learning is likely to result in a positive outcome (Liuolienė & Metiūnienė, 2006). Essentially, where motivation is concerned, Gardner
reoriented his model to place the focus on the integrative motive, that is, the degree of influence of (a) the students’ desire to learn, (b) the intensity of effort exuded in doing so, and (c) the attitude towards the L2 has on the students’ interactions with the L2 community (Apple, Da Silva, & Fellner, 2013). In order to be able to continue the path of empirical research the original model had set out on, Gardner developed the *Attitude Motivation Test Battery* (AMTB), which allowed for the measuring of the four individual differences and their sub-categories, and comprised “11 scales measuring five constructs” (Gardner, 2009).

While Gardner’s socio-educational model stood, for nearly 30 years, at the forefront of research into second language learner motivation, it has not been free of criticism. Early critics such as Oller in 1981 and Au in 1988 addressed specific aspects within Gardner’s model, and in the first half of the 1990s, three publications criticized Gardner’s model itself (MacIntyre, 2002). Crookes and Schmidt’s 1991 paper argued that Gardner’s model was, for the longest time, so dominant that most researchers did not consider spending time to explore in depth other research approaches to motivation, such as, for example, Clement’s concept of *Linguistic Self-confidence*, Giles and Byrne’s *Speech Accommodation Theory*, Schumann’s *Acculturation Model*, or Krashen’s *Monitor Model* (MacIntyre, 2002, Dörnyei & Ushioda, 2011). Thus, this persistently “unbalanced picture” resulted, over the long term, in an understanding of motivation that was much narrower than it could have been had other research avenues been explored alongside Gardner’s model (McIntyre, 2002).

In 1994, Dörnyei expanded upon Crookes and Schmidt’s criticism by stating that Gardner’s distinction between integrative and instrumental orientation was largely due to the bilingual Canadian environment in which all of Gardner’s research had been conducted and thus proved to be too limited in scope (McIntyre, 2002). In the same year, Oxford and Shearin also wrote about the need to expand the socio-educational model, adding four conditions that hinder researchers from gaining a full understanding of motivation: A lack of agreement amongst the research community on how to define motivation, the fact that there are marked differences between second and foreign language situations, “key motivational variables that are missing from the various models,” and “teachers’ inability to understand students’ actual motivation for L2 learning” (McIntyre, 2002, p. 53).
LANGUAGE LEARNER THEORIES: THE COGNITIVE-SITUATED PHASE

Above-described criticisms and resulting research brought on a paradigm shift, leading to a new phase, the cognitive-situated period. According to Apple, Da Silva and Fellner (2013), in this second period, which arose in the early 1990s, researchers focused on placing the motivational features Gardner and his associates had observed in the L2 classroom environment into practical context. Doing so, it was argued, would allow those teaching second language learners to better understand how to motivate their students (Apple, Da Silva & Fellner, 2013).

Apple, Da Silva and Fellner (2013), referring back to Dörnyei’s 2005 work The Psychology of the Language Learner, state that the cognitive situated period can be broadly divided into the cognitive perspective and the situated perspective. The cognitive perspective, according to Apple, Da Silva and Fellner (2013), examines how motivation is affected by the learners’ belief in their own abilities, potentials, and limitations; past performance in similar tasks; and perception of how the various learning tasks the learners are being presented with can help them achieve their learning goals and outcomes. The situated perspective on the other hand investigates the influences the learner encounters in the classroom environment, including the teacher, the learning materials provided, the overall curriculum, and fellow L2 students (Apple, Da Silva & Fellner, 2013).

According to Dörnyei and Ushioda (2011), the two interrelated trends, with their focus on motivation in the actual classroom setting, sought to address the concerns of second language teachers who had felt that the research that had come out of the social psychological period did not provide them with sufficient practical relevance. The latter was largely a response to the criticism of Gardner’s work, which, as briefly discussed above, had by the early 1990s begun to be seen as too limited in scope and content. However, rather than outright dismissing or drastically altering the socio-educational model, during the cognitive-situated period, researchers expanded upon Gardner’s model by incorporating what Dörnyei and Ushioda (2011) call “cognitive motivation concepts.” The resulting shift in focus, so Dörnyei and Ushioda (2011) explain, brought a “wider vision of motivation” (as cited in Tremblay and Gardner, 1995, p. 505) and saw the addition of a number of additional variables the various researchers had derived from cognitive psychology.

Gardner responded to these and related criticisms by expanding, together with Tremblay, his original model with “three concepts from expectancy-value [...] and goal theories [...] as
mediating variables between attitudes and behaviour on the language attitudes → motivational behaviour → achievement sequence:” Goal salience, valence and self-efficacy, each of which was in turn further broken down (Dörnyei & Ushioda, 2011, p. 48). Goal salience was thus subdivided into the categories of “goal specificity” and “goal frequency,” addressing, respectively, the learner’s individual goals and the frequency of the learner’s use of goal strategies. Valence, subdivided into what Dörnyei and Ushioda (2011) call the “traditional scales” of desire to learn a second language and the attitude the learner exudes towards the L2 learned, was used as a means to evaluate the value the learning of a second language has for the learner. Self-efficacy, subdivided into “L2 use anxiety” and “L2 class anxiety,” addressed learners’ worries about L2 use and performance in the classroom, while a third sub-category, “performance expectancy,” looked at what the students expected to be able to achieve with the amount of L2 learned by the end of the course (Dörnyei & Ushioda (2011).

As can be gleaned from the above summaries of only a few salient points, the growing desire of researchers to expand and build upon Gardner’s socio-educational model during the cognitive-situated period resulted in the development of a large number of increasingly complex and expansive theoretical models and frameworks, with many of them explicitly focusing on the classroom setting. Even a brief description of each of the more prevalent theoretical models would go beyond the scope of this paper; thus, the overview of the predominant frameworks of this period shall be restricted to Dörnyei’s Three-level Framework of L2 Motivation, Williams and Burden’s Social Constructivist Model, and Noel et al.’s model of language learning motivation, which was based on Deci and Ryan’s Self-determination Theory (Dörnyei & Ushioda, 2011; Apple, Da Silva, & Fellner, 2013).

Dörnyei based his framework on Crooke’s and Schmidt’s examination of L2 learner motivation, dividing his concept of L2 motivation into the “three distinct levels” of language level, learner level, and learning situation level (Dörnyei & Ushioda, 2011). This rather elaborate framework attempted to “synthesize various lines of research by offering an extensive list of motivational components categorized into [the] three main dimensions” listed above (Dörnyei, 1998, p.125). Among the three dimensions, the learning situation level, which is primarily based on research conducted in the field of educational psychology, proves to be the most complex, largely due to the fact of having been broken down further into course-specific motivational components, teacher-specific motivational components, and group-specific
components. To complicate matters further, each of these components received their own subdivisions.

Returning to a bird’s eye view of the *Three-level Framework of L2 Motivation*, Dörnyei’s rationale for separating out and sub-categorizing the three levels of motivation was rooted in his belief that while the three levels undeniably had an impact on learners’ motivation they did so independently from one another (Dörnyei & Ushioda, 2011). As a result, so Dörnyei and Ushioda (2011) write, “each [of the three levels] has sufficient power to nullify the effects of the motives associated with the other two levels” (p. 53).

Looking back, Dörnyei, in 1998, reflects on the usefulness of his 1994 model, stating that it allowed for bringing to the fore the many dimensions of second language learning motivation, pulling together individual research efforts, and “providing an elaborate enough specification of relevant motives for the purpose of in-depth analysis of particular learning situations and design of intervention techniques to enhance them” (Dörnyei, 1998, p. 126). In the same publication, Dörnyei (1998) also addresses criticisms of his model, conceding that as a result of a lack of apparent connections between the individual components of the model, and the components themselves being too varied in nature to lend themselves easily to empirical testing, the *Three-level Framework of L2 Motivation* “cannot be seen as a motivation model proper” (Dörnyei, 1998, p. 126). Dörnyei (1998) continues his self-criticism by stating that the framework lacks “the goal component” and neglects to take into consideration elements of the then contemporary findings of Deci and Ryan’s *Self-determination Theory*. He concludes the critical analysis of his own framework with the observation that the “integrative/instrumental motivational dichotomy at the language level is obviously misleading in providing a simplification of the intricate processes determining the social dimensions of L2 motivation (Dörnyei, 1998, p. 126).

In similar fashion to Dörnyei’s work, Williams and Burden’s *Social Constructivist Model* also sought to summarize the numerous motivational components that were perceived to be relevant to second language learner motivation in the classroom setting during the cognitive-situated period (Dörnyei & Ushioda, 2011). First published in 1997, Williams and Burden’s model is, in accordance with its title, based on a “social constructivist approach” and one of the few frameworks that includes a detailed definition of motivation, which, due to being a “rarity” in the field, shall be reproduced here in its entirety from Williams and Burden’s 1997 work *Psychology for Language Teachers*: 
Motivation may be construed as a state of cognitive and emotional arousal, which leads to a conscious decision to act, and which gives rise to a period of sustained intellectual and/or physical effort in order to attain a previously set goal. (or goals) (p. 120)

And,

A constructivist view of motivation centres around the premise that each individual is motivated differently [...]. However, an individual’s motivation is also subject to social and contextual influences. These will include the whole culture and context and the social situation, as well as significant other people and the individual’s interaction with these people. (p. 121)

When compiling their comprehensive summary of existing motivational components, an undertaking that, so Dörnyei (1998) points out, was actually “part of a larger overview of psychology for language teachers” (p. 126), Williams and Burden made every effort to include a number of “environmental variables” in their extensive framework, which, at the top level, were divided into the two categories of internal factors and external factors. These variables were subsequently tested for their “motivational impact” in a classroom setting that included teachers and curricula, leading Williams and Burden to conclude that teachers seek to create a positive classroom environment that is conducive to confidence building, allows for mistakes to be seen as a normal part of language learning, and successfully conveys to the students that tasks and assignments are vital to the success of L2 learning (Apple, Da Silva, & Fellner, 2013).

As a detailed discussion of each of the factors and their sub-factors is far beyond the scope of this essay, the table below shall act as means to provide rudimentary insight. The reader interested in further exploring Williams and Burden’s framework of motivation in language learning is directed to Williams and Burden’s 1997 book titled Psychology for Language Teachers.
Fig. 1 Williams and Burden’s (1997) Framework of Motivation in Language Learning (Dörnyei, 1998)

As can be expected, Williams and Burden’s framework is not free of criticism. Due to its similarities with Dörnyei’s *Three-level Framework of L2 Motivation* (in the sense of attempting to bring together multiple lines of research on motivation), it too lacked “directional relationships” between the components/variables listed (Dörnyei, 1998). Furthermore, rather than relying on second language learning theories, the authors resulted to utilizing resources that were primarily based on mainstream theories, a choice that situated their work “very much in line with the ‘paradigm-seeking spirit’ of the reform movements of the 1990s” (Dörnyei, 1998, p. 126).

Before leaving the cognitive-situated period behind, this essay shall take a brief look at one more important language learning motivation model: Kim Noels et al.’s model of language learning motivation, which is based on Deci and Ryan’s *Self-determination Theory*.

Characterized by Deci and Ryan as a “meta theory,” *Self-determination Theory* (SDT), in its broadest scope, focuses on *intrinsic* and *extrinsic motivation* (Self-Determination Theory, 2015). Apple, Da Silva, and Fellner (2013) explain that when L2 learners develop intrinsic (that is, “more self-determined”) motivation, they enjoy the learning process and associate success with the act of learning itself. Where extrinsic (“less self-determined”) motivation is concerned, learners’ reactions are the result of external signals such as “reward” and “punishment” (Apple, Da Silva, & Fellner, 2013). Deci and Ryan tie in the two types of motivation with three “basic human needs” of *autonomy, competence, and relatedness*, which, when fulfilled, serve to
enhance intrinsic motivation (Apple, Da Silva, & Fellner, 2013; Busse & Walter, 2013). On the other hand, so SDT proposes, “the degree to which any of these three psychological needs is unsupported or thwarted within a social context will have a robust detrimental impact on wellness in that setting” (Self-Determination Theory, 2015). Based on SDT concepts, Noels and her colleagues constructed their self-determination oriented framework and, after extensive research, devised the Language Learning Orientations Scale, a thorough questionnaire that allowed for the measuring and subsequent assessment of L2 learners’ intrinsic and extrinsic motivation orientations (Dörnyei & Ushioda, 2011). The research results showed that self-determined students who are driven by intrinsic motivation are “more persistent and exhibit greater motivational intensity” but also revealed that some intrinsic motivation factors like interest in and enjoyment of L2 learning may, by themselves, not be sufficient to keep the learner motivated over longer periods in time (Apple, Da Silva, & Fellner, 2013, p. 95). As such, “personal value and importance of learning the language” may be of greater importance in this context (Dörnyei & Ushioda, 2011, p. 57). Overall, so Dörnyei (1998) writes, Noels et al.’s framework proved useful for the organization of the growing number of “L2 learning orientations,” and the extensive research conducted provided “empirical evidence that the motivational complex of language learners could be validly described using the intrinsic/extrinsic subtypes” (p. 124).

While criticism of individual research, frameworks, and models was not uncommon during the cognitive-situated period, towards its waning years, the critical focus shifted to a broader view. Dörnyei (1998), for example, points out that the amount of research conducted in the relatively short cognitive-situated period led to an overabundance of motivational theories that were rooted in or related to aspects of cognitive psychology. This, so Dörnyei (1998) continues, led to confusion and, in many cases, to a merely “superficial representation of motivation in the L2 literature – for example, when the results of a few questionnaire items are equated with ‘motivation’” (p. 118). Busse and Walter (2013) elaborate on this critique by stating that while most motivation theories and frameworks of the cognitive-situated period include “important components” such as “goals, emotional arousal, and self-related beliefs,” many of the models merely list and define them, but only a few researchers “actually described in detail how these motivational constructs interact” (p. 498). Furthermore, even where interaction between the motivational constructs is considered, said constructs are “placed on
different stages of the motivational system,” leading researchers to arrive at “contradictory assumptions as to how they influence motivated learning behavior” (Busse & Walter, 2013, p. 498). This, so Busse and Walter (2013) conclude, is the result of the “inherent difficulties involved in examining motivation in quantitative research” where the researchers are forced to “restrict and simplify the number of factors that can be analyzed within a single study” (p. 498).

LANGUAGE LEARNER THEORIES: THE PROCESS-ORIENTED PHASE

The process-oriented period focused on the “dynamic character and temporal variation” of motivation (Dörnyei, 2005, p. 83), an aspect that, until then, had gone largely unnoticed -- mostly due to the fact that it had been difficult for researchers to adequately describe the “temporal organization of motivation,” that is, to “portray motivational processes as they happen in time” (Dörnyei & Ushioda, 2011, p. 60). During this phase, Williams and Burden, as well as Ushioda, conducted important work on the temporal aspect of motivation but overall, the process-oriented period was dominated by Dörnyei and Otto’s Process Model.

Language learning is a process that can only occur over time and invariably includes phases during which the L2 learner experiences fluctuations in their level of motivation. Thus, so Dörnyei (2005) writes, motivation is not a static concept, but rather a “dynamic factor that displays continuous fluctuation” (p. 83). Williams and Burden, in 1997, made the “conceptual distinction between motivation for engagement and motivation during engagement” (Dörnyei & Ushioda, 2011, p. 60), and “separated three stages of the motivation process along a continuum: ‘Reasons for doing something’ ---› ‘Deciding to do something’ ---› ‘Sustaining the effort, or persisting’” (Dörnyei, 2005, p. 83). The first two stages, so Dörnyei (2005) explains, are concerned with “initiating motivation” while the third stage revolves around “sustaining motivation.” In similar fashion to Williams and Burden, Ushioda (2011) points out that motivation is in flux rather than static, and especially so where institutionalized learning is involved. Ushioda subsequently conducted qualitative research, the analysis of which resulted in her “theoretical framework of motivation from a temporal perspective” and let her to conclude that the “notion of a temporal frame of reference shaping motivational thinking integrates the phenomenon of evolution over time, which seems central to the learners’ experience [...]” (as cited in Dörnyei & Ushioda, 2011, p. 63).
Dörnyei and Otto’s *Process Model* constitutes, in Dörnyei’s own words, “the most elaborate attempt to model the process dimension of L2 motivation” (Dörnyei & Ushioda, 2011, p. 65). The extent and complexity of the model may be best understood when reading Dörnyei (2005)’s description thereof:

This model and its further elaboration (Dörnyei, 2000, 2001) broke down the motivational process into several discrete temporal segments, organized along the progression that describes how initial *wishes* and *desires* are first transformed into *goals* and then into operationalized *intentions*, and how these intentions are *enacted*, leading (hopefully) to the accomplishment of the goal and concluded by the final *evaluation* of the process. (p. 84)

Based on Heckhausen and Kuhl’s *Action Control Theory*, the motivational process described by Dörnyei (2005) is broken down into the three “distinct” phases of *preactional stage*, *actional stage*, and *postactional stage* (Dörnyei, 2005; Dörnyei, & Ushioda, 2011). During the preactional stage, “which roughly corresponds to Heckhausen and Kuhl’s *choice motivation*,” motivation must first be generated before a goal can be set (Dörnyei, & Ushioda, 2011, p. 65). During the actional stage, which in Heckhausen and Kuhl’s theory is termed *executive motivation*, motivation is actively maintained and protected from a number of distracting influences that could prevent the learner from continuing to learn. During the postactional stage, or *motivational retrospection*, the learner then critically evaluates his learning experience (Dörnyei, 2005).

The key factor to consider when examining this model is the fact that during each of the three stages, learners are affected by different motivational influences. This provided Dörnyei and Otto with the opportunity to group the different components of motivation research they had seen over time into the three distinct phases. The advantage of this approach, so Dörnyei (2005) points out, is that it is no longer necessary to keep the different motivation research approaches separated from one another, so long as they do not intersect. Dörnyei (2005) names Gardner’s socio-educational model as an example and states that he believes that the model is “effective in explaining variance in choice motivation but [that] to explain executive motivation, more situated factors need to be taken into account” (Dörnyei, 2005, P. 86). As above-presented account of Dörnyei and Otto’s *Process Model* has barely scratched the surface, the interested reader is directed to Dörnyei and Ushioda (2011) for a more comprehensive summary of the model.
Dörnyei (2005), stoutest critic of his own work, writes that while the Process Model presented a good start into the research of the temporal organization of motivation, it fell short in two ways, both related to the actional process portion of the model. Firstly, so he states, it is implied that the “actional process in question is well definable and has clear-cut boundaries,” and secondly, “the actional process does not occur in isolation, without any interferences from other ongoing activities the learner is engaged in” (Dörnyei, 2005, p. 86). Where the former is concerned, the question must then be, “where exactly does the action start in an educational context?” and where the latter is concerned, Dörnyei (2005) concludes that hardly any research has been conducted on “how people deal with multiple actions and goals, [and] how they prioritize between them” (p. 87). To be able to answer these and other prominent questions relating to the changing nature of motivation research, Dörnyei subsequently developed the L2 Motivational Self System, which will be discussed as part of the socio-dynamic perspective outlined below.

CURRENT LINES OF RESEARCH: THE SOCIO-DYNAMIC PERSPECTIVE

While oftentimes, Dörnyei’s Motivational Self-system of L2 Learning is considered part of the process-oriented phase, Dörnyei states that his model is part of a new phase, which he and Ushioda termed the socio-dynamic period (Dörnyei, & Ushioda, 2011). At the beginning of the socio-dynamic period, a new direction in motivation research led to a rethinking of the theories developed during the first three phases, and resulted in a shift from “external to internal processes of identification” (Ushioda, 2011, p. 201). One major factor that contributed to this change was the realization by researchers that by the 21st century, English had become the world lingua franca. Examining this development, questions arose about whether or not the social psychological theory of integrative motivation could still provide valid explanations when in the new millennium learners choose English as their L2 because they see it as a basic skill needed to succeed in an increasingly international community; there is no single target community the learner can identify themselves with; and traditional geographical boundaries are being erased by rapidly evolving technological advances in online communication (Ushioda, 2011). While simplified, Ushioda (2011) aptly summarizes the shift in thinking about motivation by saying that “given the global nature of English language communication and of Internet use, our ‘integrative’ motivation to participate in these worlds may be better explained in terms of our
desired self-representations as de facto members of these global communities, rather than in terms of identification with external reference groups” (p. 201). No longer is the primary integrative goal of many English language learners one of wishing to integrate into the community of the target language, but one of “international posture,” which includes “interest in foreign or international affairs, willingness to go overseas to study or work, readiness to interact with intercultural partners...and a non-ethnocentric attitude toward different cultures” (Kormos, Kiddle, & Csizér, 2011).

Below, a brief overview of select research lines will be presented, followed by a more extensive discussion of Dörnyei’s *L2 Motivational Self System*.

**Global Changes in Motivation**

Global changes in motivation, that is, fluctuations in the level of motivation that are experienced by the learner over a prolonged period of time, have been investigated with a number of studies, with most of them consisting of survey instruments in the form of questionnaires. Chambers, in 1999; Gardner, *et. al.*, in 2004; Inbar *et. al.*, in 2001; Tachibana *et. al.*, and Williams *et al.*, in 2002, examined the level of motivation of L2 students at different points in time (Dörnyei, & Ushioda, 2011). The findings of these studies were consistent in that they revealed that over time, the motivation level of the students had declined, and especially so with upper level school students who saw themselves faced with increasingly difficult and demanding curricula (Dörnyei, & Ushioda, 2011). While these types of studies are limited in that they can only provide a broad picture, they are nonetheless useful for giving insight into the specific components of motivation that are most likely to fluctuate. Ushioda (2011) provides as an example Gardner’s study, which found that in university students learning French, “situation-specific motivation (attitudes towards the learning situation) was prone to much greater changes than integrativeness, and that such changes were associated with students’ ultimate success in the course” (p. 67).

**Motivation Across the Lifespan**

According to Ryan and Dörnyei (2013), much of the research conducted in and literature published on second language learning motivation revolves around young people learning a second language in the classroom environment. Age as a factor in L2 motivation has not yet been researched extensively but is starting to receive increased attention, largely due to the fact that L2 learning is no longer confined to the classroom of the youth but is by many adults pursued
either out of necessity or for pleasure. As such, research is seeking to understand how language learning motivation theories can help understand “language learning as a long-term pursuit” (Ryan & Dörnyei, 2013, p. 89). Heckhausen, Wrosch, and Schulz’s Motivational Theory of Life-Span Development is among the foremost frameworks of motivation concerned with how motivation changes over the lifetime of an individual. First proposed by Heckhausen and Schulz in 1995 as the Life Span Theory of Control, the theory focuses on the “role of the individual as an active agent in life-span development” (Heckhausen, Wrosch, & Schulz, 2010).

In this model, people have “two basic modes of behaviour control: primary control and secondary control” (Ryan & Dörnyei, 2013, p. 93), with primary control “enabling individuals to shape their environment,” and secondary control serving to “protect the individual against the threats to the self posed by failure” (Ryan & Dörnyei, 2013, p. 93). Since its inception, the original model has undergone numerous revisions and expansions, most notably the addition of the Model of Optimization in Primary and Secondary Control, which was developed by Heckhausen, Wrosch, and Schulz to “address how individuals choose goals in accordance with principles of development optimization,” as well as the Action Phase Model of Developmental Regulation, which “describes the sequential structure of goal-oriented action cycles [...]” (Heckhausen, Wrosch, & Schulz, 2010, p. 32). The synthesis of the original theory with the two models resulted in the Motivational Theory of Life-Span Development, the research focus of which revolves around the “capacity of individuals to optimize development across major changes in the life course” (Heckhausen, Wrosch, & Schulz, 2010, p. 54).

While many of the conceptual framework’s theories have been supported with empirical research, Ryan and Dörnyei (2013) state that the continued dearth of empirical research presents one of the “greatest impediments to a more complete understanding of the self-concept of adults and how it relates to learner motivation” (p. 94). DeKeyser (2013) raises similar concerns, stating that, “the effect of age on ultimate attainment in second language learning has been a controversial topic for years, mainly due to “conceptual misunderstandings” and “methodological difficulties” (DeKeyser, 2013, p. 52). It is important to seek answers, so DeKeyser (2013) continues, as the age effect on L2 learning is vital for second language teachers’ understanding on how to best develop and adapt curricula to different ages. Thus, in agreement with Ryan and Dörnyei (2013), DeKeyser (2013) calls for increased empirical
research that is based on better sampling, better instrumentation, but also leaves room for alternative approaches to research.

**Dörnyei’s L2 Motivational Self System**

At the forefront of the “conceptual shift to the internal domain of the self-concept” stood Dörnyei’s *L2 Motivational Self System* model, which, while having been firmly rooted in previous research on L2 motivation, ultimately grew out of two theoretical concepts: The L2 research that had been conducted on the concepts of integrativeness/integrative motivation as part of the second language field, and the research on the possible self within the field of psychology (Dörnyei & Ushioda, 2011; Ushioda, 2011). After the completion of a longitudinal study he conducted between 1993 and 2004 with more than 13,000 Hungarian students, so Dörnyei (2009) writes, he was “ready to move beyond integrativeness, and possible selves theory seemed to offer the most promising way forward” (p. 25). The study had included a variable which was initially identified as integrativeness but was, upon extensive analysis by Dörnyei, found to “tap into a broader dimension, the learner’s ‘ideal self,’ and thus a link was created with L2 motivation and future self guides” (Dörnyei & Ushioda, 2011, p. 86). This insight led to the creation of the *L2 Motivational Self System*, which comprises the three components of *ideal self*, *ought-to self*, and *L2 learning experience*. Ideal self represents the learner’s ideal of the self, that is, the learner sees himself as a person who would like to succeed in learning an L2. This image constitutes a powerful motivator in that it drives the learner to move from the current self to the ideal self. Dörnyei and Ushioda (2011) state that this component typically belongs into the category of the “traditional integrative and internalised instrumental motives” (p. 88). The ought-to self component is concerned with the types of attributes a learner believes he needs to have in order to meet the expectations of language learning and also to avoid failure. This component “corresponds to Higgins’s ought self and thus involves the more extrinsic (i.e. less internalised) types of instrumental motives” (Dörnyei & Ushioda, 2011, p. 86). The third component, L2 learning experience, is situational, that is, it is concerned with where learning happens and how the learner experiences the learning process in the classroom environment (Dörnyei and Ushioda, 2011).

The advantage of looking at language learner motivation from the perspective of Dörnyei’s reinterpreted *L2 Motivational Self System* lays in the opportunity to create new avenues for motivating L2 learners, and specifically so where the model’s first component, the
ideal self, is concerned. Based on the knowledge that the ideal self is a powerful motivator, those teaching second languages can thus structure a curriculum and classroom atmosphere that promotes the ideal self through “generating a language learning vision and through imagery enhancement,” that is, “possible future self-guides” (Dörnyei, 2009, pp. 32-33).

While the notion of ideal self and possible future selves has indeed led to a paradigm shift in L2 motivation research, it does not come without drawbacks. Dörnyei (2009) writes that a possible problem arises from the notion that to be successfully applied in L2 teaching, the student’s ideal self/possible future self must exist in the first place. Furthermore, not every student in a classroom will be able to create a vision of an ideal self to the same degree. It is thus of vital importance that the L2 teacher fosters awareness about the ideal self by guiding the students through various possible future selves they may have started to envision, and also by presenting role models for the students to emulate (Dörnyei, 2009). Assuming however, that students have the ability to create an ideal self to some degree, care needs to be taken to strengthen the vision. Here, so Dörnyei (2009) writes, previously conducted research into imagery enhancement from the fields of psychology, education and sports can be of much value in the L2 classroom due to the fact that “our capacity for imagery and fantasy can indeed give us a kind of control over possible futures” (p. 36). Strengthening the vision alone is not sufficient, however; it also needs to be substantiated in such a way as to be realistic, believable, and sustainable. Here too, Dörnyei (2009) points to the usefulness of approaches drawn from psychology research, such as Oyserman et al.’s “self-oriented training programme,” which encourages students to visualize, strengthen, and substantiate their ideal self/possible future self with in-class activities such as the creation of a “Possible Selves Tree” (p. 36). To keep the vision alive over the long term, Dörnyei (2009) points to the fact that many L2 teachers are already practicing a number of activities that can easily be modified to serve as reminders about the students’ ideal selves. Finally, “the ideal self should come as part of a package consisting of an imaginary component and a repertoire of appropriate plans, scripts and self-regulatory strategies” (Dörnyei, 2009, p. 37). According to Dörnyei, this is a feasible undertaking due to the fact that language learning motivation research and teaching methods overlap to a degree that allows for the inclusion of goal setting components in the language-learning curriculum (Dörnyei, 2009). To avoid failure at any one of the above-described stages of ideal self creation, teachers should regularly remind students about the limitations brought on by not learning the
L2, as well as “recurrently [prime] the learners’ ‘Ought-to L2 Self’ by highlighting the duties and obligations the learners have committed themselves to” (Dörnyei, 2009, p. 38). While this may, at first glance, appear to be counterproductive to the creation, strengthening, and sustaining of the ideal self, it is by and large human nature to focus on the positive and only consider the negative when all else fails. Thus, including regular reminders about possible negative consequences of failing to learn an L2 presents a more balanced view of the vision, a concept that was proposed by Oyserman and Markus in 1990 (Dörnyei, 2009).

Never one to shy away from criticizing his own work, Dörnyei (2009) concedes that no research has been conducted on how to “specifically develop an ideal language self” (p. 34), and that “very little is said in the literature about activating the ideal self” (p. 37). He also points out that, in accordance with the findings of “Zetner and Renaud (2007) [who] claim that stable ideal-self representations do not emerge before adolescence,” application of the self approach may not be appropriate in a pre-secondary student classroom (Dörnyei, 2009, p. 38). Lastly, Dörnyei (2009) clarifies that his reframing of L2 motivation research to a perspective of an ideal self/possible self is not meant to invalidate previously conducted L2 research, but that on the contrary, he believes that his research results “will come to life and receive a new meaningfulness within the self framework (p. 38).

**LANGUAGE LEARNING MOTIVATION: IMPLICATIONS FOR THE PROFESSION**

Thus far, this paper has concerned itself exclusively with the theoretical approach to motivation as it relates to second language acquisition. Due to the manifold approaches that have been discussed and developed, the remainder of the text will briefly examine how the theoretical findings of motivation research can benefit language teachers in the classroom environment. Restricted to more recent research and with primary focus on Dörnyei’s *L2 Motivational Self System*, the overall focus will be on how to motivate students, that is, how to continuously generate, enhance, and maintain students’ motivation, and how to protect it from distractions.

*Dörnyei’s Framework for Motivational Strategies*

Based on the *Process Model* developed by Dörnyei and Otto in the early 1990s, *Dörnyei’s Framework for Motivational Strategies* was introduced in 2001 in the effort to “organise the long list of relevant motivational techniques into separate ‘themes’” (Dörnyei & Ushioda, 2011). The model, so Dörnyei and Ushioda (2011) state, has the important advantage of
being comprehensive, thus providing teachers with guidance through the motivational process from start to finish rather than setting the focus on a single theme that is used throughout.

Dörnyei’s framework for a successfully organized motivational teaching practice involves four key units: (1) “Creation of the basic motivational conditions,” (2) “Generating student motivation,” (3) “Maintaining and protecting motivation,” and (4) “Encouraging positive self-evaluation” (Dörnyei & Ushioda, 2011, p. 107). As can be seen by the descriptive titles of the key units alone, Dörnyei’s Framework for Motivational Strategies is closely aligned with his L2 Motivational Self System. In fact, so Dörnyei and Ushioda (2011) point out, the L2 Motivational Self System and its emphasis on vision opened the doors to finding and creating new ways for teachers to motivate students. As the Framework for Motivational Strategies is discussed in detail in Dörnyei and Ushioda (2011), for the purpose of this paper, the model’s basic tenets are presented by means of the table below.

![Diagram of Dörnyei's Framework of Motivational Teaching Practice in the L2 Classroom](image)

Figure 5.1 The components of Dörnyei’s (2001a: 29) framework of motivational teaching practice in the L2 classroom

Fig. 2 Dörnyei’s Framework of Motivational Teaching Practice in the L2 Classroom (Dörnyei & Ushioda, 2011).
What above table does not show is the fact that each of the key strategies listed is further divided into key sub-strategies, many of which are expanded upon in turn. While certainly comprehensive, such an extensive model might, for some teachers, present the challenge of wanting to choose all of the strategies they believe would work best in their classroom with the result of selecting too many strategies, all of which they must then pay attention to alongside the day-to-day teaching and classroom management. To avoid such a conundrum, Dörnyei and Ushioda (2011) recommend that teachers start with a small set of strategies, such as the Ten Commandments for Motivating Language Learners, which were developed by Dörnyei and Csizér (1998) in the effort of providing teachers with a “core’ set of motivational strategies:

1. Set a personal example with your own behaviour.
2. Create a pleasant, relaxed atmosphere in the classroom.
3. Present the tasks properly.
4. Develop a good relationship with the learners.
5. Increase the learners’ linguistic self-confidence.
6. Make the language classes interesting.
7. Promote learner autonomy.
8. Personalize the learning process.
9. Increase the learners’ goal-orientatedness.
10. Familiarize learners with the target language culture. (p. 215)

While this list of “ten commandments” is certainly not applicable as a whole in every classroom, it nonetheless provides common-sense guidance for teachers seeking to enter into or expand upon existing motivation-sensitive teaching approaches. When considering above-listed core strategies, as well as others from Dörnyei’s model or related research, great care should be taken in considering whether the chosen strategies are appropriate for the students, the classroom environment, and the socio-cultural context in which the L2 learning takes place. Two practical concerns teachers need to consider in advance are the extent to which the consciously chosen motivational strategies are practiced in addition to already established “good or effective teaching practice,” and how to balance the fostering of students’ motivation with the learning goals and outcomes set by the curriculum” (Dörnyei & Ushioda, 2011, p. 135). Possibly the most difficult aspect of the latter lays in the “recognition that there is a critical difference between ‘motivating’ students and ‘developing their motivation’ -- that is, between creating unhealthy teacher-dependent forms of student motivation [...] and socialising and generating healthy forms of internally driven motivation [...]” (Dörnyei & Ushioda, 2011).
Breaking Away from Generalizable Models of Motivation: Learner as Person and Dogme Language Teaching

While in past research, language learning motivation has been sought to be distinct from motivation in other domains, Ushioda (2011) writes that in the more recent research the uniqueness of L2 motivation is no longer based on the learner’s “attitudes to the target language community and culture but on the fact that language is a medium of self-expression and a means of communicating, constructing and negotiating who we are and how we relate to the world around us – that is, of giving ourselves voice and identity” (pp. 203-204). Viewed from a pedagogical perspective, this means that teachers should instruct their students to see the L2 as a means of self-expression and self-development (Ushioda, 2011).

While deceptively simple on the surface, this “humanistic person-centred approach” requires, so Ushioda (2011) states, teachers to think of students as people rather than “types of learners” and to shift from using previously developed “generalizable models of motivation” to engaging “the uniquely individual people in their classroom” (p. 204).

One way of achieving this goal is to utilize Dogme Language Teaching, which originated with language education author Thornbury in 2000 and was, after having become a movement in English Language Teaching (ELT), developed into a fully formed methodology by Meddings and Thornbury by 2009 (Ushioda, 2011). Dogme Language Teaching focuses on the students’ interaction with the teacher by means of conversation, allowing for these interactions to be spontaneous, learner-driven and learner centered, instead of being restrained and controlled by the instructor’s pedagogy. As a result, students’ voices are heard, their interests realized, and their own identities established (Ushioda, 2011). Major drawbacks to Dogme teaching are the lack of empirical research to support the effectiveness of the approach, as well as Meddings and Thornbury’s insistence of “teaching unplugged” at a time and age where students are increasingly encouraged, and even required, to utilize computer technology inside and outside the classroom (Ushioda, 2011). Additionally, so Ushioda (2011) points out, Dogme Language Teaching has, for the most part, rejected widespread publication of materials and teaching resources, a fact that makes it difficult for teachers to comprehend and practice the approach. Nonetheless, Dogme teaching has retained its popularity to such a degree that proponents of the approach have begun to make concessions where “teaching unplugged” is concerned and are

CONCLUSION

This research paper has guided the reader through more than five decades of research on second language learning motivation. It outlined, in some detail, the three phases (or periods) the research on the topic can broadly be divided into, beginning with the social-psychological phase, followed by the cognitive-situated phase, and rounded out by the process-oriented phase. For each of the three phases, the predominant theories, frameworks and models were discussed with the use of relevant literature. The inclusion of criticism informed the reader as to how and why changes in thought led to shifts in theory and praxis over time. While the reader may find the treatment of the topic in this essay somewhat lengthy and much too theoretical, it de facto merely scratched the surface of a field of research that has never waned in popularity and continues to evolve at a fast pace. As a result, many concepts were only briefly addressed while others had to be left out entirely, leading to an incomplete, yet not superficial treatment of the topic.

As more than 50 years of research have revealed, much of what motivates L2 learners has yet to be discovered, with many questions remaining unanswered. To this day, little research has been conducted on the effect age has on L2 learning; the same holds true for the field of demotivation. As research into L2 learner motivation as it relates to the self continues, these two subfields, along with others, are likely to garner more attention. However, empirical research will likely prove difficult, as matters of age and demotivation are to a large part subjective.

The research on second language learning motivation will continue to see the emergence of many improved and new theories, frameworks, and models, such as the concept of Directed Motivational Currents, which was introduced by Muir and Dörnyei in 2013. It is the hope of this author that room will be made for the exploration of the more controversial approaches, such as Dogme Language Teaching. While the research into these areas may be snuffed by some or considered niche by others, they have the potential of finding practical application in new L2 teaching environments that are continuously emerging and evolving alongside the theoretical research. If nothing else, off-the-beaten path and controversial approaches will assure a lively conversation on why and how people around the world are motivated each day to learn – and keep learning – a second language.
REFERENCES


Title of the submission:
A ROADMAP TO INCREASE ACTIVE LEARNING IN ELEMENTARY EDUCATION READING METHODOLOGY COURSES WITH PROBLEM-BASED LEARNING

Session ID Number:
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Abstract:
While lectures can be crafted in a manner to cover course content, student attention begins to decline after 10-15 minutes. Active learning engages students in the learning process to think critically, work collaboratively, express ideas, explore knowledge, make connections, and reflect. Students remain engaged in the learning process when utilizing an active learning strategy and therefore learner retention is increased. Problem-based learning (PBL) is an active learning strategy not commonly incorporated in methodology courses outside of the STEM fields. This research explored the use of PBLs in reading and language arts methodology courses to increase active learning and learner retention. The research was qualitative with a grounded theory methodology. Extensive data was collected to develop a theory regarding the use of PBLs as an active learning strategy in reading and language arts methodology courses. The findings showed student retention of knowledge increased when using PBLs as an active learning strategy compared to a lecture format.
Student perspectives of using PBLs as a learning strategy were not as favorable. While using PBLs in reading and language arts methodology courses for teacher preparation is effective, further research is needed in understanding student perceptions. The grounded theory research project affords a roadmap of integration, increased participation, and recognized learner retention.
Title: Representation of identities: Social media and education

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Abstract: The evolution of communication through the Internet has influenced shaping and reshaping the identities of social media users. Communication through online interaction involves the societies in understanding each other culturally and historically while the online information exchange has influences on the identity formation of individuals (Hall, 2003). The analysis of online interviews and Facebook interactions of this qualitative multiple case study revealed that there are tight restrictions in receiving proper education from many social topics which are considered “taboos”. Social media pages and channels provide the context of information sharing in order to fill the gap in these areas. The data in this study have been collected through individual synchronous online interviews with Facebook users and through the analysis of the participants’ Facebook profiles and activities over a period of six months. The data is analysed with an emphasis on the identity formation of participants through the recognition of the underlying themes. The exploration of online interviews is on the basis of participants’ personal account of identity, language use and social media use. The ‘interactions’ and ‘presentation of self’ have been considered in the Facebook analysis phase of research. It is hoped that this research will have implications for education contexts by offering an increased understanding of the role of online communities in constructing the identities of adult social media users.

Keywords: Cultural identity, identity formation, online communities, social media, self-representation.
1. Title of the submission:

How to make invisible disorders visible in educational context?

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6. Abstract:

Eating disorders (ED) is one of the most prevalent mental illness among adolescents (Fairburn, 2008). Most of them present high risk of ED while achieving their academic cursus, especially athletes (Sundgot-Borgen et al., 2013). School and teachers could help prevent ED but ED isn’t a problem of interest for education, even if they can have a negative influence on their academic success.
While the majority of studies about ED are focused on the person with ED or the significant other, this research wants to draw the picture of ED in a Canadian college with a double look: ED as lived by students and perceived by teachers. Three objectives were defined: identify the risk of ED among students, identify perceptions and beliefs about ED among teachers and finally compare the reality of ED with perceptions in order to see if there were any differences between the two.

Mixed methods were used in this research. First, students completed several questionnaires like the eating disorders inventory, then teachers and coaches completed a questionnaire about ED then participated in a focus group. Interview questions were determined using the results obtained with student’s questionnaires.

Preliminary and partials results show that students are presenting ED symptoms in the form of diets, bulimia, or excessive physical activity. Those symptoms are more prevalent among non-athletes than athletes. Teachers are not able to precisely estimate how many students may present ED symptoms. And they don’t know how to look for the right signs in order to help them.

Those results let us think about how knowledge of this characteristics among students and staff, may help in ED prevention in schools. It seems important to develop formation for the staff and help in early identification of ED, based on those findings.
Understanding the Role and Contributions of Instructional Staff in a Cohort Experience

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Understanding the Role and Contributions of Instructional Staff in a Cohort Experience

Abstract

In the academic world of the 21st century, institutional administrators are faced with the need to be financially creative in managing large scale work environments that incur considerable costs at the same time as also ensuring the provision of high quality educational experiences. With the increase in popularity of undergraduate education, the need for viable programs to assist in the effective delivery of undergraduate courses and the support of the continued development of instructional excellence seems to be essential. Dyson and Hanley (2002) identified that the effectiveness of instructional delivery had started to become a point of considerable interest for administrators at higher education environments. This was particularly due to public demand for accountability and demands for reform. Such pressures resulted in a movement toward more learner-centered experiences (Doolen & Biddlecombe, 2014, Leisey et al., 2014) and, in recent years, an appreciation of the importance of developing learning communities (Cleveland-Innes, Garrison, & Kinsel, 2008, Lei et al. 2011). This is particularly important as community is identified as being essential when aiming to support collaboration and promote high levels of learning (Rausch & Crawford, 2012). Therefore, it is important for institutions to consider how programming experiences are structured in order to best support student learning opportunities. However, as much of the current research has focused on the student perspectives of learning communities, hearing and acknowledging the perspectives of instructors can enhance the overall understanding of this type of learning experience; it can begin to complete the circle of understanding. This paper addresses a research project that has begun to interpret and understand the experiences of a group of instructors who work with a student cohort learning community. This project has utilized action research as its methodology to investigate the role of instructional staff in a cohort experience. When applied to an educational setting, action research involves systematic inquiry to gather information about, and subsequently, improve the ways of operation, teaching, and how well students learn (Creswell, 2014). This approach has resulted in an understanding of the thoughts, practices, and needs of instructional staff when teaching in a cohort setting. Findings from the data attend to such issues as the importance of developing the potential of the cohort, fostering opportunities for communication and sharing between instructional staff, and recognizing the instructional team as a cohort.

Introduction

The 1980s witnessed the emergence of a business model approach in higher education at universities and colleges (Kerby, Branham, & Mallinger, 2014). This resulted in institutional administrators being faced with the need to be financially creative in managing large scale work environments that incur considerable costs at the same time as also ensuring that high quality educational experiences are provided to the students enrolled in its programming (Hickson, 2015). Due to the public demand for accountability and reform, Dyson and Hanley (2002) identified that administrators at higher education institutions began to look at the effectiveness of instructional delivery with considerable interest. This resulted in a movement toward more learner-centered experiences (Doolen & Biddlecombe, 2014; Leisey et al., 2014) and, in recent years, an appreciation of the importance of developing learning communities in higher education environments (Cleveland-Innes, Garrison, & Kinsel, 2008; Leisey et al., 2014) as community has been identified as being essential when aiming to support collaboration and promote high levels of learning (Rausch & Crawford, 2012).

With the continued increase of popularity of undergraduate education (National Center for Education Statistics, 2016), the need for viable programs to assist in the delivery of undergraduate coursework and the support of the continued development of instructional excellence seems to be essential in
order to ensure that effective learning opportunities for students are provided (Hickson, 2015). Therefore, how programming experiences are structured is a critically important consideration for institutions to address in order to best support student learning opportunities.

Review of Related Literature

Much of what is known of learning communities and cohort learning has been from research that has focused the perspective of students experiencing learning activities within a cohort group. This research has identified such benefits as increased learning, and feelings of belonging and cohesion, student retention and completion trends, and the organizational benefits.

Cohorts as Learning Communities

When students are placed in consistent groupings for their learning, such experiences are referred to as cohort learning (Lei et al., 2011). These communities of learning are characterized, according to Pemberton and Akkary (2010), as intentional groupings of students during a program of study for shared experiences, interactions, collective effort, and learning toward educational goals. Similarly, Rausch and Crawford (2012) also describe cohort experiences as a group of students who proceed through a common program of learning in a sequential manner.

Cohort models have been developed from the social cognition research base that indicates that learning is best achieved when students are actively involved in interaction with others and the sharing of experiences (Lei et al., 2011). Unzueta, Moores-Abdool and Donet (2008) suggested that theories in particular associated with group learning and cohesion provided the framework for the development of cohort education. As such, cohort experiences range from a flexible open-cohort through to a restrictive closed-cohort format (Pemberton & Akkary, 2010). The flexible open-cohort allows some freedom for students to move in and out of common learning experiences according to programmatic needs and student preference, while the restrictive format is characterized by a single group that shares all learning experiences together in the same sequence and at the same time.

Experiences with Cohort Learning Communities

Since the early 1990s, the practice of providing cohort-based learning has increased in colleges and universities (Rausch & Crawford, 2012). The adoption of the cohort approach to programming has been identified to provide a number of positive impacts both at the institutional and student levels.

Increased Learning. Cohort learning experiences can promote intellectual and academic stimulation (Seifert & Mandzuk, 2006). Unzueta et al. (2008) further reported that students believed that belonging to a cohort learning community positively impacted their learning due to all the students were working toward a similar goal and supported and motivated each other in that process.

Belonging. The cohort learning environment purposefully aims to access interpersonal relationships to enhance the learning process and create opportunities for support from fellow cohort members (Saltiel & Russo, 2001; Seifert & Mandzuk, 2006). Student feelings of belonging, unity, and support were also reported by Unzueta et al. (2008) and by Lei et al. (2011) who suggested that the literature indicates that students in a cohort learning experience appreciate the trust that is established between cohort members and the strong familial type of ties that develop between members.

Student Retention and Completion. The issue of retention of students in programming is something that all institutional administrators face. The impact of high rates of attrition of students can be a viewed in two ways. One view point is that attrition can indicate that there are high standards of performance required and successful students are considered or recognized as being well above
average. However, a second, and very different, view point can potentially result in serious implications for institutions. When students do not succeed and rates of attrition are high, it is often accompanied by critique of instructional and student development priorities and can centre on the question of the financial expense to students. While institutions need to be cognizant of academic rigour and standards of achievement, the notion of admitting students into programming knowing that a large portion will likely never finish does raise ethical questions for the institution and issues of value for the student. Therefore, the positive effect of cohort membership on student enrolment retention rate (Lei et al., 2011) is an important factor for institutional administrators to consider.

Organizational Ease. The administrative ease of design and delivery of a cohort program was identified by Nimer (2009) due to the use of a lock-step style of program scheduling. As administrators know the program from start to finish and the fact that all students require the same coursework, allows for administrators to know such things as registration numbers, class sizes, room needs, and even text book ordering requirements. From a student perspective, Unzueta et al. (2008) also suggested that there were also organizational advantages at the student level too, stating that students find cohort programming to be easier to: navigate; know and follow necessary procedures; and understand pre-determined programming.

Benefits and Drawbacks. Pemberton and Akkary (2010) in a review of cohort experiences and Lei et al. (2011) stated that there are numerous studies reporting positive findings but that there is also evidence of drawbacks of cohort community experiences. These drawbacks mainly centre on issues of tension, jealousy, and competition between members. However, despite the drawbacks, the literature demonstrating the benefits of cohort experiences in regards to organizational efficiency and student learning benefits (Lei et al., 2011) presents a compelling argument for the adoption of cohort programming in educational programming (Pemberton & Akkary, 2010) and membership of a cohort learning community outweighed any potential concerns (Lei et al., 2011; Pemberton & Akkary, 2010).

Recognizing Instructional Staff in Learning Communities

Although there are many positive results from students being part of a learning community through their cohort experiences, there may well be issues for instructional staff with the increase of student presence and voice. Therefore, understanding of the role of instructional staff in a cohort experience is of value to the full understanding of the cohort community experience.

Community of Inquiry. In discussing the notion of Community of Inquiry, researchers have identified three interdependent elements that are necessary to ensure a meaningful learning experience: social, teaching, and cognitive presence (Garrison, Anderson, & Archer 2010). In particular, the teaching presence element describes instructional staff as being critical for success and the modeling and facilitative role that instructors play as being vital for student retention and progress.

Instructional Staff Perspective. However, although instructional staff members are viewed as being a part of the overall success of such learning communities, little else is known about the specific role that instructors play in this success or their perceptions of their role. Unzueta et al. (2008) found that professors working with a cohort learning community identified student relationships, unity, and group dynamics as benefits. However, the research findings from Unzueta et al. focused upon the opinions of professors regarding what they observed of the student experience of being in a cohort community rather than their perspectives of their experiences as an instructor.

Therefore, due to the distinct absence of an understanding of the role of instructional staff in a cohort experience, research is required to add to the literature and provide new understanding on the cohort community from an instructional staff perspective. Such new understanding not only has
the potential to add to the literature, but also has the potential to provide benefit on a practical level too. Institutions have a responsibility to regularly evaluate programming to determine and understand its effectiveness and consider any potential need for change. As teacher education programming must be reflective of ever-changing societal needs, continual and evaluative action is a necessity.

**Review of Related Literature Summary**

The understanding of the experiences and perspectives of not only students but also instructional staff in cohort learning communities can be of significant importance and value both theoretically and practically, and has the potential to contribute to program understanding and effective implementation of learning community experiences.

**Background Information**

This two-year research study focused on a cohort learning environment established in a collaborative programming experience between a large research intensive university and a small regional college in northern Canada. Established in the late 1990s, this joint venture was constructed in a manner that allowed the program participants to take all the required undergraduate course work at a local regional college while attaining a Bachelor of Education degree from the larger university. The program was designed to achieve two major benefits: first it allowed students to continue to live in their home community and undertake their undergraduate degree coursework without the need to move to a larger centre and, second, it assists in creating qualified, potential employees with community ties for regional employers.

Due to the uniqueness of the program at the regional college, the students experience their programming as part of a cohort that Pemberton and Akkary (2010) would describe as a restrictive closed-cohort. As such, cohort members take the same courses as each other and in the same sequence; whereby following a common community style class schedule that is consistent amongst all of the students. Interestingly, this issue of community is further extended as a single classroom is used for the delivery location of the vast majority of the courses in the program.

**Purpose**

The purpose of this research study was to investigate and understand the perspectives of instructional staff members that teach students in a cohort learning community setting. As there is little research understanding of such perspectives, it is hoped that this research study will specifically add to the understanding of what the instructor experience is, whether instructors believe that they can contribute to the overall cohort experience of students, and if instructors ever become part of the cohort experience.

**Research Plans and Methods**

The discussion presented in this paper represents understandings from two years of study. Based on the identified lack of understanding of the cohort experience from the instructional perspective, the research study began with investigating and considering the following three research questions:

1. What are the experiences of instructors when delivering coursework to a cohort of students?
2. How can instructors positively contribute to the student experience?
3. In what ways can instructors become part of the overall cohort experience?
Research Design

The research study utilized action research as its methodology. Action research in education involves systematic inquiry to gather information about, and subsequently, improve the ways of operation, teaching, and how well students learn (Creswell, 2014). The study followed an outsider in collaboration with insider approach to the action research process (Herr & Anderson, 2005). This approach to action research requires that both the researcher and the participants to collaborate in order to understand issues and find answers to question(s) or problem(s).

As per the Action Research design, the research study had a series of repeated phases (initial, action, observation, reflection) with each phase consisting of a particular focus such as relationship building, the consideration and reflection on instructional practice, and planning future action. According to Mills (2011) action research data collection techniques can be categorized under three headings: experiencing (e.g. observations and field notes), enquiring (e.g. interviews and discussions), and examining (e.g. journals and personal reflections). Therefore, the research study utilized data collection techniques that fell under each of these categories.

The role of the researcher in this study has been both a participant observer and non-participant observer (Creswell, 2014). The participant observer role occurred during the planning, action, and reflection phases of the study. However, during the observation phases the researcher took on a non-participant observer role while taking field notes and recording observations. Consequently, the researcher met with participants, discussed their experiences, conducted individual informal interviews and small group discussion sessions, collected on-line individual reflections and compiled researcher notes throughout the research process. Throughout this process, probing style questions were posed by the researcher to clarify and seek elaboration of participants’ responses as suggested by Patton (2014). The specific probes were designed to help clarify the understanding and interpretation of the data being provided and develop a deep understanding of instructor perspectives of their experiences of teaching a cohort learning community.

To enhance credibility and trustworthiness, several sources of validity were considered. Process validity to examine the adequacy of the processes used in the different phases of the study was continually established through the triangulation of journals, observations and interviews. Democratic validity, ensuring that all perspectives were taken into account, occurred through data gathering from individual interviews, and dialogic validity was enhanced through the continued intentional sharing of findings with the participants.

Participants

All eight of the instructional staff members delivering the variety of courses to the cohort learning community were invited to participate in the study. From this total of eight, seven agreed to do so, providing a participant pool representing 87.5% of the overall instructional staff.

The instructional staff participants were all experienced educators. Their experience ranged from having spent several years of teaching in the K-12 school system through to having multiple years of experience at a college or university level teaching course work. All seven of the instructional staff participants had obtained at least a master’s degree and several had earned a doctorate. Of note is that the instructional staff participants had a range of previous experiences of teaching with cohort groups at the post-secondary level. In particular, one participant had taught in excess of 10 cohort groups, several had taught more than five cohort groups, one participant had taught a cohort group but at another educational institution, and another was completely new to the cohort experience and teaching to such a learning community of students. However, none of the participant instructors
reported that they had personally experienced being part of a cohort learning community as learners themselves.

**Ethical Considerations and Safeguards**

The research study was conducted according to the relevant Research Ethics Board requirements. Informed consent was obtained from all of the participants after being informed that their participation in the study was voluntary and that they could withdraw at any time without penalty.

**Data Collection**

Data was collected from a variety of sources. From this data it was possible to interpret and begin to understand the lived experience of the instructional staff members; their reactions to teaching in a program that involved cohort learning, and whether they considered their participation to be beneficial. The qualitative data collected were interpretationally analyzed. Analysis involved manual categorization through line-by-line coding of transcripts, interpretation of researcher interview notes, and participant reflections that identified salient meaning from the data. Such meaning was then grouped by content into themes (e.g., the importance of potential, recognizing the instructional cohort, etc.) As such, themes and patterns were identified to describe, draw conclusions, and explain the phenomenon being studied (Gall, Gall, & Borg, 2003).

**Results and Discussion**

The findings of the data collected from the instructional staff participants indicated that they believed that their experiences were most beneficial. Interestingly, they noted that these benefits were not only restricted to the student cohort community members but also applied to the instructors themselves.

In regards to the kind of benefits that the instructional staff members believed that the student cohort members experienced, they remarked that although there are always “…pockets of students…” that can challenge any teaching environment, they found that the cohort experience allowed students to “…do it together to extend learning…” and there was a “…power to the group…” that supported and aided student work habits. Comments were made that suggested that “…common goals…” resulted in opportunities for “…interactions for students with each other…” and that there was a “…shared motivation…” to achieve learning expectations or goals. These findings of increased learning opportunities and a supportive environment mirror the understanding gained by other researchers (e.g. Lei et al., 2011; Saltiel & Russo, 2001; Seifert & Mandzuk, 2006; Unzueta et al., 2008).

Overall, the instructional staff participants overwhelming supported the value of a cohort community experience and concluded that they believed that their own participation had also been most beneficial. As one participant remarked, “A really, really worthwhile experience. I have become a better teacher. I find that I need to not only consider what I need to teach but also consider how might I support other instructors and how can they support me…”

The data collected in this study has been rich and varied with many points of discussion. From this, three themes of experience for the participants were identified. The three themes identified were:

1. The importance of developing the potential of the cohort.
2. Fostering opportunities for communication and sharing between instructional staff.
3. Recognizing the instructional team as a cohort.
Theme: The Importance of Developing the Potential of the Cohort

In alignment with the strengths identified by others (e.g. Lei et al., 2011; Saltiel & Russo, 2001; Seifert & Mandzuk, 2006), participant comments collected in personal interviews and group sessions identified that the cohort experience provided a level of collaboration and comfort for the students that supported learning experiences. Hence, it was believed that students were prepared to risk and sought support from each other. Example participant comments:

“Cohorts can provide opportunities due to trust, allegiance, and loyalties.”
“Cohorts can present a different dynamic. There is a comfort to risk but also a concern to critique... collaboration is something that can be exploited with a cohort group.”

It was also remarked that it was critically important that the cohort members be given opportunities to learn how to function effectively as a group. In order to not limit the potential of the cohort, it was viewed as a weakness by the instructional staff to simply assume that students had this understanding. This was seen in such participant comments as:

“We cannot assume that students will become a cohort, we need to teach being a cohort...students need to learn to be in a cohort.”
“...need to set the tone for the group...you belong to a cohort so you have responsibilities to yourself, the cohort, program, and profession...you are part of a club!”
“...students are getting something special...we need to let them know...need to be deliberate in letting students know what being in a cohort is...”

These comments illustrate that the instructional staff participants believe that cohorts have considerable potential but such potential needs to be drawn out of the group rather than simply expecting for it to occur. That, according to the participants, is a key role that instructors can play; to support the realization and impact of the cohort.

Theme: Fostering Opportunities for Communication between Instructional Staff

Participants identified the importance for instructional staff to have the opportunity to meet as a group to discuss issues pertaining to cohort matters and their instructional practices. The instructional staff participants remarked that they believed that even though the students are adults, often times, they can require assistance to deal with learning issues or those things that occur in day-to-life outside of the learning environment. In 2011, Lei et al. suggested that the introduction of cohort learning experiences in further education was due to issues that included instructor isolation which can lead to a lack of effectiveness. The fostering of opportunities for communication between instructional staff could address such possible isolation and increase instructional effectiveness. As one participant remarked:

“Discussing issues with someone else is helpful...I think others are probably experiencing the same kind of issues as we share the same group of students.”

The data collected from the instructional staff participants indicated a belief that increasing communication could support them as a group, provide for a better student experience, and also illustrate to students that the instructional staff are a collective team. Example participant comments:

“Our teaching is not done in isolation...one body of students that we all share...as our paths do not always cross...be aware of issues...”

“Just knowing that there were others probably having to deal with the same issues or concerns with the same students is comforting.”

“When other instructors discuss what they were seeing or experiencing, I understand that I could learn from their experiences too.”
“...need to create connections for students...the instructional team needs to role model...we need to ensure that the instructional team speaks the same language.”
“Most of the instructors share the same office, the same student group; can we not arrange times for us to share other issues too?”

Similar to Pemberton and Akkary (2010) who suggested that cohorts provide opportunities for students to share experiences, the instructional staff participants also recognized the importance of sharing information amongst their own membership. As explained by one instructional staff participant:
“...students know more than we do, they all experience the same things each day...they know what is going on, where I come in once a week and know little of what has occurred since my last visit…”

Therefore, communication between the instructional staff could increase information and understanding in the instructional staff group and decrease the isolation identified by Lei et al. (2011). Such sharing could, according to the participants, provide a collective response to those students in need of support. This would negate the need for a student to inform a number of separate instructors the same set of information and create the possibility for having a collective, consistent response across all the members of the instructional team.

Theme: The Importance of Recognizing the Instructional Team as a Cohort

Interestingly, the instructional staff participants identified that they too needed to become a cohort; a need to provide opportunities for reflection as an instructor cohort. The opportunity to share instructional expertise and develop relationships was seen as important. Example participant comments:
“We need to think of ourselves as a cohort too. Not really part of the student cohort but something like a partner or a co-cohort, one that can intersect when necessary but has its own identity. How can we not think that way?”
“I think we are a cohort in many ways, our own cohort...we haven’t really formally acted like one in the past...in a coherent manner as such...but we have informally been one especially between certain instructors. Maybe we need to think of ourselves as a cohort of instructors much more than we normally do. I think that would have a lot of benefits for everyone.”
“We are (a cohort) whether we want to be or not as we have a common group of students.”

While there was a belief from participants that an instructional cohort may have occurred previously in an informal manner, it was suggested that there was a need to do so in a more formal manner. Such a move was viewed to have the potential of allowing instructional staff to share ideas, thoughts, and best practices and to ensure that the learning environment is informed from all those that contribute to the student cohort experience. This notion is highlighted in this participant comment:
“Perhaps it is just me but I have always wanted to be more than just an individual instructor...especially as we have a group of students that have common experiences. Surely, we need to talk to each other to ensure that we know what is going on in each other’s classes. Isn’t that good pedagogy?”

Participant remarks indicated that they believe that if the instructional staff members see themselves as a cohort, students would be positively impacted. This thought supports the work of Ford and Vaughn (2011) who suggested that a bond or connection between instructors and students is necessary for a successful cohort experience. Therefore, the purposeful creation of an instructional staff cohort that could operate separately from and also intersect with the student cohort could prove to be advantageous to the overall learning environment.
Conclusion

From the data collected from this research study, it is clearly evident that the instructional staff participants recognize and appreciate the uniqueness of the cohort experience and the benefits that it can bring for both students and themselves. They also have articulated that in many ways they see themselves as a possible cohort that can, at times, intersect with the student cohort group. It was mentioned on numerous occasions by the instructional staff participants that, by assuming a cohort identity, they could become more: aware of specific issues with the student cohort group; cognizant of integrating teaching ideas from each other; and supportive of each other.

Research Questions

In regard to the research questions, analysis of the data has provided evidence that can answer or at least partially attend to each of the three questions.

1. What are the experiences of instructors when delivering coursework to a cohort of students?

Overall, the participants believe that the experience is positive. While, teaching to any group is not an easy task, it is clearly seen to be an enjoyable experience. As one participant suggested: “Not having taught a cohort before I really didn’t know what to expect. I suppose some things were a surprise and others were what I expected. However, it has been really enjoyable. It is like being part of a family in many ways – there are ups and downs but generally it is much more personal than some of my other experiences.”

2. How can instructors positively contribute to the student experience?

The instructional staff participants indicated that not only do they believe that a cohort of instructional staff could have a personal benefit for themselves but suggest that it could have many positive experiences for students, and the cohort in general, too. For example, a participant remarked: “We need to be able to come together on a regular basis. That way, we can support each other and also be a better team for the students. I will not be asking them to think one way and someone else the opposite.”

3. In what ways can instructors become part of the overall cohort experience?

The instructional staff participants identified a need to create their own instructional cohort group or, at the very least, have opportunities to come together to discuss instructional and cohort issues. However, at this stage of the research study, this has not been enacted and is still an aim for further research. It is speculated that this group could operate separately from the student cohort or, at times, intersect with the student cohort. Further study will, hopefully, explore this notion and investigate if it is possible to achieve.

Concluding Thoughts and Planned Actions

This paper addresses a study that has occurred over a two-year time period. It is hoped to further examine the mentioned themes, any others that may be identified, and investigate how an instructional staff cohort might be created, as it is clear that the instructional staff participants in this study visualize a distinct role for instructors in the overall cohort experience by intentionally creating an instructional staff cohort. How such a cohort of instructors might operate and exactly what role and responsibilities it might require to be successful, are likely to be a major focus of potential future work. Time will need to be taken to examine if a cohort of instructors is possible to achieve, and to
determine whether instructional staff believe that it is beneficial to their teaching, the overall learning environment for the cohort learning community, and the program in general. Such an understanding will, hopefully, add to the connection between instructional staff and the cohort community membership and the overall understanding of cohort learning communities.

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MAKING VISIBLE OUR INVISIBLE FACULTY: CONTINGENT ONLINE FACULTY MENTORING

Higher Education
Panel Session

Contingent faculties are increasing visibly as high education addresses challenges related to disinvestment of funding for universities and colleges. Results of a meta-synthesis of academic mentoring for contingent faculty teaching online courses are discussed.

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**Introduction**

Institutions of higher education in the United States employed 1.5 million faculty members in the fall of 2013. Of this number, part-time faculty totaled 45 percent of all these faculty or 752,700 individuals working in universities, colleges, and community colleges, an increase of 104 percent from a decade prior (NCES, 2016). At the institution of one author, more than 75% of courses within an academic discipline are taught by part-time instructors (contingent faculty), geographically dispersed from the flagship campus and teaching online courses.

Though this surge in contingent faculties has exacerbated decades-old concerns, the hiring of these short-timers seems unlikely to stop with the challenge of disinvestment in higher education, especially state-supported institutions that also are experiencing the public’s contempt of institutional inefficiency and lack of accountability. Once seen as expendable, and almost always invisible, contingent faculties have found employment in teaching developmental classes, basic core curriculum, and general education courses sometimes unattractive to senior full-time faculty and in some cases serving a majority of part-time and weekend students.

Although there are disadvantages with hiring contingent faculties, institutions can best be served by supporting and mentoring this academic employee base. Improving the environment for contingent faculties can involve mentoring strategies or program that address both institutional and contingent faculty needs. In this study, contingent online faculty needs and experiences were explored based on a meta-synthesis of research concerning academic workplace mentoring.

**Study Background**

This paper provides insight on the impact of utilization of contingent faculty in U.S. institutions of higher education. As found in the literature, there are numerous effects of hiring teaching faculty on a part-time basis, not only for the institution but for the employees as well.
Because contingent faculty members are growing in numbers, geographically dispersed locations from flagship campuses and teaching online courses (Curtis & Thornton, 2013), this demographic will be studied. The authors were interested in accessing current contingent online faculty research to examine strategies and programmatic aspects of mentoring for reaching these part-time colleagues. Findings were reviewed to ascertain best practices and new ideas for a future mentoring plan at a publically funded state university.

A meta-synthesis of the most contemporary qualitative research (2000-2016) on mentoring programs and strategies in academe for part-time online faculty was completed. Upon individual study review, the findings were integrated into a transformed whole, providing future direction to the following question: “What mentoring strategies and programs address the needs and interests of contingent online faculty?”

**Changing Landscape of Teaching Faculty**

Higher education is changing rapidly in terms of student demographics, faculty statistics, and stakeholder demands and concerns. In turn, faculty who teach part time are fast becoming a new majority of teaching faculty in many departments and colleges. As noted in a report on the community colleges (Center for Community College Student Engagement, 2014), “… institutions’ interactions with part-time faculty result in a profound incongruity: Colleges depend on part-time faculty to educate more than half of their students, yet they do not fully embrace these faculty members” (p. 3). Contingent faculty are providing the base for which institutions stand, yet the culture of academe provides little encouragement, respect, and support while offering low pay, no benefits, and limited opportunities to advance (Maxey & Kezar, 2015).

Professional groups that conduct national research on the condition of faculty in higher education today (AAUP, n.d., New Faculty Majority, n.d.) have brought light to the ongoing plight of
contingent faculty. As researchers who study contingent faculty noted, they are still “missing from the institutional data picture” (Kezar & Maxey, 2012, p. 47).

Recruitment, job satisfaction, commitment, loyalty, and retention of those that work part-time in academe have not been studied as extensively as have employees in business and industry, where thousands of articles and books show clearly this subject is one of great interest. One can only wonder if much has changed from four decades ago when a front-page article in *The Chronicle of Higher Education* (Scully, 1975, p. 1) was entitled “Part-Time Teachers: Many Angry,” followed by the poignant comment, “They are, says one of them, marginal, expendable, underprivileged, underpaid.”

Contingent faculties have been described as part-time, adjunct, and associate, and titles have been used interchangeably in the literature, although universities and colleges have institutionalized meanings, criteria, and pay. Contingent faculty fulfill a professional teaching assignment in a community college, college, or university and have limited duration contracts with compensation that is determined on a per-course or hourly basis (AAUP, 2014; Biro, 2005). In this study, the authors used the term contingent faculty to encompass all teaching faculty who are not tenure track, have non-permanent short-term contacts, and are paid differently from full-time faculty. The study will not examine or address issues such as lecturer rank or other such graduate student positions, accreditation policies and requirements, Common Law Rules, independent contractors, state or federal law, or holdings from the National Labor Review Board.

Twenty-first century studies addressing mentoring strategies and programs for contingent faculty teaching online were sparse. Studies more likely than not focused on contingent faculty and full-time faculty wherein the results could not be separated easily by faculty status (Diegel, 2010; Linck, 2004; Oomen-Early, & Murphy, 2009; Maier, 2012; Marsh, 2010).
Contingent faculty may remain de-professionalized and managed by administrators embedded in the culture of academe, unless this new faculty can be supported and encouraged by stakeholders. Then, too, mentoring programs need financial, technological, and personnel resources as well as cooperating full-time faculty members (Brannagan & Oriol, 2014; Wallin, 2005, 2007). To follow are studies of mentoring programs and/or strategies with applicability to the population of interest.

**Methodology**

Synthesis of the research allows for greater understanding of the phenomena under study and is interpretive or explanatory rather than deductive. Meta-synthesis is a meta-methodology that aggregates all forms of qualitative research and presents an interpretive conclusion (Bondas & Hall, 2007). Aggregation of the contingent faculty experiences surrounding mentoring are synthesized and interpretively presented.

The search strategy aimed to find only published studies or dissertations. The authors searched databases for literature related to contingent online faculty mentoring in ProQuest, Education Source, Educational Administration Abstracts, and ERIC. These databases were identified based on educational, academic, and higher education content, which were all pertinent to the subject. The search terms included adjunct, contingent, associate, online, virtual, faculty, higher education, part-time, mentor*. Limits included scholarly, peer-reviewed journals in the English language where available.

Sixty-four (64) results were returned from a combination of database searching and hand-searching known references. After removing non-English language articles, duplicate articles across databases, and articles that discussed faculty-student mentoring, 12 citations remained for initial assessment. Because the authors wished to review only contemporary findings, further
exclusion included articles published prior to year 2000 and those without higher education context. The initial 12 articles met these criteria. Inclusion criteria for the final review were descriptive, qualitative, and quantitative articles that addressed contingent online faculty mentoring. Following the review using this criteria, nine articles remained for examination.

**Results**

Table 1 is a summary of participants, design, and findings of the synthesized 2000-2016 articles on mentoring contingent online faculty, nine articles analyzed and critically appraised. This process permitted the authors to evaluate and engage with each article to determine its quality. Ultimately, seven papers were included and assessed by the reviewers with two articles excluded. Excluded articles in the final round were not appropriate to the purpose of the study or were of poor quality.

Table 1

*Meta-Synthesis Summary*

<table>
<thead>
<tr>
<th>Author</th>
<th>Participants</th>
<th>Methods</th>
<th>Context</th>
<th>Mentoring artifacts</th>
<th>Findings or examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Biro (2005)</td>
<td>10 Online adjunct faculty</td>
<td>Grounded theory approach with semi-structured interviews involving open-ended questions</td>
<td>How adjunct faculty perceive their preparation, support, and value as online instructors</td>
<td>Required training and a mentoring relationship were of benefit</td>
<td>Mentors checked regularly, observed their online courses, and served as a guide for questions (handle parts of the course or student issues). It was only after completing the mandatory training and having a mentor observe and work with them, did each receive final approval as an online instructor</td>
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<tr>
<td>2. Blodgett (2008)</td>
<td>Convenience sample of 28 public and private university adjunct instructors, taught at least one online course within two years prior</td>
<td>Mixed methods; web-based survey and small focus group held in the mid-west</td>
<td>Exploration of faculty development and training experiences encountered by online adjunct teachers</td>
<td>Mentoring was an effective preparation or experience for online adjuncts</td>
<td>Having immediate and timely access to program administrators or faculty mentors allowed them to get the answers they needed. Recommend a structure for mentoring that permits adjunct faculty members to address their unique needs for teaching.</td>
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<td>3. Brannagan &amp; Oriol (2014)</td>
<td>None</td>
<td>Model related to Bandura’s social cognitive theory, which is predicated on the concept of self-efficacy, or the belief in one’s ability to engage in a particular behavior</td>
<td>Provides a theoretical foundation for a model that can be used to orient and mentor online adjunct faculty</td>
<td>An online adjunct faculty coordinator directs each step of the process, conducting an initial three-week orientation and working with assigned mentors</td>
<td>Mentoring adjunct faculty can socialize them to the same standards as their full-time counterparts for strong educational excellence. Orientation, communication and engagement are emphasized.</td>
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<td>4. Fulkerth (2014)</td>
<td>Adjuncts in case study, private university</td>
<td>Case Study</td>
<td>The program aim is to improve student perceptions of courses in a MBA and Law degree granting university</td>
<td>Student evaluation comments are used to mentor via coaching online adjunct faculty in improving teaching</td>
<td>Targeted adjunct teacher training via existing Resources was successful.</td>
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<tr>
<td>5. Lee (2012)</td>
<td>139 stratified random sample of online adjuncts at four-year, for-profit colleges and universities</td>
<td>Non-experimental study</td>
<td>The study evaluated preferred learning style and satisfaction toward the training</td>
<td>Opportunities for communication and collaboration with faculty and instructor via reflection and online</td>
<td>Pearson's r determined a correlation between teaching experience and faculty satisfaction toward both training</td>
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<td>Study</td>
<td>Method</td>
<td>Mentoring Will Increase Satisfaction and Improve Faculty Self-concept and Increase Effectiveness</td>
<td>Method and Training Content. Both Males and Females Felt More Satisfied with Training That Included. Mentoring.</td>
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<td>Table 6: Puzziferro-Schnitzer &amp; Kissinger (2005)</td>
<td>New online adjuncts in case study at public community college</td>
<td>Case Study</td>
<td>Virtual Mentoring Program goal is personalized, collegial support for 10 online adjunct faculty</td>
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<td></td>
<td>Case Study</td>
<td>Descriptive article about program</td>
<td>Mentors coach then guide and develop resources. There is access to other instructors for collaboration and support.</td>
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<td>Table 7: Rogers, McIntryre, &amp; Jazzar (2010)</td>
<td>Adjunct faculty at private university (number not indicated)</td>
<td>Interviews with online faculty</td>
<td>The quality of adjunct development, communication skills, building balance and forming relationships will determine quality adjunct teaching</td>
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<td></td>
<td>Perspectives of the adjunct participants conveyed the need for online mentoring</td>
<td>The perspectives of the adjunct participants conveyed the need for online mentoring</td>
<td>Mentoring programs need to provide and accommodate for high performance online faculty by including high-quality professional development, effective communication, building balance and forming relationships.</td>
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**Synthesized Findings: Organizational Support and Mentor Coaching**

The search discovered publications about mentoring interventions or programming and contingent online faculty. Although the synthesis was limited by the small number of publications, the thematic thread was clear. For example, Rogers, McIntryre, and Jazzar (2010) found online coaching or mentoring accommodated better communication and teaching performance. This result was similar to the findings of Biro (2005) and Blodgett (2008). Moreover, online or virtual mentoring fostered professional development.
Contingent faculty craved rich supportive services such as faculty orientation, professional development, and specialized training for the online environment. Such services improved communication, faculty retention, and satisfaction. The higher education community shared institutional and student policies with contingent faculty, while technology skills and teaching advice were made accessible. With feedback about teaching evaluations foundational and vital for new and continuing contingent faculty, mentoring was basic to providing feedback, and coaching honed online teaching skill sets. In the final analysis, the aggregated studies noted that organizational support for contingent faculty was compulsory, and coaching by a mentor was preferred for career development.

**Ending Perspective**

“Part-time faculty make critical contributions to teaching and learning in the higher education enterprise—educationally, socially, and economically . . . Part-time faculty are sleeping giants; their sheer numbers and their impact on college instruction cannot and should not be ignored. . . . The issues that have separated part-timers from the larger academic community will not go away. They will be addressed, or they will maim higher education” (Roueche, Roueche, & Milliron, 1995, p. 157). For those educational institutions that rely heavily on contingent faculty, online/virtual mentoring and coaching strategies or programs should be investigated to meet the needs of these newly visible faculty colleagues.

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A DAY IN THE LIFE OF WILLIAM PENNY BROOKES, A 19TH CENTURY
PIONEER BRITISH EDUCATOR AND INSPIRATION FOR THE MODERN
OLYMPIC GAMES IN 1850

By

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ABSTRACT: An original presentation showcasing the life of Dr. William Penny Brookes, pioneer 19th century British educator, by visually following his routine through still extant buildings and grounds, where he lived, worked, and taught in the small town of Much Wenlock, Shropshire. He developed reforms in physical education that led to curriculum reform in England and to the revival of the Olympic Games.

It is a rare occasion when the career of any significant educator from the mid-nineteenth century can be followed closely. It is even rarer when that individual's pioneering reforms that demonstrated, scientifically, the benefits of physical education are currently impacting the revised curriculum for A level Physical Education (16-18 year olds) in his country, in this case Great Britain. The same innovations had such impact in his own day that they led directly to the modern revival of the Olympic Games after a dormancy of 1500 years. Such a man was Dr. William Penny Brookes, whose shadow still looms large after more than a century and a half, not only over his small town of Much Wenlock, Shropshire, in the English Midlands, but also on the now accepted International Olympic Committee's belief that Brookes "really was the founder of the Modern Olympic Games"—a concession
made in 1994 by Juan Antonio Samaranch, then President of the International Olympic Committee, and acknowledged more publicly at the 2012 London Olympics.

Figure 1. Dr. William Penny Brookes (1809-1895), Pioneer Educator, Physician, Magistrate, Botanist, and Organizer of the First Modern Version of the Olympic Games in 1850 at Much Wenlock, Shropshire, England. By permission, Much Wenlock Olympian Society.

Brooke's contributions have been the subject of other studies, especially the groundbreaking volume by David Young, *The Modern Olympics: The Struggle for Revival* (1996), my own papers at the 2015 Annual Hawaii International Conference on Arts & Humanities and the 2012 International Conference on Learning in London
following the close of the London Olympic Games, and a number of Much Wenlock Olympian Society publications (all listed in the accompanying bibliography). It is the focus of this presentation, however, to visually reconstruct the good doctor’s routine as educator, physician, magistrate, and campaigner to include physical education in England’s national school curriculum, as he went about his business in Much Wenlock. Not only does his residence still remain (it is currently up for sale),

Figure 2. William Penny Brookes’ residence as it stands today in Much Wenlock on Wilmore Street.
but also the building in which he began his educational reforms, particularly in regard to the infant study of physical culture-- or physical education as it is known today-- and the grounds, the Linden Field, on which he put his first "Olympian

Figure 3. The author standing at the Brookes’ Commemorative Plaque on Linden Field, where his Olympian Games were first put into practice and continue to this day.
Figure 4. Wenlock Olympian Society Archivist, Chris Cannon, at the Corn Exchange Building, original center for Brookes' educational reforms and his Olympian Society.
Figure 5. Inside the Much Wenlock Archives on the second floor of Brookes’ Corn Exchange Building, where the documents establishing Dr. William Penny Brookes as the first to reestablish a modern Olympic Games may be viewed.

Games” into practice. It is not difficult to do this since the town has essentially been transformed into a modern tribute to Brookes.

In the two times I have visited Much Wenlock since 2012 and used the Archives there for my own studies, I have taken photos of the major places Brookes frequented during his long and productive life (1809-1895), with the object of transporting interested persons to the small town where the move toward establishing physical education and the modern Olympics began. It is a presentation designed to provide visually the best experience short of visiting the place. I have been escorted around the picturesque town by Chris Cannon, the Archivist of the
Much Wenlock Olympian Society, with whom I correspond regularly, and we will follow in the footsteps of Queen Elizabeth II, Samaranch, and other dignitaries and Olympic and world record holders who have made Much Wenlock the must see place for every contemporary enthusiast to visit. In 2012, Much Wenlock attracted the attention of the world media and had its appropriate place in the Opening Ceremonies of the London Olympics. The Wenlock Olympian Society continues to hold athletic games every July, and in the summer of 2015, a Japanese delegation showed up unannounced in preparation for the 2020 Tokyo Olympics. Since that visit, the Tokyo Olympics Organizing Committee has stated, “We have found that the moral, physical and intellectual improvements promoted by Dr. Brookes are still alive today in Much Wenlock. The vision of Tokyo 2020 involves sport, education and culture and we in Japan recognize the importance of the legacy of Brookes and the Wenlock Olympian Society”— indication that their Games will fully appreciate the inspiring individual and township which are at the foundation of the modern Olympics. Brookes’ original intent to include “every grade of man” in athletics has long become Olympic reality.

Born in 1809, Brookes’ father was a physician, and the family’s interests certainly extended well beyond those of what might be expected in a small English township. Young Brookes’ studied in London, later traveling to Padua, Italy, to continue his education at the University’s prestigious medical school, while also indulging his interest in botany at the famous botanical gardens there. In 1830, he furthered his studies in Paris, another center for prosperous young men coming from Great
Britain and the Continent to advance their education—also demonstrated, ironically, by Brookes' contemporary and fellow early Olympic enthusiast, Panagiotis Soutsos, from Greece.¹ Both studied at Padua and Paris within a few years of one another, although Soutsos was not a physician and there is no indication the two ever met or knew one another. Soutsos, Brookes, and, lastly, Baron Pierre de Coubertin of France, are the nineteenth century triumvirs of the modern Olympic movement.

Brookes returned to England upon learning of the death of his father. After qualifying, he took over the family medical practice at Much Wenlock. As a concerned Christian and physician, who later became a Fellow of the Royal College of Surgeons, Brookes wanted to improve the situation of the working class at Much Wenlock and environs. He was also the local Justice of the Peace, a minor magistracy that frequently involved him with petty criminals, drunks, and in other types of disorderly conduct—so he was familiar with all aspects of working class problems. However, it was mostly the poor physical condition and lack of education of local limestone quarry workers and those who labored nearby in Ironbridge Gorge, also in the Borough of Wenlock, Shropshire (Much Wenlock was the administrative center), that prompted Brookes' efforts. The heaviest labor took place at the iron-smelting centers around Coalbrookdale and Ironbridge, where the world's first iron cast bridge was built in 1779. Ironbridge is listed as a World Heritage Site for being the birthplace of the Industrial Revolution, a long-standing tradition that was connected directly with Brookes as part of the 2012 London Olympics Opening Ceremonies.
Brookes also wanted to improve the skills of the average working man for better employment and offered “Still Life” art classes at his school to help prepare many for work at the famous Coalport China works, also in Ironbridge Gorge (through which the Severn River passes). In this, however, Dr. Brookes was the proverbial voice in the wilderness and not a very popular man in his own rural community because of his outspoken advocacy of physical fitness, changes in the local and national education, and other non-traditional Victorian attitudes.

Figure 6. In front of the Brookes’ house (currently up for sale with a thoroughly modernized interior) looking up Wilmore Street toward the town center, Corn Exchange Building, and Olympic Museum. On the left is the Guild House, where Brookes’ magistrate chair (see Figure 1) can still be viewed in its impressive Council Chamber. Brookes was a Justice of the Peace, and Commissioner for Roads and Taxes. He was also heavily involved in the renovation of the Council Chamber.
Pursuant to such interests, Brookes started the Agricultural Reading Society in 1841, "for the promotion and diffusion of useful information," from which a number of classes in the arts and sciences would develop. He also established a lending library, and requested contributions from some of England’s finest, including the Duke of Wellington and Alfred Lord Tennyson. In 1850, an independent “Wenlock Olympian Class” was formed to promote “structure physical exercise and education.” Brookes also believed that physical education would help defend the

Figure 7. “The Corn Exchange was built in 1852 as a Public Reading Room and Library with a Librarian’s residence and a small museum. Provision was made in the open space beneath for a free Corn Market. It was in this building that William Penny Brookes established the Wenlock Olympian Society. From here he spread the message of the benefits of physical exercise and promoted the revival of the Olympic Games far and wide."
nation with a prepared youth to protect it, and he would later campaign for compulsory classes in the national schools. Previously, he had opened the Much Wenlock National School to encourage the benefits of physical education for children.

Brookes' intention to promote education through his proposed "Olympian Games" does not require much inquiry because it is clearly stated in the first few lines of the charter that lead to the creation of the Wenlock Olympian Society. It states, quite simply, "That it was desirable that a class should be established in connection with the Agricultural Reading Society for..."

the promotion of the moral, physical and intellectual improvement of the inhabitants of the town & neighborhood of Wenlock and especially the working classes, by the encouragement of out-door recreation, and by the award of prizes annually at public meetings for skill in athletic exercise and proficiency in intellectual and industrial attainments.

Both the finely bound leather Volumes I (1850-1876) and II (1877-1895) of the Minute Books of the Wenlock Olympian Society (WOS), and the original handwritten page containing the passage above may be viewed in the Society Archives at Much Wenlock. Images of Volume I, and the passage (Figures 8 and 9) in questions are included here by the author.

The contents of these two historic volumes not only demonstrate Dr. Brookes' pioneering educational philosophy and show him to be among the first to recognize the principles underlying the modern discipline of Physical Education to promote health and sport 150 years ago in England, but they also have had a profound impact.
Olympian Clas

of the Wentloog Agricultural Reading Society

At a public Meeting of the Members of the Wentloog Agricultural Reading Society held in the Reading Room, March Wentloog on Monday, Oct. 5th 1836, W. D. Brooke Esq. in the Chair.

It was resolved unanimously,

"That it was desirable that a Club should be established in connexion with the Agricultural Reading Society, for the promotion of the social, physical, and intellectual improvement of the inhabitants of the town & neighborhood of Wentloog, and especially of the Working Classes, by the encouragement of outdoor exercise, and by the award of prizes annually at public meetings for skill in athletic sports and producing intellectual and individual attainment.

That the action of the Wentloog Agricultural Reading Society be adopted. The Olympian Club.

That the annual subscription to the Club be not less than one shilling to be paid in advance to the Treasurer.
in recent years on the actual story of the development of the modern Olympic Games. They clearly demonstrate that Brookes’ educational ideas spread from England to inspire the eventual success of the modern Olympic movement, usually attributed to Baron Pierre de Coubertin of France.

If one is to start his or her journey at Much Wenlock and view the very places Dr. William Penny Brookes frequented to inspire his educational reforms and help set the foundation for the revival of the Modern Olympic Games, the best place to begin is the center of town at the clock. Several places of interest have already been mentioned, including his home, the Corn Exchange, and the Guildhall (seen in the background in Figure 10) below. The modern museum contains the most pertinent exhibits and displays, including original medals from the early Wenlock Olympian
Games. (I have contributed materials from the 1948 London Olympics to the Museum.) Also inside is the famous Much Wenlock Pentathlon Medal, first awarded in 1868, with the major image of the winged figure of Nike, Greek Goddess of Victory, that would inspire the Goddess' appearance on the medals of the first Modern Olympic Games at Athens in 1896 and grace the medals of all Olympic Games since.
Figure 12. The Much Wenlock Pentathlon Medal as displayed at the British Museum during the 2012 London Olympic Games.
During the preliminaries to the 2012 Olympic Games in London, Dr. Brookes and Much Wenlock attracted worldwide attention, and, as seen below, the Olympic Torch Run was routed through the town and passed in front of Brookes’ house—with Archivist, Chris Cannon, as the venerable Doctor symbolically giving a nod of recognition to the London torch in celebration of the Modern Olympic Games he helped to begin. Much of the pomp and celebration created by Brookes for his

Olympian Games found its way into the Modern Olympics, and the grandest of celebrations took place at Linden Field, shown below in both modern and early guise, some 1300 meters from the center of town. Here most of the athletic competitions once took place, and on the way to the Field today, it is almost inevitable that even when the Annual Modern Wenlock Games are not being held, one will encounter local dignitaries of the WOS, or Wenlock Town Officials crossing the streets or getting out of their vehicles. It seems that almost everyone is involved in the celebration of their town and the roots of their Olympic tradition and Dr. William Penny Brookes.

Figure 14. Linden Field as it appears today
Figure 15. Celebration of the Wenlock Olympian Games at Linden Field in June, 1867. This is reputedly the oldest photo of a sports gathering. Note the tower on the hill in the background, which is still visible at the far back of the previous modern view of the Field. By permission.
Figures 16 and 17. Above: The 1887 Procession of the Wenlock Olympian Games of that year. Dr. Brookes appears center right in the top hat and medals. The Herald in Tudor costume is on the white horse in the center. Such pomp and circumstance would influence Ceremonies at later Modern Olympic Games (By permission). Below: The now tree-lined processional lane, as it appears today.
By October 1890, Dr. Brookes' Wenlock Olympian Games had attracted the attention of a young Frenchman named Baron Pierre de Coubertin, generally acknowledged as the founder of the Modern Olympic Games. It is now known, however, that without Brookes' influence upon Coubertin, it is very likely that the same Olympic Games would not have been revived at all—or at least in the form they did. Much of what eventually went into resurrecting the Ancient Olympic Games and turning them into a modern sports phenomenon was the result of William Penny's Brookes' earlier educational and athletic efforts, which, at age 81, he gladly and unselfishly passed on to the twenty-seven year old Coubertin, who initially gave due credit to his older mentor in England when he wrote in tribute to Brookes just after his death in December, 1895 death, "If the Olympic Games that Modern Greece has not yet been able to revive still survives today, it is due, not to a Greek, but to Dr William Penny Brookes."

Unfortunately, the more the success of the revived Olympic Games, first celebrated at Athens in April, 1896, grew and flourished, the more Coubertin relegated his debt to Brookes to the background—until it was virtually forgotten. It was fully revived in the 1990s, chiefly by the work of David Young, confirmed by the IOC President Juan Antonio Samaranch on a visit to Much Wenlock in 1994, and celebrated extensively during the 2012 London Olympic Games.

In 1890, however, Coubertin fully immersed himself in the local glory of Brookes' Much Wenlock Games, and the two shared their ideas at the Raven Hotel. Much that took place in their discussions became a part of of the modern Olympic Games.
Figures 18 and 19. The exterior and interior of the Raven Hotel, the Much Wenlock center for Coubertin’s and Brookes’s discussions about the Olympics’ future.
Figure 20. The tree, as it now stands, adjoining Linden Field that was planted by Pierre de Coubertin in commemoration of his visit to Much Welock and observation of the Olympian Games in 1890.
Figure 21. The notation in the second Minute Book of the Wenlock Olympian Society that “Baron Pierre de Coubertin, Paris,” had been elected an “Honorary Member of the Wenlock Olympian Society, in February, 1891. The entry is the final one on the page. It was original documentation like this and other dated correspondence between Brookes and Coubertin that finally convinced the International Olympic Committee that Brookes had, indeed, preceded Coubertin as, in former IOC President’s Samarach’s own words, “the founder of the Modern Olympic Games.”

The Baron was so impressed that he offered a medal, probably the only personal award ever given in his name, as a prize at the following year’s Wenlock Games.²

Long before Coubertin’s visit, however, Dr. Brookes was already having to deal with the large crowds coming to his Wenlock Olympian Games. As was typical, Brookes led the way in trying to convince the major British railway companies to extend a line to the small community. He finally ended up forming his own Wenlock
and Severn Junction Railway Company, and completed a line in time for the 1861 Wenlock Games. There had been no time for an official inspection, but "Brookes was permitted to run speical trains to carry the many competitors and spectators to the Games— at their own risk. It was reported that, 'a great concourse' of spectators arrived in the town." It was on this line (which no longer exists) and at the station that was built later, that Baron Peierre de Coubertin first arrived at Much Wenlock to see firsthand a modern Olympian experience. The pouring rain at the time apparently did not dampen the Baron's spirits— or Brookes' either. The visit was a complete success.

Figure 22. The old Railway Station, as it appears today, some 1200 meters from the town center. Construction began in 1864. The railway line, itself, has long since disappeared, and the closest rail service is now some miles away at Telford, England, requiring visitors to plan other transportation to reach Much Wenlock.
Figure 23. The rail station in its heyday, a backdrop for a football team that had come to compete at the Wenlock Olympian Games in the 1860s. By permission.

By the time of Coubertin's visit in 1890, Brookes was the foremost advocate of the revival of the Olympic Games—at least outside of Greece. Internationally, no one was more adamant, and Coubertin, born in 1863, was not a player at the time. Brookes' interests had turned more national, putting his initially local educational and athletic ideas into action to form the British Olympic Committee and place physical education in the national school curriculum. In 1860, he reproduced an interesting old passage taken from Roger Ascham, tutor to Queen Elizabeth I, that squared nicely with his own modernist views about education in sport as the great equalizer among classes, promoter of companionship, unifier of country—and guarantor of its strength, on his public announcement for the Eleventh Annual
Meeting of the Wenlock Olympian Games in 1860. Ascham had become known as "The Schoolmaster," because in 1570 he had written a work by that name on teaching and learning, starting with children. It was so well known that Ascham and the title of the work became synonymous.

The one particular passage in "The Schoolmaster" that attracted Brookes’ attention was "to vault lustily, to run, to leap, to wrestle, to swim," are "very necessary for a courtly gentleman to use." To discover such a statement at so early a date is probably as surprising to us as it was to Brookes in his day, because all these physical activities presage modern Olympic events—and were sanctioned by gentlemen, no less. Had not contemporary Christian society come to frown on such pagan Greek rites? Brookes liked the passage so much that he incorporated it into the philosophy of the Olympian Class. Also from the start, pageantry was an integral part of Brookes’ Olympian celebrations, and, considering his admiration of Ascham’s pedagogical comments about sport in Elizabethan times, it should come as no surprise that Brookes included a Herald dressed in Tudor costume (Figure 16) at his Games.

In the meantime, Brookes had heard about plans for the newly revived Greek Olympics to be held at Athens in 1859, and he endeavored to connect them with his own efforts in England by offering a Wenlock Prize of £10—ultimately awarded to the winner of the distance race *(dolichos)* at those Games. This apparently was Brookes’ initial contact with the Greeks, and these 1859 Games were pivotal in Olympic history because they were where the ideas, educational and otherwise, of
both he and Greece’s strongest advocate for the revival of the Olympics, Panagiotis Soutsos, first came together.

The Greek Games had a profound effect on Brookes, who afterwards held an enlarged, countywide, "Shropshire Olympian Games" in 1860 (which would subsequently rotate among the larger towns). They became more Greek—both ancient and modern—in concept; more international; and more elevated intellectually with poetry, essay, and literary contests featured. To concentrate on his now recharged Olympic interests and develop them further, Brookes divorced the Wenlock Olympian Class completely from its parent Agricultural Reading Society, and renamed it the "Wenlock Olympian society" (WOS). His involvement from England with the nascent Athenian Olympics, even though open only to Greeks, also first colored them with an unanticipated international flavor.

Brookes’ tireless efforts to widen the influence of his Shropshire Olympian Games ultimately helped form the National Olympian Association (NOA) at Liverpool in 1865. At key passage in its charter about education and the Olympics reads that besides athletics, the Association “will also pay homage to Mental Excellence, by electing from time to time as honorary members, persons who have distinguished themselves in Literature, Art or Science, or have proved themselves benefactors to mankind.” The NOA, the parent of today’s British National Olympic Committee, held its first successful “Olympics” at the Crystal Palace at London 1866, and Dr. Brookes was president of the organizing committee.

After a promising beginning, however, the NOA quickly met resistance. There remained opposition about associating the revived Games with ancient Greek ritual
and a false god, Zeus—a criticism that had also been raised by those who objected to the name "Olympian Class" or "Olympics" at Brookes' First Shropshire Olympics. This was probably the major reason why he decided to separate the Wenlock Olympian Society from the Agricultural Reading Society since such criticism did not abate. However, most of the opposition was secular in form and now came from rival athletic clubs in the more urban southern part of Britain, including London, where the NOA, viewed as an interloper, shockingly held its first Olympics. The main issue used to undermine the NOA's growing influence was "class-exclusive amateurism." The Amateur Athletic Club (AAC), later the Amateur Athletic Association, had been quickly formed to counter the NOA, and used its elitist ideas about amateurism versus professional as an opposition platform. It pre-empted the NOA's Olympics with an athletic meet of its own, specifically stressing the amateur-elitist view point and directing its "gentlemen athletes" to boycott the NOA Olympics (perhaps qualifying as the first "Olympic boycott").

Consequently, though National Olympics had taken place in England, the once promising Olympic movement now became embroiled in a class controversy over who should be allowed to compete—and this same controversy had moved to Greece in 1870 and similarly undermined Olympic progress there after the successful Greek Olympic Games of that same year. Ironically, the traditional educated elite in both Great Britain and Greece was doing all it could to derail a movement that Brookes had helped to create to promote education.

Nonetheless, Brookes continued his Olympic efforts in England and became more
Figure 24. Brookes at the time of the raging controversy of amateurism vs. professional in the Olympic movement. By permission.
involved with the Greeks, urging an international Olympic festival to be held in Athens in the near future. Unfortunately, he did not live to see it happen-- although he knew before his death in December, 1895, that the first international modern Olympic Games would indeed be held at Athens, as he wished, in 1896, and that the

Figure 25. Dr. William Penny Brookes late in life. By permission.
influence he and his Much Wenlock Olympian Games had on Pierre de Coubertin had helped bring those first international Modern Olympic Games to fruition.

Figure 26. Dr. Brookes' (family) gravesite, as it appears today near Holy Trinity Church— and not far from the house where Brookes grew up and lived at Much Wenlock.

Aside from his Olympics contribution, which would eventually bear rewards he could not possibly have imagined, William Penny Brookes' most enduring and beneficial legacy purely for the advancement of education was his effort to introduce physical education into the curriculum of British national schools as a "regular branch of education."
Dr. Brookes and Much Wenlock transcend the bounds of anything ordinary—both for modern educators and the Olympic Games.

Figure 27. Dr. William Penny Brookes commemorative plaque inside Holy Trinity Church at Much Wenlock.
Figure 28. The tradition continued: A Wenlock Olympian Games program from 1913, during the 63rd Annual Festival—Games still held yearly in July. By permission.
Unless otherwise indicated, all photos are by the author.

**Bibliography**


See, also, for a variety of information, www.wenlock-olympian-society.org.uk.

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1 The most complete study of Panagiotis Soutsos and his Olympic contributions can be found in David's Young's *The Modern Olympics: A Struggle for Survival* (Baltimore and London: The Johns Hopkins University Press), 1996, particularly Chapters 1-2 (see, also, additional Index entries for his name in Young's book).

2 The medal is from Coubertin's Union des Sociétés Françaises de Sports Athlétiques, and it is engraved, "Presented by Baron Pierre de Coubertin Paris." When IOC President, Juan Antonio Samaranch, visited Much Wenlock in 1994, the original medal won by Edward Marston Farmer at the 1891 Much Wenlock Games was presented to the Wenlock Olympian Society by his ninety-two year old daughter, Miss Joyce Farmer. The medal is shown below.
ERRATA

P. 2, Figure 1, line 3; P. 3, line 1; P. 16, Figure 13 Caption, line 4; p. 20, line 21: Strike “Much”. Should read “Wenlock Olympian Society” or “Wenlock Games.”
P. 14, line 2: Substitute “Wenlock Olympian Society Medal” for “Much Wenlock Pentathlon Medal.”
P. 15, Figure 12 Caption, line 1: Substitute, as above on P. 14.
P. 24, Figure 22: Strike Caption. Building shown is the Much Wenlock National School, where Dr. Brookes carried out his testing of local children. The actual Railway Station (shown in Figure 23) has now been turned into two semi-detached private dwellings.
P. 27, line 10: Capital letter for “Society.”
1. Paper Title: *Promoting Youth Engagement in STEM and Physical Activity through an Active GreenSTEM Program: A Self-Determination Theory Perspective*

2. Topic Area: *STEM Education; Kinesiology & Leisure Science (additional topic area)*

   (Research Abstract)

3. Preferred Presentation Format: *Paper session*

4. Description (75 words or less): *This study investigated high school students’ psychological experiences of an outdoor adventure-based GreenSTEM course in relation to self-determination theory concepts of autonomy, relatedness, and competence. Participants reported increased engagement, competence, autonomy, positive relations with peers and instructors, and autonomy-supportive learning climate during the five-day course. Findings suggest that active GreenSTEM programming may increase self-determination for STEM learning and that future research should examine the potential for physical educators to inform physically active STEM curriculum.*

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HICE 2016 Abstract

Promoting Youth Engagement in STEM and Physical Activity through an Active GreenSTEM Program: A Self-Determination Theory Perspective

Introduction: A large body of research suggests that outdoor environments offer physical, mental, and cognitive benefits for youth and adults (e.g., Barton & Pretty, 2010; Bratman, Hamilton, & Daily, 2013; Jackson et al., 2013; Ryan et al., 2010). For instance, youth who spend more time outdoors engage in significantly higher levels of physical activity than youth who spend less time outdoors (Schaefer et al., 2014). In a meta-analysis of 28 studies on physical activity and youth, Gray et al. (2015) found that youth aged 3-12 years engaged in more physical activity when they were outdoors than indoors. Physical activity, in turn, supports cognitive learning and improves grades, test scores, on-task behavior, attendance, concentration, attention, and classroom behavior (CDC, 2010). Youth with higher physical activity show greater brain function, energy/concentration, and self-esteem (e.g., Shephard, 1997; Tremblay, Inman, & Williams, 2000). Physical activity outside of the classroom is related to higher attention levels in class and lower perceived boredom levels (Linder, 1999). Although many educational initiatives, such as GreenSTEM programs, have begun to embrace outdoor, place-based learning in order to enhance environmental awareness and the ‘real-world’ relevance of STEM curriculum (e.g., Levin & Dickerson, 2015), educators often overlook the potential these programs to simultaneously improve students’ motivation for physical activity.
Study Purpose & Research Objectives: This study investigated high school students’ psychological experiences of an outdoor adventure-based GreenSTEM course. Twenty-two students participated in a five-day GreenSTEM program that integrated outdoor adventure activities (e.g. downhill skiing, snowboarding, snowshoeing) with snow science education. Students studied self-directed topics relevant to their outdoor activities by learning how to collected and analyze relevant data in the field, such as digging snow pits and examined snow crystal structures to assess avalanche risk. The purpose of this program was to integrate nature-based STEM topics with outdoor adventure activities to enhance students’ engagement with STEM curriculum and physical activity. Specifically, educators sought to facilitate engagement by supporting students’ basic psychological needs for self-determination through autonomy, relatedness and competence (e.g., Deci & Ryan, 2000). The research objectives were to increase (a) student engagement and (b) self-determination (i.e., perceived autonomy, relatedness, and competence) in snow science topics and outdoor activities during the five-day course.

Methodology: Data were collected in small focus groups (e.g., 4-5 students) by two researchers on the final day of the course. A semi-structured interview guide that addressed the key concepts stated in the research objectives was used to facilitate systematic data collection. This interview guide was developed, piloted and refined prior to data collection. Focus groups were first transcribed verbatim; data were then independently coded by three investigators. An external auditor then conducted an audit trail to verify data analyses and identify inconsistencies. No major inconsistencies were identified in the audit trail.
Results: In comparison to their normal school settings, participants reported increased engagement, competence, autonomy, positive relations with peers and instructors, and autonomy-supportive learning climate during the five-day course. Representative quotes that reflect these findings are provided below.

Optimal Engagement: “I think the most focused I was, was probably on the first snow pit on the mountain, because he went into this whole thing about how avalanches start and this stuff, I think it was very cool.” [OE1]

“Oh, like for – digging pits were more like learning - kind of like absorbing stuff.” [OE2]

Autonomy: “Usually teachers will set up a lab and there's only one certain way to do it, where like out here, it was – we had a lot of different choices and stuff.” [A1]

“Like, we're doing something that we enjoy. And we actually like signing up for what we wanted to do, instead of just being forced to do it in class.” [A2]

Relatedness: “Here everybody was engaged. Everybody was supporting each other. And we all were working toward a common goal, we all wanted to be here. So, the attitudes just were completely different [than at school] ... just completely changed. Like, the aspect of learning in itself.” [R1]

“I felt a lot more support and a lot more like, everybody here had clear focus, we didn't – I feel like at the high school, you get those people like if you're in a classroom that don't care, that don't honestly want to be here, instead they'll give you this attitude almost where they make everything so much harder than it really is.” [R2]
"Competence: “I feel like these five days I've learned more than I would in a month at the high school and the college – in any class.” [C1]

“And when we're out here, it gives us an opportunity to see what our abilities are and not just be graded.” [C2]

Autonomy-Supportive Learning Climate: “Well, I never even learn anything about snowflakes in school ... It's like we're still in a classroom, but we also have to experience it. But at school, we're in a classroom, we don't just – we don't get to go outside and experience it most of the time. So, you do both here and only one thing at school. It's a lot more hands-on... And experiencing it teaches you better than just hearing about it. Yeah. And you memorize it more, because you're like, ‘Oh. So, those are what our snowflakes look like,’ because you get to experience it.” [ASC1]

“It's like we learned all the concepts and then we went out and applied them. And I like that much better. In chemistry I don't really do that except for labs, which I don't even get half the labs...” [ASC2]

Discussion: This study provides preliminary insights on student experiences of active GreenSTEM programs. Findings suggest that active outdoor ‘learning laboratories’ have the potential to enhance student autonomy, relatedness and competence in relation to STEM concepts. Data also suggests that active GreenSTEM programs may provide more autonomy-supportive learning climates than traditional classroom settings. Future research should examine various models of K-12 active GreenSTEM programming and how these programs might increase self-determination for STEM learning, academic achievement, and student engagement with STEM programs in higher education. Practical implications of this study include (a) the
importance of developing programs that purposefully integrate opportunities for physical activity with STEM education and (b) the potential role of physical educators in designing STEM curriculum.
References


Connectivity of Graduate Students in an Asynchronous, Online Distance Degree Program

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Abstract: Despite growth of distance education programs, a significant challenge for higher education institutions is that student retention is lower in online programs than in traditional programs. One reason cited is the lack of connection students feel between themselves and the institution. An initial quantitative study conducted by the authors of this study confirmed that students in an online asynchronous program did indeed desire connectivity. To more deeply understand this, the research team sought participants from the original study to participate in a follow-up, qualitative investigation. Using a consensual qualitative research (CQR) design, the team interviewed participants using open-ended questions. Results indicated that students desired high to very high connectivity with their advisors, instructors, and the online program, but only some connectivity to their fellow students. The leading factor that contributed to their feelings of connectedness was quality communication. Communication must be ongoing, timely, and utilize a variety of modes.

Introduction

Despite the continual growth of distance education programs, a significant challenge for higher education institutions is that student retention in online programs is lower than in traditional ones (DiRamio & Wolverton, 2006; Hoyer, 2006; Stanford-Bowers, 2008; Terry, 2007). This dropout rate is one of the greatest challenges facing online educators and administrators (Lee & Choi, 2011). Literature suggests there are a number of reasons for low retention among students taking coursework online. These include, but are not limited to, lack of institutional support, lack of connection between the student and the institution, quality of interaction between the student and faculty, sense of isolation, disconnection, issues with technology, and student self-discipline (Heyman, 2010, Stanford-Bowers, 2008; Veenstra, 2009).

While there are barriers to online student retention, there are students who persist in distance degree programs. Studies have suggested that faculty-student interaction is correlated with dropout rates. To illustrate, Ivoankova and Stick (2007) found that students were more likely to persist if faculty gave timely feedback, involved students in interactivity activities, and promptly provided supports to struggling students. When Thompson, Miller, and Franz (2013) examined the learning experiences of undergraduate students who failed the online version of a
course, then passed when completed it face-to-face, their findings confirmed the importance of establishing a teaching presence and cultivating social presence among students. Lastly, Carr (2000) and Rovai (2002) suggested that students who take online courses experience a lack of connectivity with their instructors, peers, and the program because they do not have a physical presence.

Schwartz and Holloway (2012) reported that one might assume student-faculty relationships are not valued in graduate education due to the short length of a master’s program and the increased focus on careers. However, they investigated the relationship between faculty and master’s seeking students and found these connections were forces for growth and forward movement. Students felt energized by their connections, had boosts in self-esteem, increased their knowledge, improved their ability to take action, and desired more connection.

Schroeder, Baker, Terras, Mahar, and Chiasson (2016), conducted initial research to ascertain the connectivity students desired and actually experienced within their asynchronous, online Masters of Science in special education program. For the 100 students who participated, researchers investigated their connectivity with students, instructors, advisors, and the online program. Results suggested students desired high connectivity overall but wanted the highest connectivity with their advisors and the least connectivity with other students. There was a variation between participants’ ages and those who wanted connectivity with peers, advisors, instructors, and the program. Students between 26 and 30 years of age desired high connectivity with other students and their instructors. Conversely, students between 46 and 50 years of age desired the least amount of connectivity with students and instructors. All students experienced high or very high connectivity with other students, their instructors, advisors, and program. The greatest level of experienced connectivity was between the student and advisor.

Research on the effectiveness of online learning has largely focused on the instructional process relative to meeting course objectives, which typically is measured through the acquisition of knowledge and skills. Yet, the online learning experience is more expansive and includes relational elements, such as connectivity. To date, there is limited empirical evidence on the degree of connectivity learners feel toward others in their learning communities, especially in distance degree programs.

In the initial quantitative study described above, students desired and experienced high connectivity to the program, their advisors, and their instructors, while at the same time, they reported experiencing and wanting less connectivity to fellow students. In turn, this current study further investigated the concrete perceptions and experiences of connectivity for these graduate students enrolled in this distance degree program using asynchronous, online instruction. Specifically, the perceptions and experiences were focused on connectivity with advisors, instructors, students, and with the online program as a whole.

Method

An applied qualitative design provided a vivid and full description in the natural language of the phenomenon under study. Specifically, Hill, Thompson, and William’s (1997) A Guide to Conducting Consensual Qualitative Research (CQR) provided the framework. CQR uses open-ended questions to collect data, utilizes an inductive analytic process, uses teams to make decisions by consensus, and verifies the stability of results.

In the initial, quantitative study described above, students desired and experienced high connectivity to the program, their advisors, and their instructors, while at the same time, they reported experiencing and wanting less connectivity to fellow students. In turn, this study
further investigated the concrete perceptions and experiences of connectivity for these graduate students enrolled in this distance degree program using asynchronous, online instruction. Specifically, the perceptions and experiences were focused on connectivity with advisors, instructors, students, and with the online program as a whole. Recommendations for increasing connectivity were also ascertained.

Setting

The study was situated in the College of Education and Human Development’s Department of Teaching Learning. This department is comprised of seven programs, one of them being special education. The special education program was selected for this study because it offered a fully online Master’s of Science degree using asynchronous instruction, with no on-campus residency requirement. Enrollment was approximately 325 graduate students. Since the program began offering online learning in 2007, students have resided across 42 states and eight countries.

Participants

During the initial study, participants were asked to provide their name and primary mode of contact if they were willing to participate in an interview for a follow-up, qualitative study. A total of 42 participants provided contact information.

After the project’s approval by the Institutional Review Board, participants were contacted via email. Those who responded were electronically sent the consent form detailing the study. After written consent was received, participants were assigned to members of the research team for an interview to be scheduled. Twelve students participated. CQR recommends 8 to 15 participants, which is small enough to study intensively, yet large enough to determine if findings apply to several participants or are just representative of one or two.

Data Collection

Data were collected across one semester by conducting one semi-structured interview with each of the 12 participants. Interviews were divided amongst researchers resulting in a one-on-one pairing. Each interview was approximately one hour and was conducted by phone or video conferencing. Because interviews were conducted across the five member research team, a semi-structured interview guide was developed for consistency. Findings from the authors’ initial study on the degree of connectivity in online courses was the framework for developing the interview guide. This guide consisted of 22 open-ended questions in order to not constrain the responses of the participants. The questions were categorized into five sections: (1) participant information; (2) connectivity with advisors; (3) connectivity with instructors; (4) connectivity with students; and (5) connectivity with the program.

Data Analysis

To understand this natural phenomenon, data were inductively analyzed using consensual qualitative research (CQR) designed by Hill, Thompson, and Williams (1997). This process relies on two teams, the core team and the audit team. This method permits the core team to
rigorously and systematically analyze data in an effort to reach consensus, then relies on the audit team to check all analyses. The core team was specifically charged with identifying the core ideas for participants’ experiences through analysis of each participant’s statement, then for discovering patterns within these core ideas that accurately represent the sample. The audit team’s role was to audit these core ideas and patterns for stability. In CQR, the core team initially analyzes the majority of the transcripts, while the audit team analyzes a small sample to determine stability of findings. In this study, the core team initially analyzed 10 transcripts and the audit team the remaining two. Four themes emerged from the data and three conclusions were drawn.

Results

Upon completion of data analysis, four themes emerged. Below, each theme is presented along with supporting evidence.

Theme 1

A majority of participants did not experience any change in their desired connectivity to advisors (58%), instructors (83%), students (58%), and program (83%), but for those who did, they experienced greater connectivity than initially desired, especially with advisors. Participants were asked to rate their desired connectivity, with advisors, instructors, students, and the special education program as a whole. They rated the desired connectivity on a scale of 1 to 5 (no connectivity (1); limited connectivity (2); some connectivity (3); high connectivity (4); very high connectivity (5). Connectivity ratings were given for both the student’s desire when first starting graduate school, and then upon reflection, how it may or may not have changed over time. When participants began their fully online program, many revealed being “nervous,” or not sure what they were “getting into.” Consequently, they initially desired high to very high connectivity with advisors and instructors, yet as they progressed through the program and became more “comfortable and confident,” this desire for connectivity did not change for most participants. This may have been a result of participants (n = 10) feeling well supported, especially by their advisors.

Theme 2

Participants desired high to very high connectivity to their advisors, instructors, and the program; whereas no participant desired this degree of connectivity with other students. When participants first began graduate school, none of the 12 wanted high to very high connectivity with other students. This is a stark contrast to the connectivity they wanted with advisors, instructors, and the online program. Nine participants wanted some connectivity, and three wanted low to very low. One participant explained, “I was expecting fully online. Hey great, I won’t have to interact with a room full of strange people. That was just fine with me.” Another explained how she was more focused on having a connection with colleagues at work than with peers in class. Working full-time and having children did not leave time for connectivity with peers for another participant. Over time, only three wanted more connectivity.

Theme 3
The central experience that made most participants feel connected was quality communication; consequently, they felt part of the distance degree program. Quality communication was defined by the participants as the following: variety of modes (not just email), prompt, and ongoing. The preferred mode of communication was a phone call.

**Theme 4**

Most participants did not have a disconnecting experience with advisors nor the program. However, slightly less than half of the participants had delayed feedback from instructors, and half experienced limited interaction from other students, which impacted their connectivity.

**Discussion**

This follow-up study investigated the concrete perceptions and experiences of connectivity for graduate students enrolled in a distance degree program using asynchronous, online instruction. Specifically, their perceptions and experiences focused on connectivity with advisors, instructors, students, and with the online program as a whole. Three conclusions were drawn.

**Conclusion 1**

Participants enrolled in this distance degree program desired high to very high connectivity with advisors, instructors, and to the program as a whole, whereas none desired this degree of connectivity with other students.

Participants revealed that the greatest level of connectivity was experienced between them and their advisors. Other research corroborates this finding as one study found that academic advising was vital to a student’s success within any program of study, affecting both student retention and student satisfaction (Corts et al., 2000). A more recent study stated adult graduate learners needed their advisors to provide good programmatic guidance they could trust, to care about them as individuals, and to remain readily available with timely responses (Schroeder & Terras, 2015). The participants in the current study identified similar essential characteristics, such as timely communicative responses and guidance.

While previous research supports the notion that students desire connectivity with advisors, and have better retention when there is high connectivity, studies substantiate that students also need an involved instructor. Woods and Baker (2004) found that a “sufficient level of interaction with faculty generally creates a sense of personalization and customization of learning and helps students overcome feelings of remoteness; perhaps the greatest obstacle to fostering a student’s sense of community in online distance learning” (p. 6). In another study, Reupert, Mayberry, Patrick, and Chittleborough (2009), stated that students needed online instructors to provide a personal presence by being engaging, approachable, understanding, patient, and passionate about the subject. Accordingly, they purported these qualities were enacted through specific teaching strategies including self-disclosure, relationship building, humor, provisions of individualized and timely feedback, and organization. Comparatively, findings from this current study support these assertions. Participants felt connected when
advisors and instructors initiated and responded through a variety of modes of communication, because being able to talk to somebody made students feel faculty's presence. Participants also felt cared about through personal information shared during formal and informal dialogue.

Much like research on traditional, face-to-face teaching, participants in this online program also implied that it is the connective experiences with their advisors and instructors that link students to their institution of higher education and their academic programs. In an effort to retain students in online programs, advisors and instructors must form relationships with their students in an effort to create levels of connectivity that have traditionally been desired among on-campus learners.

**Conclusion 2**

Participants desired *some* connectivity with other students. Although participants wanted connectivity with their peers, having an increased connection with their advisors and instructors was more important for the aforementioned reasons. Findings from the initial, quantitative study revealed that only 12% of students wanted *high* to *very high* connectivity with their peers. Similar to the initial study, students were more concerned with establishing and maintaining a sense of connection to their academic advisors first, instructors second, online program third, and fellow students last.

Many students desired lower connectivity with peers. This phenomenon can be explained by a study conducted by Capdeferro and Romero (2012) who investigated online master’s students’ perceptions of collaborative learning activities. Students identified these activities as the most important source of frustration in online learning due to the following: group disorganization, lack of shared goals amongst team members, imbalance in level of commitment and quality of individual contributions, excess time spent on these tasks, and difficulties in communication. Empirically supported, not all students want a social connection with their instructors and classmates (Drouin & Vartanian, 2010), rather the *flexibility* of online learning is paramount (Reupert et al., 2009). Reupert et al.’s finding is corroborated with the current study as the majority of participants selected the online, distance degree program because of its flexibility and convenience. However, this cannot be generalized to all students. Müller’s (2008) study found that students ranked high in importance the relations they built with online classmates because building social relationships with peers provided a key support system for them. Müller’s findings are reinforced by Mykota and Duncan (2007) which found students are able to develop a sense of connection to others if they experience belonging and a sense of being part of the online experience.

Participants’ pursuit for a graduate degree, in order to advance their professional careers, would explain their reduced connectivity with other students, but increased connectivity with advisors, instructors, and the program. Participants enrolled in this online program to attain a graduate degree for career advancement; advisors and instructors were their primary pathways for meeting this goal. Similarly, Ivankova and Stick (2007) postulated that graduate students are motivated for goal attainment and valued the career and financial outcomes of their education. This current study should not imply that participants do not want a connection with their peers, rather connectivity with peers may be pursued more in the workplace than in the college classroom, as all participants in this study were practicing professionals.

**Conclusion 3**
Quality communication was the leading factor in participants feeling connected or disconnected in this distance degree program. Quality communication was operationalized as ongoing, timely, and utilizing a variety of modes. Without these variables, disconnection ensued, especially when feedback to participants was delayed. Müller (2008) found that instructors’ [and advisors’] availability (through email, telephone, or online chat), timeliness of their replies, and words of encouragement were viewed as critical to students’ academic success.

The impact of quality communication is that participants in this current study understood the program, resulting in feelings of calmness and comfort. Numerous studies have suggested a positive correlation between relationally supportive online environments and cognitive learning (e.g., Baker, 2010; Gunawardena, 1995; Rovai, 2002). Another impact was that most participants in this study had connecting experiences, which were provocations for desiring high to very high connectivity with advisors, instructors, and the program. This supports a major finding from the initial, quantitative study that concluded all participants experienced high to very high connectivity. Pigliapoco and Boglio (2008) found that students’ perceived sense of community in online courses was relevant to student satisfaction, performance, and persistence. Fundamentally, it was theorized that if students feel involved and develop relationships with other members of the learning community their levels of satisfaction and persistence increase (Tinto, 1993; Rovai, 2002). When examining these supportive and relational elements, they may have contributed to participants’ average GPA of 3.9, especially when considering how GPA is a significantly predictive of student persistence (Harrell & Bower, 2011). Woods and Baker (2004) postulated that failure to fully consider the relational dynamic in the online setting may produce greater feelings of isolation among distance learners, reduced levels of student satisfaction, poor academic performance, and increased attrition.

Findings from this current study provide evidence that quality communication with students is paramount for connectivity, which can have a direct effect on retention. Although online learning is expanding in availability and popularity, the high dropout rate remains one of the greatest challenges facing online educators and administrators (Lee & Choi, 2010). Ivankova and Stick (2007) had a parallel finding in that if faculty gave timely and appropriate feedback, involved students in interactive activities, and promptly provided supports to struggling students, then students are more likely to persist in online courses, whereas ineffective communication is a barrier to persistence (Aragon & Johnson, 2008). Because this study was situated in a graduate, special education program, retention of students is vital in order to help reduce the national shortage of qualified special education teachers.

References


Mathematics Awareness through Technology, Teamwork, Engagement, and Rigor

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Abstract
The purpose of this two-year observational study was to determine if the use of technology and intervention groups affected fourth-grade math scores. Specifically, the desire was to identify the percentage of students who met or exceeded grade-level standards on the state standardized test. This study indicated possible reasons that enhanced conceptual understanding within the study group at a Title I elementary school. Throughout the two-year time period, the classroom teachers created mathematics awareness through technology, teamwork, engagement and rigor. The findings revealed a significant percent of fourth-grade students who used technology and participated in specific learning activities met or exceeded grade-level standards in math as measured by the Washington State standardized test.

Keywords: conceptual understanding; discourse; engage; interactive whiteboard; intervention; rigor; Common Core State Standards for Mathematics

1. Introduction
Mathematics concepts can be difficult for elementary students to grasp. That is why it is important to create a classroom climate allowing students to feel comfortable to take risks, ask questions, and learn through inquiry. When having a deeper level of discussion, students can make their discoveries while talking about their thought process when solving problems (Zwiers & Crawford, 2011). Through this process, students increase their need to know why something works in math, not just how it works. Understanding why and how to solve problems requires students to acquire the proper language and terminology (Zwiers, 2014). Therefore, providing students with a supportive infrastructure in math is vital to their success.

What steps help students deepen their understanding of new knowledge in the math classroom? First, daily instruction must build from prior lessons to engage students in thinking and learning about mathematics. Next, teachers need to be creative through a combination of integrated technology and intervention groups while providing a positive classroom atmosphere where students learn from each other. Teachers must help students acquire mathematical language (NCTM, 2000). Finally, students can expand their understanding through productive struggle. When students make mistakes experiencing productive struggle, their brain activity grows because synapse fires making new connections (Boaler, 2013).

This study illustrates how fourth-grade students enhanced their math skills on their way to becoming more mathematically literate. Math is more than just remembering facts and using formulas; it is about being able to explain your thinking, solve problems, and learn through productive struggle. This progression leads students to change their approach to mathematics and increase their academic drive creating a growth mindset. Students are creating a growth mindset when believing they can develop their mathematical ability reinforcing the idea that math is the process of learning not the product (Boaler, 2013). Mathematical concepts that students are in the process of constructing formulate over time (Van de Walle & Lovin, 2006). In doing so, students acquire the ability to apply their knowledge in creating sophisticated products (Wiske, 2005).

One challenge in education is getting students at Title I schools to meet grade level standards on state academic assessments (Office of Superintendent of Public Instruction, 2016). Under current law, Title I provides financial
assistance to local educational agencies and schools with high numbers or high percentages of children from low-income families to help these students meet state academic standards (U.S. Department of Education, 2010). To support the current needs of students who attend a Title I school the federal government provides additional funding to enhance instructional services and activities for the entire school. The intent is to support the academic achievement of students who are most at risk of failing (Office of Superintendent of Public Instruction, 2016). Therefore, the goal of a Title I school is to provide customized instruction to help students meet challenging academic standards and take an active role in the learning process.

1.1 Background: Teaching Mathematics Effectively

Before the start of the school year, it is necessary for teachers to collaborate to develop an instructional plan incorporating hands-on activities and technology to enrich student learning. There is an emphasis placed on how to teach the big ideas in math more effectively so students can make sense of mathematical problems and concepts (NCTM, 2000). Effective teachers ask students appropriate and timely questions that connect new ideas to big ideas. These big ideas in mathematics allow students to make connections by building background knowledge and enduring understanding.

To develop students’ level of knowledge, teachers need to ask open-ended questions creating a more rigorous classroom setting. Rigor creates an environment in which students learn at high levels, articulate their thought process, and apply mathematical knowledge (Common Core State Standards Initiative, 2016). When mathematical rigor increases, the students develop cognitive skills through reflective thought and creativity. The teachers must recognize the importance of immersing students with key mathematical vocabulary as well as provide opportunities to answer higher-level questions. It is necessary for students to comprehend complex ideas, so they solve problems and transfer their knowledge to new situations. Since all students have different experiences in math, students need to know the teacher’s expectations for them as well as what they can expect from the teacher. When the teachers establish mathematical expectations, the students willingly interact among themselves (Marzano, 2007).

A math lesson design that uses interactive technology allows for higher levels of scaffolding (DeVita, Verschaffel, & Elen, 2014). Instructional scaffolding helps to bridge learning gaps identifying what students learned and what they were expected to comprehend. For real learning to take place, there must be some challenge, some new ideas even if students merely saw an old idea in a new format (Van de Walle & Lovin, 2006). The students’ ideas should be valued and serve as a source of learning (NCTM, 2000).

Technology infused within the core curriculum requires a new way to teach and think about mathematical content. Understanding the role of technology in the classroom is an essential component in the students’ learning development (Scoter & Boss, 2004). A way to keep students on track would be to follow a pacing guide (Marzano, 2007). When teachers create a logical scope and sequence for their students, downtime decreases making it possible to expedite a pacing guide.

1.2 Supporting Mathematics Instruction

To support math instruction, the teachers must develop a well-rounded math program essential for student success. Students apply previously learned strategies to the problem, summarize main points, organize information in a logical way, and compare a problem to similar problems (Zwiers, 2014). Making math a priority, the students take a journey to become mathematicians. Becoming a mathematician does not just mean doing things a different way. Being a mathematician means taking action. These actions prepare the students for real-world mathematical problems as well as standardized tests.

The interactive whiteboard is a sensory, hands-on learning tool providing students with different learning styles to become more engaged in the lesson (DeVita, Verschaffel, & Elen, 2014). Students who are tactile learners can touch and move things around on the interactive board while visual learners benefit from the information provided in a clear and organized fashion. The interactive whiteboard focuses instruction on the development of specific concepts and helps to improve students’ mathematical knowledge. The students become skillful learners by adapting continuously.

The integration of the interactive whiteboard creates a collaborative classroom where students absorb information, talk about new knowledge, and reflect on how their understanding changes. Using an interactive whiteboard as an extension of the computer creates new opportunities for learning (Zevenbergen & Lerman, 2008). The interactive whiteboard turns a traditional classroom whiteboard into a kinesthetic experience making it useful and engaging for
students (Lever-Duffy & McDonald, 2011). During the learning process, students can think and talk like mathematicians.

Teachers use flipcharts for each lesson as a way to share information through multiple electronic slides. Each flipchart is an electronic tool used to display mathematical concepts, save notes, and review previous content on a large, vertical display (Mercer, Henessy, & Warwick, 2010). The flipcharts make it simple for students to use the interactive technology while revising previous work (Scoter & Boss, 2004). When students construct their understanding and test new ideas of mathematical concepts, how they are learning is as important as what they are learning (Van de Walle & Lovin, 2006). As a result, this technology is an essential tool for both learning and teaching mathematics (Van de Walle, Karp & Bay-Williams, 2016).

1.3 Why having a Positive Classroom Atmosphere Matters

At the beginning of the school year, it is important to create a positive classroom atmosphere allowing students to feel comfortable to take risks, ask questions, and learn from each other. When students think positively about themselves, they unlock their abilities and prevent stress from blocking their working memory (Boaler, 2013). The teacher models and guides students in ways to compliment and encourage each other. One way to ensure in-depth discourse is to provide sentence starters so students can articulate their thinking. Because of this form of dialogue, students gain confidence in their mathematical discourse and begin to share their thoughts openly. This rigorous, interactive environment empowers students to learn (Van de Walle, Karp & Bay-Williams, 2016). Open communication allows the teachers to identify misconceptions students have regarding their learning. Also, the teacher needs to encourage students to ask questions when they do not understand (NCTM, 2000). Deep understanding develops over time (Hiebert & Wearne, 2003). Reviewing mathematical content in groups helps gain a higher conceptual understanding of the material. Conceptual understanding is an important component of proficiency (NCTM, 2000).

Effective and accurate peer feedback is just as powerful as teacher feedback. When students provide each other with feedback, it shows they are listening and understanding what others are saying. Students check their thinking and look for ways to solve problems by using mathematical discourse. Students use the language of mathematics to express their thoughts building connections to formal mathematical terms (NCTM, 2000). The conversations help students develop vocabulary, syntax, background knowledge, and thinking skills (Zwiers & Crawford, 2011).

Even though students may struggle, creating a risk-free setting where they can externalize their struggle creates opportunities for success (Hiebert & Wearne, 2003). Conversations allow students to show what they know and what they can do (Zwiers & Crawford, 2011). When having opportunities to discuss topics, students talk about their thought process making discoveries and expanding understanding of how the math works. This discovery helps students realize they are capable of doing well in mathematics (Boaler, 2013). When students share with each other, they expand on new mathematical concepts (Van de Walle, Karp & Bay-Williams, 2016). Through the group discussions, students discover working together is fun.

Another notable technique used in the math classrooms is peer tutoring. During peer tutoring time, students work through problems and explain their mathematical reasoning to each other. While articulating their thoughts, students might think differently and struggle. This approach to learning provides opportunities to deepen their level of understanding they might have executed without thinking (Hiebert & Wearne, 2003). Having in-depth conversations allows the students to process and clarify content (Zwiers & Crawford, 2011). Because of this discourse, students use clear and precise language in their discussions with peers. Furthermore, the students develop a sense of pride and confidence to figure out and make sense of the mathematics (Van de Walle & Lovin, 2006).

During a math work time, small groups of students relearn specific content with the assistance of the classroom teacher. The teacher bridges learning gaps by using a variety of instructional techniques to reinforce mathematics. Some students use the classroom computers to reinforce mathematical concepts which transfer their knowledge to other situations. Students might view computer activities as games, but instead the activities reinforce fundamental concepts including basic facts, geometry, measurement, fractions, and word problems.

2. Methods

The intent of this two-year study was to determine if students who used interactive technology and intervention groups in math would meet or exceed grade level standards. In the first year of this two-year study, there were 46 students in the fourth-grade study group. Participants selected for the study group consisted of all students enrolled in
the two classrooms. This Title I elementary school had 74% of the students receiving free or reduced-priced meals and 34% of the students were transitional bilingual.

The second year of this study consisted of a different group of 50 fourth-grade students. Participants in the study group included all students enrolled in the two classrooms. The teachers used the same pacing guide, teaching techniques, and technology with this study group as they did the previous year. The same Title I elementary school had 77% of the students receiving free or reduced-priced meals and 36% of the students were transitional bilingual.

The common threads in the classrooms for all mathematic lessons were the interactive technology and intervention groups. The two teachers used the interactive whiteboard to review previous mathematical concepts and problems. The review would last approximately 20 minutes leaving 70 minutes to integrate the next mathematical standard or big idea. The first slide of each flipchart displayed on the interactive white board was the Common Core State Standard for Mathematics along with the learning targets. As the units developed each week, the number of slides within the flipchart increased.

At the beginning of the year, the two teachers developed procedures and administered a baseline assessment to evaluate the students’ current performance levels. The assessments were part of the instruction process, not apart from it (Popham, 2011). With the data collected, the teachers shared learning targets and the criteria for success. To begin each math lesson, students sat on the floor in the front of the room with a small dry erase board and marker. The teachers used an interactive whiteboard as a means to model problems. Students took part in the instruction process by standing next to interactive whiteboard and manipulating the information to explain problems and show their work within the flipchart. By using an interactive whiteboard, the speed of questions displayed and the delivery of instruction decreases lag time within the math lesson (Zevenbergen & Lerman, 2008).

The teachers used exit slips and posttests to evaluate the fourth-grade students on mathematical content. The teachers compiled scores onto a spreadsheet forming intervention groups. Structuring intervention groups in multiple classrooms allowed students to receive instruction that was more refined while learning concepts at their level. Through the guided instruction process, students extended their mathematical knowledge while generating ways to solve problems and testing their hypothesis to complete tasks.

2.1 Utilizing Technology in the Classroom

The students were motivated to do the math as well as make meaningful connections to the mathematical concepts when hands-on activities were part of the instructional lesson. Technology reinforced mathematical thinking as students developed the knowledge, skills, and disposition that engaged multiple strategies for understanding. When the teachers provided real-world applications to math, students saw a purpose for math and made connections to emerging technologies. Those technologies included classroom computers, handheld tablets to view eBooks, access to stream videos, and collaboration online. Technology engaged students and promoted active learning as a regular part of students’ educational experiences (Scoter & Boss, 2004).

The students used classroom computers and the Internet to help develop and reinforce mathematical concepts. A frequently used Internet site was IXL.com. The IXL Learning site made learning fun for students through open-ended standard aligned questions and exercises (IXL Learning, 2016). The Internet program adjusted the types of questions to the level of success of each student while at the same time provided immediate feedback guiding students through problem-solving activities (Scoter & Boss, 2004). The IXL program provided teachers data tracking reports with content specific information. The tracking reports displayed the actual problem students missed and their incorrect response (IXL Learning, 2016). The data from the performance tracking was useful information when delivering instruction in the intervention groups.

Professionally produced math videos offered additional resources in the classroom. Videos outlined strategies to enhance and support concepts. Using visually appealing videos to introduce or reinforce a specific skill was one more way students connected with math. To provide students more time to absorb and clarify information it was helpful to pause, review, or watch the video multiple times.

2.2 Other Variables in Math

The teachers implemented other activities into the classroom to promote student learning and support the Common Core State Standards for Mathematics. The teachers presented multiple contexts for students to acquire information and demonstrate understanding through the key shifts in mathematics. By teaching fewer topics with greater focus, students strengthened their foundation and enhanced their ability to solve problems. Linking topics from grade to grade increased coherence so students built new understanding onto foundations from previous years. The Common
Core Key Shifts ensured the math rigor provided authentic learning letting students apply knowledge to real-world situations (Common Core State Standards Initiative, 2016).

The mathematical discourse in the classrooms helped students talk, write, participate, and share information. Even though the teachers provided a positive climate where students collaborated and explained how they arrived at their answers, for students to be successful, there were other areas to address. Through this style of instruction, the teachers were explicit in identifying each math standard that aligned the task and assessment meeting the students’ individual learning targets. When students understood the learning target and the assessment criteria, they improved their ability to self-regulate (Moss & Brookhart, 2012).

Using assessments designed with a purpose in mind promoted learning significantly (Wiske, 2005). Teachers made instruction meaningful and used assessment to drive instruction in the classroom. To monitor student progress, the teachers used results of classroom assessments as evidence to improve and modify instruction (Popham, 2011). The teachers tracked student successes as well as content areas that needed improvement. Throughout the day, students solved mental math problems linked to their learning targets. At the end of each day, students received homework related to the learning target. Homework had a well-articulated purpose and structure to ensure high completion rates (Marzano, 2007).

Students played a more active role and took ownership of their learning when they recorded their learning targets, identified their success criteria, and charted their growth on a spreadsheet. They decided what was important and had a deeper understanding of themselves as learners. Students can be successful when they control their learning environment by monitoring their progress to meet their math goals. The best way to share their success criteria and provide evidence of learning was through their experiences and performances that represent the learning target (Moss & Brookhart, 2012).

3. Findings

The findings from this two-year study revealed notable results existed among the students in the study group who received additional support in math with a combination of technology and intervention groups. It was apparent providing multiple contexts for learning presented new opportunities for students to develop their mathematical skills. Students used their prior knowledge to make sense of a mathematical problem and then extended their learning through conceptual understanding.

In the first year of this two-year study, there were 19 girls and 27 boys in the study group. Based on the results of the Washington State standardized math test, 74% of these fourth-grade students met grade-level standards. From the 74% of the students who met grade-level standards, 71% of those students scored at an advanced Level 4 exceeding state standards.

In comparison to the study group, there were 246 fourth-grade girls and 256 boys in the other Title I elementary schools in the district. From this group, 49% of fourth-grade students met grade-level standards with 19% of those students scoring at an advanced Level 4. In the school district, there were 474 fourth-grade girls and 511 boys with 62% of the students meeting grade-level standards and 34% of those students scoring at an advanced Level 4. In all the Washington State elementary schools, there were 37,163 fourth-grade girls and 39,605 boys. Within the state, the percentage of all fourth-grade students meeting standards was 60% with 29% of those students scoring at an advanced Level 4.

Figure 1 shows a comparison of four areas in the first year of the study. Based on the results of the fourth-grade Washington State standardized test, a notable percentage of students in the study group were more successful in meeting grade-level standards with a vast number of those students exceeding grade level standard. Therefore, the 74% of students in this study group who met or exceeded grade-level standards in math was more than the percentage of students at Title I schools in the same district, all the district elementary schools, and all the Washington State elementary schools.
The second-year of this study consisted of a different group of 27 girls and 23 boys. Based on the results, 88% of these fourth-grade students met grade-level standards on the state standardized math test. From the 88% who met grade-level standards, 66% of those students scored at an advanced Level 4 exceeding state standards.

In comparison to the study group, there were 266 fourth-grade girls and 246 boys in the other Title I elementary schools in the district. From this group, 64% of fourth-grade students met grade-level standards with 30% of those students scoring at an advanced Level 4. In the school district, there were 511 fourth-grade girls and 529 boys with 70% of the students meeting grade-level standards and 39% of those students scoring at an advanced Level 4. In all the Washington State elementary schools, there were 37,868 fourth-grade girls and 39,295 boys. The percentage of all fourth-grade students meeting standards was 63% with 32% of those students scoring at an advanced Level 4.

Figure 2 shows a comparison of four areas in the second year of the study. Based on the results of the fourth-grade Washington State standardized test, the study group had a higher percentage of students meeting grade-level standards. Thus within this study group, the 88% of students who met or exceeded grade-level standards in math were significantly above the percentage of students at Title I schools in the same district, all the district elementary schools, and all the Washington State elementary schools.
4. Discussions

The main purpose of this study was to identify the percentage of students who would meet or exceed grade level standards if their math instruction included technology tools and intervention groups. Information collected supported the findings of this two-year study. The outcome provided insight and information on how a notable percentage of fourth-grade students at a Title I school met the Common Core State Standards for Mathematics on the Washington State standardized test.

There was a higher percentage of students in the study group meeting grade-level standards than their peers. The teachers worked as a team to support student learning while implementing multiple teaching strategies to provide opportunities for students to discover solutions that made sense to them. When students received a balanced math program, they constructed their conceptual understanding by applying new knowledge. Other key areas integrated into the math classroom included solving open-ended questions, identifying learning targets, watching videos, and using computer activities to reinforce content.

Overall, this study represented a small step in exploring the students’ successes in math through integrated technology, intervention groups, and creating a positive classroom atmosphere. Therefore, the methods used in this study can help guide professional educators in their pursuit to having students meet grade-level standards in math.

References


Running Title: An Asset Based Approach for Male Students of Color: The Impact of PACT.

Topic Areas: Higher Education: Student Affairs

Presentation Format: Panel session

Description:

Males of Color, historically have had limited access and experience difficulty acclimating to predominantly White institutions (PWI). Often, they lag behind their White and female counterparts in high school completion, college enrollment, and graduation rates. Using critical race and stereotype threat theory, we will present a case study of PACT, an asset based mentorship program for undergraduate Males of Color. From our findings we hope to advocate for the application of similar asset based modeled programs at PWIs.

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Abstract

In response to the widening higher education gap between the US and its counterparts, President Obama’s goal for the country is that by 2020, America would once again have the highest proportion of college graduates in the world. Acknowledging the increase in the population of people of color in the US and the educational trends for Males of Color, the White House has created initiatives to address persistent opportunity gaps specifically faced by boys and young men of color to ensure that all young people can reach their full potential (Force, 2014). Historically, this group has been denied access and experience difficulty acclimating to predominantly White institutions (PWI). Researchers have often proven that young Males of Color lag behind their White and female counterparts in high school completion, college enrollment, and graduation rates (Kena et al. 2015). The scattering of programs, initiatives and spaces at PWIs make it difficult for Male Students of Color to successfully matriculate and graduate from said institutions (Strange & Banning, 2001). Some of the unique challenges they face in higher education include navigating daily micro-aggressions, low societal expectations and a low sense of belonging due to inadequate representation. Facing such dilemmas, Male Students of Color have been discovered to leave universities before graduation more often than their white peers on PWIs (Harper, Patton & Wooden, 2009; Yosso, Smith, Ceja, & Solorzano, 2009). Through theory based programing, culturally competent practitioners and fully committed institutions, we have the opportunity and obligation to change the pernicious narrative surrounding Male Students of Color.

Using critical race and stereotype threat theory, we will present a case study of PACT, an asset based mentorship program for undergraduate Males of Color. We will evaluate if or how
tailored and intentionally created programs positively influence the campus climate and culture at a PWI for Male Students of Color. To do so, we will determine how PACT has 1) created a supportive structure, 2) cultivate self-efficacy within participants to successfully navigate PWIs and 3) provide opportunities for community building and engagement. From our findings we hope to advocate for the application of similar asset based modeled programs at PWIs.
Online STEM Education Content Modules: A Third Year Review

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A team of rural West Tennessee master teachers developed twenty-nine Science, Technology, Engineering and Mathematics (STEM) education high school-level content modules accessible to all teachers in TN via a Web Portal. Required courses for graduation were integrated with STEM content to enhance students’ knowledge of STEM content and post-secondary education and career paths; the content was developed in alignment with national, state, and Common Core standards. The online STEM education high school content modules are also accessible by parents, as well as teachers and students, throughout the state. This study examines the success of the initiative as measured by module access and completion rates over a two-and-a-half year period.

Keywords: Science, Technology, Engineering and Mathematics education, online teaching and learning, content modules, secondary education.

Introduction

Rural school districts face the continuing challenge of having access to a limited number of teachers qualified to teach upper-level secondary science, technology, engineering and mathematics, or “STEM” courses (Goodpaster, Adedokun & Weaver, 2012). The West Tennessee STEM Collaboratory was developed as a component of a statewide initiative in the state of Tennessee to increase the pipeline of students entering STEM majors, improve K-12 transitions to IHE, and address the needs of regional industries (Honey, Pearson & Schweingruber, 2014). The West Tennessee STEM Collaboratory mission is to unite K–12, institutes of higher education, and STEM industry partners in an innovative approach to transforming regional STEM education and workforce opportunities. The partnership envisions a community-wide initiative to increase students’ STEM preparedness, interest, and transition to the STEM workforce. Industry and higher education partners, working with K–12 teachers and administrators, are helping to bridge gaps in developing appropriate curriculum content, delivery, and community connections to create unique learning environments.

Background

One component of the West Tennessee (TN) STEM Collaboratory was to organize a team of master secondary teachers who were tasked with developing a set of online STEM and STEM-integrated course content modules for high school/secondary education. The steps for meeting this goal were met by accomplishing the following:

- Recruiting ten teachers from the West TN mostly rural districts who were identified by their district’s administrators as being master teachers in STEM as well as other HS content curriculum.
• Identifying and dedicating a central location in which to meet with the teacher team to develop HS core content online modules.

• Develop modules for 100% online delivery cooperatively as five two-member teacher teams in the specialization areas of required HS core content: English/Language Arts; Mathematics; Science; and Social Studies, plus a two-teacher team dedicated to developing content in HS Engineering.

• The content modules were based on Challenge-Based and Problem-Based Learning instructional concepts (Johnson & Adams, 2011; Boud & Felleti, 1998; Savery & Duffy, 1995; Margetson, 1991), comprehensively utilizing problem- and project-based learning while incorporating STEM content and the Common Core Standards as these are being adopted nationally and in the state of Tennessee.

The primary goals and expectations for the interdisciplinary online HS content module development teacher-team are to:

• Develop and make available a minimum of twenty online interdisciplinary/STEM integrated high school content modules during the timeframe of the funded project (2013-14).

• Integrate STEM and interdisciplinary content and incorporate Common Core standards and assessments where available in the TN curriculum.

• Promote regional implementation of the online STEM content modules and interdisciplinary curriculum.

Methodology

As of July 2016, twenty-nine HS content modules are available online via the Battelle For Kids/TN (BFK/TN) professional development web portal through a partnership between the West TN STEM Collaboratory and BFK; this vehicle for access was selected due to its already extensive use by K-12 teachers in the region (since 2011). The first fourteen modules were completed in June 2013 with availability for TN teachers during the 2013-14 academic year beginning in August 2013. The content modules are accessible for free and readily available to all TN teachers; usage can be tracked by region. The West TN STEM Collaboratory and Battelle For Kids-Tennessee provides access to the BFK/TN portal through their websites so that modules can be accessed by teachers and other educators across the country.

To gauge the success - or not - of the implementation and diffusion of the online HS content modules, the researcher determined that comparing the usage of the online STEM content modules would provide a visual representation in measuring the degree of success – or lack thereof – according to increases in usage of the content modules available online via the BFK/TN portal from when first made available to the present. The initial “snapshot” (screenshot) of the modules’ access and usage was obtained on January 21, 2014, approximately six months after the 2013-14 academic year began for public schools in Tennessee (Fig. 1). (Note that while all of the online modules shown in the view are designated as “Non Path Courses”, the modules under discussion are labeled “TNSTEM”.)
As shown in Figure 1, the total number of users for all of the “Non-Path” TN STEM courses was 143. The total number of users who had completed the TNSTEM courses by the Jan. 21, 2014 date was 56.

The latest “snapshot” (screenshot) of the modules’ access and usage was taken on June 21, 2016, thirty-six months after the first view, and three years after the initial availability of the modules. There are currently twenty-nine content modules available (since January 2015) for public and private educational use in Tennessee (Fig. 2). (Again, note that while all of the online modules shown in the view are designated as “Non Path Courses”, the modules under discussion are labeled “TNSTEM”.)
As shown in Figure 2, the total number of TNSTEM users enrolled in the “Non-Path” courses after two-and-a-half years (30 months) was 1,040; the total number of users who had “Completed” the TNSTEM courses by the June 21, 2016, date was 603.
**Results**

The screenshots illustrating TNSTEM online content module usage from, respectively, January 21, 2014 and June 21, 2016, show an overall increase of user enrollment and completion rate of the TNSTEM modules. User enrollment increased from 143 in January 2014 to 1,040 in June 2016, an increase of 897 users, or 627%. A comparison of user completion of the TNSTEM modules between January 2014 and June 2016 shows an increase from 56 to 603, an increase of 547 users, or 977%. (“Completion” of each module indicates only that users viewed every screen in the module; it is not an indication of successful completion of any particular measurable level of achievement.)

**Discussion**

The results of the comparison of the TNSTEM online content modules between January 2014 and June 2016 readily reveal that the implementation has been an overall success in achieving and surpassing the primary goals and expectations for the online HS content modules as determined by the West TN STEM Collaboratory; to wit:

*Develop and make available a minimum of twenty online interdisciplinary/STEM integrated high school content modules during the timeframe of the funded project (2013-14).*

This goal was achieved and exceeded, as there are currently 29 online content modules available; this number was achieved by the end of the grant’s funding period on December 31, 2014.

*Integrate STEM and interdisciplinary content and incorporate Common Core standards and assessments where available in the TN curriculum.*

While the integration of interdisciplinary STEM content into each online module cannot be measured by a numerical comparison of the modules’ overall usage, the significant increase in completion of the TNSTEM modules indicates that the users have determined that the content is of value to them as teacher/educators.

It is also noteworthy that each and every content module contains the full name and email address of the two teachers who developed and authored that particular model and, to date, none of the teachers involved have been contacted in regards to the module. In addition, the name and email address of the teacher team coordinator was also provided, as is the BFK/TN hosting web portal administration’s contact information. None have ever received communications in regards to the TNSTEM modules.

*Promote regional implementation of the online STEM content modules and interdisciplinary curriculum.*

Promotion and dissemination of the information on the availability of-and instructions on how to access the content modules online via the BFK/TN web portal has consisted primarily of printed informational flyers developed collaboratively by the Battelle For Kids organization as hosts of the TNSTEM modules, and by the West TN STEM Collaboratory communications’ team, as the sponsoring agency for the initiative. The flyers were distributed at various STEM-related
presentation and conference venues throughout West Tennessee, mostly, and the state as a whole; it is also available online as a downloadable PDF. The West TN STEM Collaboratory also hosts its own website with links to various STEM-related resources accessible online, and promotes the online HS content modules via that vehicle as one of the available teacher/educator resources: http://www.westtnstem.org/teachers.

Conclusions

In bringing the various West Tennessee rural and urban districts’ designated master teachers together in February 2013, the five 2-person teacher teams designed course content - as well as associated professional development - to improve teachers’ STEM content knowledge and pedagogical approaches. As a result of the 23-month implementation in developing and uploading the online HS content modules, teachers and other educators have benefitted from the products made available via the BFK/TN web portal, as evidenced by the very significant increase in access, use, and completion of the modules over the monitored 30-month period.

While the relative qualitative “value” of the online modules cannot be identified via analysis of the quantitative data collected of user enrollment and completion of the modules, the overall numerical increase in these two areas over a relatively brief time period cannot be viewed other than as significant: the availability of the online HS content module met - and surpassed - the criteria for the goals and expectations of the original mandate for the West TN STEM Collaboratory in the areas of development, dissemination, diffusion, and actual use of online STEM- and Common Core-related high school/secondary core content made available online via a readily accessible vehicle.

References


Service Learning in the Community in a Pre-Service Teacher Education Course

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Abstract

In the fall of 2015, we began offering a residency-based elementary education major at Metropolitan State University of Denver. As part of the new major, we revised the multicultural course to include service learning within the community. The course is placed early in the sequence of courses for the major. Students are asked to complete 15 hours of service learning during the semester in a community setting outside of school. There are three identified objectives for this component of the course:

- To learn about what community services are available and used by families in the metro area;
- To meet community volunteers to find out more about their work and why they volunteer;
- And, to work with community members from different backgrounds from their own.

Students are asked to engage with the community and community members in some way. They are asked to fulfill a need that is identified within the community. And, they commit to working with the organization over the course of the semester.

This paper examines the design of this service learning component including effective practices based on three semesters of implementation. In addition, we will look at students’ responses to the required service learning component in this course from apprehension when learning about this requirement to embracing their work in the community.
Service Learning in the Community in a Pre-Service Teacher Education Course

Theoretical Framework: Service Learning

As part of a new elementary education major, the course on human diversity was completely redesigned. One component of the new course is the focus on service learning. Service learning is “a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities for reflection designed to achieve desired learning outcomes,” (Jacoby, 2014, pp. 1-2). The purpose of service learning within the community is so that students become aware of the types of services available. As teachers, they may be in a position in which their students and their families need to access services such as food banks or donations of clothing, for example. Through their work in this class, they will develop an understanding of the range of services available to people within the community.

For the service learning component in this new course, students work out in the community (not in a school-based setting) with people who are different from themselves. Students have a variety of choices for service learning activities which meet the requirements of the assignment. They spend a minimum of 15 hours over the course of the semester, attending at least 4 times. A typical service learning setting is with a non-profit organization that provides food / clothing to families in need.

The benefits of service learning within university courses are well-documented (for example, Jacoby, 2014). Student benefits include: personal growth, application of learning, and development of interpersonal skills. Students develop a sense of community responsibility. They have the opportunity for application of skills and knowledge which helps students retain and understand course content. And, students have opportunities to practice and develop communication, leadership, and collaboration skills (Jacoby, 2014). Service learning is acknowledged as a high-impact instructional move in higher-education.

Most service learning activities within teacher education courses are at schools through field placements and student teaching. Again, the benefits that students receive through placements in schools is well-documented. However, the benefits of service learning in the community are less documented in teacher education. One study by Carrington et al (2015) found: “that transformational learning experiences in a critical service learning program can facilitate the development of the attitudes, values and practices that support inclusive educational approaches in schools. While some students may have already possessed inclusive values and attitudes, the service learning program provided all the students with a foundation on which to develop and build on their understanding of inclusive practices,” (p. 70). Although they state that service learning can be transformational for students, their study does not identify what made the experiences so powerful.

One common objective found in service learning courses is a focus on social justice—allowing students to learn about social inequities through experience (Hildenbrand & Schultz, 2015). This objective fits well with the objectives of multicultural courses in pre-service teacher education programs. The theme of this course focused on engaging with the community which also fits well with the objectives of a multicultural course.
Design of the Service Learning Component

On the first day of class, students receive information about the service learning component including goals, expectations, and coursework for the project. Although I provide several examples of possible organizations, I encourage students to identify their own service learning project. Our students commute from a variety of locations in and around the Denver area. This allows students to find opportunities for service within their own communities. When they decide on an organization, they create a service learning plan in which they answer the following questions:

• What organization are you planning to work with for your service learning?
• Why did you choose this organization?
• In what ways are you going to be working with people who are different from yourself as you complete your service learning hours with this organization?
• What skills or dispositions do you have to offer to this organization as you complete your service learning hours?
• What questions or concerns do you have now, if any?

During the semester, students complete 4 written reflections and a final multi-media project. The prompts for each paper are:

Reflection Paper #1
Tell me about your organization. What is the mission? What services do they provide in the community? Who is involved? Why did you select this organization to work with this semester? How is this service learning connecting with you with people different from your own background? How did you feel contacting this organization and beginning your service hours? What are your first impressions? What goals do you have for yourself this semester related to your service learning activities?

Reflection Paper #2
What kinds of activities have you been working on during your service learning hours? What has surprised? What is challenging you? What are you noticing about the other volunteers you are meeting during your hours?

Reflection Paper #3
What are you learning about yourself through your service learning hours? What are you learning about others? What did you expect when you began? Were your expectations realistic? In what ways are you making progress on your goals for yourself this semester? What impact is your organization making on the community?

Reflection Paper #4
How has your work this semester made a difference in the community? What is the most important thing you have learned from your work this semester? How does working in this organization help you understand the families you will be working with as a teacher? Would you refer families to this organization? Why or why not? How are you going to
continue engaging with the community beyond this semester? Reflect on your goals. Did you meet them? What are next steps?

The reflections are evaluated using a course rubric which considers depth of reflection, connections with coursework, use of a critical lens, and personal growth. In addition to the reflections, students create a final project which is described below.

Final Project
For your final project, you will create a 2-3 minute multimedia presentation about your service learning project. You can include pictures and videos (please do not take pictures or videos of the people who are using the services provided by your organization; you may take pictures or videos of the site or activities). Videos will be posted on the School of Education YouTube channel.

Students’ Responses to the Service Learning Component

Students had many concerns before they started their service learning projects. These concerns fell into four primary categories: logistical, emotional, organizational, and safety.

The primary concern students expressed about the service learning project was logistical. The students enrolled in this pre-service teacher education program are busy. Most students are working, often full-time. Approximately half of the students have family care-taking responsibilities such as taking care of children or parents. Typically, students are taking 12 credits of courses (with this course being 3 credits). Students were very concerned about fitting the service learning project in their schedules.

The second concern that students expressed was related to their emotions about doing the project. They expressed that they were nervous, apprehensive, anxious, and uncomfortable. Some students felt like the environment might be chaotic or dirty. Some students felt uncomfortable working with adults.

The third concern expressed was organizational—primarily concerns around how the organization that they selected to work with worked. They did not know how they would fit in as a volunteer and what they would be expected to do. Some students were worried that they might not have the skills they needed to do the work.

And, finally, some students expressed concern about their safety such as going in to areas in which they did not know well (such as downtown).

By the end of the experience, the vast majority of students found the learning experience valuable and many students expressed an interest in continuing their work with the organization.

Conclusion

Through thoughtful integration of a service learning component into this teacher education course, students are able to meet the objectives of this assignment—to learn about community services available; to meet community volunteers; and, to work with people different than themselves. The service learning component is an effective way to add depth and experience to a multicultural course. Students have the opportunity to learn
about themselves and a small sliver of their community. One primary theme in this course
is engaging with the community—students learn that schools are part of a larger
community and learn that engaging with the community benefits teachers, students, and
families.

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Jacoby, Barbara (2014). Service-Learning Essentials: Questions, Answers, and
This session focuses on the application of a prominent psychological theory utilized in leadership and business known as the “Elephant and the Rider” theory. This model was first advanced by Dan and Chip Heath and has been utilized successfully in combination with various models of advising and student support to advance student retention efforts at a small, private university in the Midwest. The approaches taken by both Sarah Klucker, Faculty in the School of Business and Director of Student Affairs and Jennifer Miller, Assistant Dean for Student Success will be specifically explored through case study analysis, theoretical framework and creative application. Discussion about the difficulties all of us have with creating and responding to change will lead the session. Further description of the theory and it’s application will follow. Emphasis is placed on the need for leaders in education to focus not only on the rational but the emotional in order to create lasting and positive change in any environment. Methods for focusing on both are broken down into a series of 9 steps, as initially advanced in the theory and literature. Not only did the presenters observe measurable success in retention of students, but there was also success in applying these strategies to the often overwhelming pieces of higher education politics and structure. Through their combined 35 years in the field, both presenters demonstrate a creative enthusiasm about opportunities for change not only among students but among the workplace in general. This session will be engaging and participants will walk away with a new lens on the work they do creating positive change in and around themselves. When applied, their students will find these strategies easy to understand, motivating and creating the sense of hope that so many of our future leaders need to improve the world in which we live. Regardless of your academic background, your institution size, your role in education or your previous experiences with change, this session will undoubtedly be inspiring and applicable.
P-20 Collaboration and Induction Practices: Enhancing Teacher Preparation in Georgia

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Abstract

Not only are school districts across the nation currently facing a difficult time hiring sufficient numbers of teachers to fill their classrooms, but they are also challenged to keep newly hired teachers in the profession. It is widely reported that 40% to 50% of teachers leave the profession during their first five years of teaching (Ingersoll, 2012). A study by the U.S. Department of Education of teachers who left the profession found that many did so because teaching offered few opportunities for professional development or advancement, collaboration with colleagues, recognition of their work by administrators, decision making on school or district policies or practices, and autonomy for their work (Keigher, 2010). In an effort to address these limitations in the workplace and reduce the attrition of new teachers, the state of Georgia is implementing an innovative process to revamp teacher induction programs across the state.

The Georgia Department of Education, the Georgia Professional Standards Commission, and the University System of Georgia are collaborating to develop and support P-20 regional partnerships across the state. Currently, nine regional partnerships are functioning and each focus on continuous school improvement and student learning and growth through the preparation of teacher candidates and the professional development of P-20 educators.
Introduction

Over the past twenty years, the number of teacher induction programs have grown as school districts attempt to provide professional development and support for new teachers entering the profession. However, the impact of the majority of these programs has not been particularly strong, as indicated by the large percentage of new teachers who leave the profession during their first five years in the classroom (Ingersoll, 2012). Until recently, little research was conducted on teacher induction; thus, we are just beginning to identify effective induction practices. Providing a mentor teacher for newly hired teachers has been a standard practice embedded in most induction programs, yet research by Smith and Ingersoll (2004); Kapadia, Coca, and Easton (2007); and DeAngelis, Wall, and Che (2013) have helped us understand that providing a mentor as the main induction support is ineffective and is poor usage of already-limited time.

In addition to a mentor, comprehensive induction support activities are needed, and it is important that such supports be tailored to meet the distinctive needs of each individual teacher. Not only do these comprehensive induction practices reduce teacher turnover, but they also result in a positive impact on student achievement (Ingersoll, 2012). Since schools with large numbers of students living in poverty have higher levels of teacher turnover than suburban schools with low numbers of students living in poverty (Boyd, Lankford, Loeb, Ronfeldt, & Wyckoff, 2011), comprehensive induction supports are especially needed in schools with large numbers of underserved students. Georgia has one of the highest rates of childhood poverty in the nation; according to the Children’s Defense Fund (2015), more than one in four children in the state of Georgia were poor in 2014. Therefore, induction models are critical for attracting and retaining highly qualified educators within the state who can meet the challenges and set high expectations.
for student learning, as research conducted by Johnson, Kraft, and Papay (2012) found that there is greater teacher retention in high poverty schools that are identified as high performing.

Teacher preparation and teacher induction have traditionally been viewed as separate processes, but many teacher educators are beginning to recognize that teacher induction begins when a teacher candidate is accepted into a teacher preparation program. Teaching is a highly complex profession that involves many dimensions which are interactive and integrative (Hollins, 2011). Learning to teach is not an easy process for preservice teachers since they build their understanding of teaching by combining various dynamics at once, including content knowledge, pedagogy, student assessment, classroom management, differentiated learning styles, and numerous other facets. Based on this, initial teacher education programs must aim to provide teacher candidates with theoretical and practical knowledge in order to cultivate their teaching skills, attitudes, and behaviors. The Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning (2010), commissioned by the National Council for Accreditation of Teacher Education (NCATE), encourages teacher preparation programs to create extensive and intensive field and clinical experiences that connect to academic content and professional education courses. Under the mentorship of skilled practitioners, both P-12 teachers and teacher educators, teacher candidates will “blend practitioner knowledge with academic knowledge as they learn by doing” (NCATE Blue Ribbon Panel, 2010, p. ii).

**P-20 Regional Collaborative Practices:**

Recognizing a looming teacher shortage and a critical need to bring educators together for the common good, the Georgia Department of Education (GaDoE), the Georgia Professional Standards Commission (GaPSC), and the University System of Georgia (USG) joined together to establish “P-20 Collaboratives” within the state. These collaborative networks serve as regional
structures to support for pre-service candidates as they advance into the role of certified teachers. The P-20 Collaboratives also provide continued support through professional learning for practitioners and leaders within school systems (Georgia Professional Standards Commission, 2016).

At the inception of the P-20 Collaboratives, the state demographics were divided into nine regions. Each region includes a group of institutions of higher education or state agencies that prepares teachers. Each of these nine regional groups convene twice during an academic year. The topics discussed within the collaborative settings vary by region, as the focal points in various areas of the state differ from year to year and from location to location. Topics of valuable importance include recruitment efforts within the region, especially in high-needs areas, best practices for the recruitment and training of future teachers, induction for in-service teachers, support for in-service teachers and educational leaders, and professional learning for all (Georgia Professional Standards Commission, 2016).

Each regional collaborative has a strategic planning team that plans the collaborative agendas based on needs of the region. These strategic planning teams are compiled of P-12 teachers and administrators and faculty and staff members of Educational Preparation Providers (EPPs) and state agencies. Each regional collaborative also has a lead contact person who works with representatives from state educational agencies to facilitate and disseminate important information throughout the network. Planning team members join together throughout the academic year to determine critical needs within that region.

Due to significant ramifications, a critical component throughout all regions of the state is the mentoring of novice teachers. Educational leaders within state agencies and P-20 environments recognize that stronger support systems must be in place for both teacher mentors and induction-
phase teachers. Because of an impending teacher shortage and the reality that a large percentage of teachers leave the field within the first five years, in Georgia and throughout the nation (Ingersoll, 2012), teacher mentoring throughout the induction phase has become critical to the success of students within school systems, to the attraction of college students to the field of education, and to the retention of novice teachers. Mentors are a significant factor in the retention of teachers within the state; therefore, those who serve as mentors must also be provided with intensive support and encouragement. The objective is to retain quality mentors so that the state can retain novice teachers.

While the work of each regional collaborative varies, there is a strong commitment of each one for the improvement of mentoring practices within the state. For this reason, data is being collected to determine perceptions of the challenges and rewards of mentorship so that external and internal provisions for success can be put into place. Listening to the teachers concerning mentoring practices has proven to be a very critical component in finding deficiencies within the current structure. In addition, determining what novice teachers require in order to feel successful in the classroom allows for a better understanding of what is not working within induction practices.

Data is helping to define needs of novice teachers in specific geographical regions; the “one size fits all” approach does not work when providing support for induction-level teachers. The needs of novice teachers in large inner-city environments are much different than teachers in small, rural school systems, and Georgia is recognizing that both mentors and mentees must be looked at individually and systematically, as areas of needs and levels of needs vary greatly within the geographical locations within the state. Members of the P-20 collaborative groups have been looking for ways to best improve the quality of mentoring programs within the school
systems of the regions. While mentors must go through trainings, the P-20 Collaboratives want to enhance and improve the trainings to be most effective for all involved.

The forming of academic partnerships is nothing new, but the approach of making such collaboration both meaningful and deliberate allows for all entities to better understand the work that is taking place in other academic settings. Those in P-12 environments have the opportunity to share information pertaining to assessments and mandates within their respective school systems, and EPPs have a platform for which to voice new initiatives and mandates occurring within the realm of higher education and teacher preparation. College faculty and directors of field and clinical placements are now able to better prepare teacher candidates for what is currently taking place in P-12 schools in regards to assessment measures, including state and school system testing for students and annual teacher assessments, new curricula development, and state and local mandates that affect both teacher practitioners and teacher candidates preparing for the field. In the same manner, EPPs use this venue to discuss advancements taking place within teacher preparation.

The notion of bringing both groups to the table and giving voice to both P-12 and higher education personnel within the state has proven to be extremely beneficial. It allows educator preparation programs to have better knowledge of what teacher candidates will see in the P-12 classrooms, and it also allows school systems, within the entire state, to know current expectations of the pre-service teachers who will be entering their schools for clinical practices. This allows and encourages richer discussion in regards to what is currently working in education and what needs to be improved throughout both entities.

Challenges:
As with any new initiative that occurs in educational settings, there have been challenges along the way. Establishing true, authentic relationships between P-12 and EPPs can sometimes be formidable. For real partnerships to transpire, feelings of trust and equality must be present between members of the school establishments. It is often difficult to get faculty members from respective educational settings devoted to this work; although the mindset that “we are all stronger together” is interwoven into the mission of the P-20 working groups within the state, the reality is that not everyone sees the importance of such collaborative practices. Real partnerships between P-12 and higher education can only exist when one entity does not feel as though they are more, or less, valuable than the other. The goal is to continuously improve upon partnerships within educational settings, and this can only be accomplished when stakeholders recognize and embrace the significance.

Another challenge is the need to find willing and qualified mentors who will use their expertise and knowledge to help support novice teachers throughout the induction phase. Undoubtedly, teachers are consumed with a multitude of tasks, leaving little time for additional responsibilities. However, new teachers can suffer tremendously, especially in their first year in the classroom, when there is a deficiency in the support received. When done appropriately, being a mentor for an early-career educator can greatly increase a teacher’s workload. Since this is an obstacle, many teachers decide not to mentor new teachers, or do so in a way that is not beneficial to the novice educator. This is a main reason that the initiatives for better preparation within the state are so critical.

Perhaps the greatest challenge of the work in the P-20 efforts throughout Georgia is time. There is often little time for colleagues within an educational setting to meet and talk, and it becomes extremely difficult for members of various P-12 and EPP settings to find the time to
share and to plan collaboratively. This can become a tremendous obstacle, but finding the time to identify needs, develop strategies for engagement and support, and to target deficiencies is imperative. Although time is limited, evaluate what is working and not working within educational settings is invaluable.

Conclusion

The goal of collaboration practices throughout the state allows for the continual use of best practices within all areas of education. The context is very simple: If EPPs are able to better prepare teacher candidates, and if mentoring practices begin early and last throughout the induction phase, those candidates will become novice teachers who have the stamina, drive, and knowledge to stay in the career. In turn, these individuals will then be more able and willing to mentor others at an appropriate time. Educator preparation systems must know current practices in P-12 settings in order to better prepare pre-service teachers, and school systems must know current dictates within educator preparation in order to give best hands-on clinical practice. There is a great need to support all of those in education, from those pre-service teachers, to those in the induction process, to those ones who are seasoned practitioners in the field.

Though much continued research is needed to identify the most effective practices, collaboration across the P-20 spectrum that combines quality teacher preparation and on-going support and professional learning during the early years of teaching is viewed as a positive approach to addressing both a teacher shortage and teacher attrition within the state of Georgia. Working to both prepare pre-service teachers and to retain quality teachers is critical. Now more than ever, educators must be partners in preparing all learners, from P-12 to college and beyond.
References


Examining Preservice Educators’ Perceptions of Teaching Children of Poverty

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Abstract

According to the Children’s Defense Fund (2014), the United States has one of the highest rates of child poverty among industrialized nations, and the percentage of children living in or near poverty has been steadily increasing (Jiang, Ekono, & Skinner, 2016). There is consistent research to show the academic difficulties that students from poverty often face: For example, in his work, Allington (2012) found that there is a large gap in the abilities of children from low-income families and those living in middle class families, and Gargiulo and Metcalf believe that poverty is a “significant factor placing children at risk for school failure” (2010, p. 115). Poverty can be an opposition in every stage of learning and can hinder later success in life, as children who live in impoverished conditions are more likely to drop out of high school (Gollnick & Chinn, 2009).

However, classroom teachers, as well as preservice teachers enrolled in educator preparation providers, are most commonly from middle class backgrounds (Parameswaran, 2007). Due to a lack of understanding on how best to meet the unique needs of these learners, educators often have difficulty teaching and relating to students from impoverished environments. Many novice teachers enter the classroom unprepared to work with a population of low-income students; therefore, those working to prepare teachers for the field must be explicit in addressing the needs of poor children (Hughes, 2010).

The purpose of this study was to evaluate teacher candidates’ perceptions of poverty on education. Teacher candidates were surveyed about their experiences with those living in poverty, thoughts on teaching children of poverty, and the extent of information they had received from their education courses concerning poverty. Groups of sophomores, juniors, and seniors were surveyed. Analysis of the surveys was used to inform policy and practice. Learning about the attitudes of teacher candidates concerning poverty, as well as the perceived time being spent discussing children of poverty in education courses, are key components in strengthening course curricula and enhancing understanding of diversity in P-12 environments. The discussion of this study may be relevant for individuals from other EPPs who hope to enhance preservice teachers’ knowledge and understanding. The impact of this could be far-reaching for teacher preparation programs globally, as the field of education, and the global economy, is ever-changing and EPPs must know how best to equip candidates for the increasingly diverse landscape of education. Preservice teachers must be prepared to meet the demands of the profession; therefore, better training and preparation can benefit novice teachers and the students with whom they work, and this could have a positive impact in keeping teachers in the classroom and reducing attrition. The use of such qualitative evidence helps to inform decision-making and adjust practices which are currently being used.
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ABSTRACT

RESULTS OF THE 2014 STUDY

This study investigated the participation of small business managers in adult and continuing educational activities. The population for this study was small business managers who were members of the Montana State Chamber of Commerce (MSCOC). The 2013 membership of MSCOC consisted of a wide range of diverse members. The small business managers selected for participation in this study resided in varied geographical locations in the state, possessed various income levels, had varied educational backgrounds, had differing amounts of business experience, represented both genders, and were a wide variety of age. From the population of approximately 1200 a random sample of 200 small business managers was obtained from the 2013 membership roster. Forty-one usable surveys were returned for a response rate of 20.5%. The data were collected with the Adult Attitudes toward Continuing Education Scale (AACES), the Deterrents to Participation Scale-General (DPS-G), and a demographic sheet. The data were organized to facilitate statistical analysis. A t-test was utilized to assess whether a statistically significant difference existed between the participants and nonparticipants in adult and continuing education.

The study respondents had an average age of 52.2 years. Their ages ranged from 24 years to 80 years.
Of this group 45% were males and 55% were females. The educational level of respondents ranged from 9 to 20 years with an average of 15.4 years. Their gross income ranged from $20,000 to $300,000 with an average of $116,444. Respondent’s years in business ranged from four years to 47 years with an average of 22.7 years. This group had participated in adult educational activities; the participation status of respondents revealed that 61% had participated while 39% had not participated.

The group varied in its perceived barriers to participation and its attitude towards adult and continuing education. On the DPS-G, which had a possible range of 34 to 170, the group’s average score was 70.97 and their scores ranged from 34 to 130. On the AACES which had a possible range of 22 to 110, the group’s average was 88.13 and their scores ranged from 56 to 110.

An analysis of the group means for the various variables indicated that participants and nonparticipants did not differ greatly on most of the variables. On all the variables the participant group scored higher than the nonparticipant group. On the AACES adult education participants scored an average of 91.42 and nonparticipants scored 82.92. On the DPS-G, participants scored an average of 71.78 and nonparticipants 69.67. The average of participants was 53 years and nonparticipants were 50 years. Participants had an average educational level of 15.68 years and nonparticipants had 15.08 years. The average gross income of participants was $130,278 and nonparticipant’s gross income was $88,778. Finally, participants have an average of 23.6 years’ experience and nonparticipants had 21.42 years.

Although the participants group was consistently higher on these variables, the AACES total score and gross income were the only variables with sizeable mean differences between the groups. This difference was statistically significant at the .05 level on both the AACES total score and the gross income levels of small business participants and nonparticipants in adult and continuing education in Montana.

In conclusion, the 2014 study suggests that small business managers who have participated in adult and continuing education have more favorable attitudes toward continuing education. In addition, they tend to be older, better educated, have more business experience, and earn significantly more income.

RESULTS OF THE 1989 STUDY

This study investigated the participation of small business managers in adult and continuing educational activities. The population for this study was small business managers who were members of the Nebraska State Chamber of Commerce (NSCOC). The 1988 membership of NSCOC consisted of a wide range of diverse members. The small business managers selected for participation in this study resided in varied geographical locations in the state, possessed various income levels, had varied educational backgrounds, had differing amounts of business experience, represented both genders, and were a wide variety of age. A random sample of 600 small business managers was obtained from the 1989 membership roster. A total of 302 usable surveys were returned for a response rate of 50.3%. The data were collected with the Adult Attitudes toward Continuing Education Scale (AACES), the Deterrents to Participation Scale-General (DPS-G), and a demographic sheet. The data were organized to facilitate statistical analysis. Discriminant analysis was done using select demographics along with the total score on the AACES and the DPS-G.
The study respondents had an average age of 48.1 years. The educational level of respondents ranged from 9 to 18 years with an average of 15.2 years. Their gross income average was $73,573. Respondent’s years in business ranged from one year to 65 years with an average of 22.3 years. This group had participated in adult educational activities; the participation status of respondents revealed that 67% had participated while 33% had not participated.

The group varied in its perceived barriers to participation and its attitude towards adult and continuing education. On the DPS-G, which had a possible range of 34 to 170, the group’s average score was 73.6 and their scores ranged from 34 to 135. On the AACES which had a possible range of 22 to 110, the group’s average was 88.3 and their scores ranged from 29 to 110.

An analysis of the group means for the various variables indicated that participants and nonparticipants did not differ greatly on most of the variables. On most of the variables the participant group scored higher than the nonparticipant group. On the AACES adult education participants scored an average of 90.2 and nonparticipants scored 84.5. On the DPS-G, participants scored an average of 72.4 and nonparticipants 73.1. The average age of participants was 48 years and nonparticipants were 46 years. Participants had an average educational level of 15.3 years and nonparticipants had 14.9 years. The average gross income of participants was $76,251 and nonparticipant’s gross income was $68,680. Finally, participants have an average of 22.8 years’ experience and nonparticipants had 20.3 years. The participants group was consistently higher on these variables with the DPS-G total score the only minor exception.

In conclusion, the 1989 study found that attitudes toward adult education were the most powerful discriminators of adult education participation. In addition, participants tend to be older, better educated, have more business experience, and earn more income.

Data Comparison from 1989 & 2014

Both studies found that participants were older, better educated, wealthier, had more professional experience, and they scored higher on the AACES instrument than nonparticipants in adult education. In the 1989 study it was found that attitudes toward adult education was the most significant variable that discriminates participants from nonparticipants in adult educational activities. While the 2014 study determined that participants had significantly stronger attitudes toward adult education than nonparticipants and it was statistically significant at the .05 level. The DPS-G scores did not significantly differ between participants and nonparticipants on both studies.

In conclusion, the data suggests that all the variables examined remain relatively consistent over 25 years. The studies revealed that there is a difference between participants and nonparticipants in their attitudes toward participation in adult education. This difference in attitude may be the key determinant of their participation in these educational activities.
Six Media-Savvy Ways of Answering the *Tell Me About Yourself* Question

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*The Web is no longer just about the present.... As we share messages, photos and updates, we're building a data trail about our lives and histories online. We can now tell stories not just about what is happening today, but where we've been, what we've shared, and what might happen in the future.”* — Keith Ferrazzi

“The skills necessary to be an effective communicator today are different than in the past. Today, literacy is not only about reading and writing—which are necessary—but also about understanding visual communication. Today we need a higher degree of visual literacy and an understanding of the great power that imagery has for conveying important messages.” — Garr Reynolds

*Self-promotion is a leadership and political skill that is critical to master in order to navigate the realities of the workplace and position you for success.* — Bonnie Marcus

**Key words:** Media richness, channel choice, audience analysis, social media, careers, pedagogy, social capital, networking, video, personal awareness

As educators, part of our responsibility to students is to prepare them for “life in the Digital Economy of the 21st century” (Kivunga, 2015, p. 9). As an example of fulfilling this goal, this paper describes a series of exercises assigned in Managerial Communication classes to raise awareness of the value of using a variety of multimedia tools available to students to answer the question at the heart of networking and job interviews: *Tell Me About Yourself.* It uses data students originate using their social capital as a starting point for six exercises that show them how to promote their talents for job and internship opportunities by using a variety of visual, networking, and social media tools that connect with different audiences for different purposes.
We have used these exercises in over 40 sections over the past six years in a class focused exclusively on career communication and required of all business students at our university. Our classes meet twice a week for 75 minutes each, and we schedule the exercises over the first five weeks of an eleven week course. We view them as appropriate for both part-time and full-time undergraduate students, as well as for non-credit career development workshops.

Students enjoy these exercises as they rely on their ability to use their creativity, digital media, and networking skills on behalf of a personal goal—finding a co-op, internship, or full-time job. And students demonstrate initiative and self-direction skills as they plan and execute a variety of personal brand building actions.

**Pre-class readings**

As a prereading assignment for the first day, we assign three online readings about branding and networking in the age of social media, with an emphasis on using the resources of LinkedIn. The articles are """"Wikihow: Build Your Personal Brand (Wikihow, n.d.),"""" """"5 Reasons, Why Your Online Presence Will Replace Your Resume in 10 Years,"""" (Schwabel, 2011) and """"The Importance of Loose Ties."""" (Brown, 2011).

Students answer Discussion Board questions about each selection. The questions are

1. What have you learned from reading """"Wikihow, Build Your Personal Brand"""" about how to promote yourself effectively for internship and full-time jobs you are seeking?
2. With what conclusions do you agree or disagree in """"5 Reasons Why Your Online Presence Will Replace Your Resume in 10 Years?"""" Support each of your claims with at least one reason.
3. Analyze the argument Brown makes about the importance of weak ties to networking and job hunting success.

For this assignment, we ask students, as a basis for subsequent in-class assignments and discussions, to read and comment on the answers of at least two other students prior to attending the initial class.

**First day of class: Awareness**

Our goal in the first class is demonstrate to students that they can adapt communication strategies that are already using to their career objectives. We divide the session into 3 steps: We begin the class by having students break into small groups to initially comment on a slide of the three quotations that start this article. We then ask for feedback about how the students use social media tools in their own lives. Students tell stories of using Skype, Twitter, Evernote, PowerPoint, Snapchat, and other social media tools to communicate about group projects as well as in-class and internship presentations.

As a second step, we ask students to analyze how they use different tools, such as Snapchat, Pinterest, Facebook, PowerPoint, Twitter, LinkedIn, and Email for different purposes and for different audiences. This exercise allows us to briefly explain media richness theory and to show students that they already have some insight into the issues of purpose, audience, message, length, design, and channel choice in their current social media contributions (Trevino, et al., 1987). After part of their analysis, students are asked which of the networks on their list are most appropriate for career communication, along with the how and why.

As a third step, we analyze “The Importance of Weak Ties” (Brown, 2011) which cites data that people were more than three times as likely to find a job through a networking contact
than through traditional means—and that “loose ties” were more productive in the job search than “strong ties.” We point out that existing student networks are typically with strong ties—consisting of relationships with people they perceive to be like themselves and also with whom they interact on a consistent basis. We invite the class to discuss the importance of networking beyond the “echo chamber” of close relationships to the loose ties who may be instrumental in helping them identify job and internship opportunities (Stewart et al., 2014).

At the end of class we ask students to read a chart covering Mayer’s (2009) 10 principles of multimedia design and to be prepared to talk about them in their small groups. We also let students know that in the second class period we will ask them to introduce themselves using a variation on the game, Pictionary (See PlayNet, n. d.).

**Pictionary**

Rather than a standard biographical sketch where each student talks about the same topics, such as major, year in school, and career aspirations, we ask students to create a pictorial biography on a chart pad and then share the meaning of each symbol with the class in an oral presentation. We explain that research shows combining very brief text with visual images aids the “sense-making process through activating both verbal and visual cognitive processes simultaneously” (Reynolds, 2012).

We point out this exercise has two purposes: as an introduction to developing a brand, or a set of unique selling points, as part of their career positioning—and as a tool for networking for discovering conversation topics with others. In this case, we define our audience as class mates and ask students to represent themselves with facts and events that have defined their lives, being careful to minimize negative or embarrassing information while highlighting objective and positive information. Typically, we see students draw pictures of cities or countries to indicate
the various places they have lived or visited; titles of jobs they have held and companies for which they have worked; military symbols to highlight the role that service has played in their lives; drawings of family members and pets; religious symbols to indicate faith commitments, as well as images of game competitions, such as chess, bridge or trivia; food preferences; athletic pursuits; volunteer activities; honors and awards; and artistic, musical, cooking, fashion, mechanical, software, social media, foreign language, and other specific talents. Students enjoy hearing these presentations, and during break are encouraged to connect with classmates based on mutual interests and experiences, something that allows students from diverse backgrounds to find areas of mutuality with fellow undergraduates. We also ask students by the next class period to select one or two accountability partners with whom they will work on the remaining five branding projects.

After introductions, small groups discuss Mayer’s multimedia guidelines as preparation for the next four exercises which use a mix of video, photos, graphics and text. We also briefly summarize the storytelling principles the Heath brothers highlight in *Made to Stick* (Heath & Heath, 2007): Simple, Unexpected, and Concrete Creditable Emotional Stories as good criteria by which to evaluate their own and their partners’ efforts.

**Networking Brief**

During the second week of class, we introduce students to a relatively new type of message: the networking brief, a one-page document sent to individuals who might network on the applicant’s behalf. We ask students to create a one-page document that contains a branding statement, highlighted with a series of headings that indicate to contacts what the candidate has to offer; a persuasive presentation of the applicant’s career history, including a list of
organizations for which the applicant has worked, their highest titles, and significant accomplishments, focusing on how they have added value to these organizations; and a list of organizations and job titles of interest that describe the applicant’s desired career path (Right Management, 2015).

We suggest using the networking brief as part of the job search, best emailed prior to a telephone or face to face networking meeting. This document allows contacts to focus their thoughts on who they might know for a student to contact in a particular company. We stress that third party recommendations, especially from a current employee of a target company, are especially powerful ways to move to the front of an applicant list. We include examples on Canvas and Flickr on which students can model their networking briefs. Highlighting the multiplier effect, how a few contacts can turn into hundreds through networking, we encourage students to send the brief to others in their networks and to request their contacts send the brief to others in their networks, thus making loose ties aware of a student’s credentials, career goals, and graphic design abilities. We also encourage students to link to their preferred companies’ LinkedIn sites as a way of becoming acquainted with the most recent stories of each so they can cite them should they hear from recruiters who have contacted them after seeing their briefs.

**Video Resume**

During the third week of class, we introduce the Video Resume assignment in which we ask students to create a video that they will upload to LinkedIn, Facebook, and other sites. We indicate this assignment will have the additional value of preparing them to answer the “Tell Me About Yourself” question in one-on-one networking and job interviews. We encourage them to consider highlighting their career goals, major and minors, work and volunteer history, special
talents, such as social media or mechanical skills, or deep insight into an industry, as well as team and individual goal achievement and expectations for future achievements. We request that they dress as professionally as they would for a formal interview.

As preparation, we ask them to view “Five Tips on Creating a Video Resume” (Elliott, 2011) which uses text and video examples to highlight the Do’s and Don’ts of video resume productions. We also provide student examples from past classes saved on Canvas to show what efforts have met our highest standards. For this assignment, students first submit a script, limited to 400 words, which they share with a class partner, who also films their video resume rehearsals. We encourage students to use a teleprompter and to record their videos in an on-campus studio to provide a quiet and professional background to the video, to get feedback on delivery, content, and audience, and to record their pitch as many times as necessary to create the best impression. Some students have used soft background music and character generation to showcase film editing skills as well.

Once, as faculty, we agree the submitted video represents a professional effort, we ask students to upload a link, preferably on YouTube with closed captioning, to it on their LinkedIn account and to reference their LinkedIn url on other branding items, such as their resume, business card, Facebook accounts, and SlideShare presentation. We warn students not to submit the video resume to an employer as part of a job application, as some companies do not want to view them in this context for legal reasons.

**Business Card**

During the third week of class, typically 1-2 weeks before the college’s Job Fair, we ask students to design a business card, reflecting their brand. We argue that business cards serve as an inexpensive and valuable aid because they often remain in a wallet or card caddie and are not
as easily misplaced as a resume or letter. We stress that they are valuable to take advantage of unexpected networking opportunities—and if students provide one while other job applicants do not, they may appear to recruiters to be more prepared and professional. We suggest that students go to vistaprint.com or a similar site, using templates to create a business card that promotes their brand, both visually and in text. We stress the importance of the design of the card as critical to “winning the first moment of truth” in establishing a theme. So, for example, a student pursuing a career in child care, designed a card featuring a series of different colors of small hands; an accounting student created a card with a 1099 tax form as a key visual; a finance major designed a card tinted green with a drawing of a dollar sign to indicate her interest in a career as a financial consultant, and an IT major used a picture of a computer screen as his attention getter.

We recommend that students provide their name, college, major, LinkedIn and email addresses, and personal cell phone number on the card. Some have used an inspirational quotation to show their commitment to positive ideals and others have put a CZ code on the back so a potential employer could scan immediately into their LinkedIn account. Another alternative has been to use the front of the card for personal information and the back for a mini resume, highlighting degrees, work experience, key personal qualities and achievements.

**SlideShare Presentation**

During the fourth week of class, we show students that LinkedIn has an application that allows a link to SlideShare.com. We ask them to create 2-3 PowerPoint slides, with the caveat that “a picture is worth a thousand words,” that have brief text and photographs incorporated into them to create a visual resume that shows aspects of their personality as they relate to a career choice. We point out that pictorial representations may suggest qualities not apparent on a
resume that are important to an employer which include competitive, compassionate; empathetic, team player; creative; goal achiever; bilingual; mechanical, entrepreneurial; loyal, and disciplined—and we encourage students to use one of these or similar positive term above each visual.

For example, some students have highlighted their creativity and cultural appreciation by picturing their talents in fashion design, painting, videography, playing an instrument, singing or dancing. Others showed through volunteering that they cared about others and were team players. Some have demonstrated goal achievement by picturing evidence of honors, such as National Honor Society, Eagle Scout, DECA, 4-H, Model United Nations award or mastery of software and statistical programs, and by highlighting certifications, such as a Six Sigma Black Belt. Others have highlighted knowledge of foreign languages and cultures to demonstrate an ability to navigate globally. Photos of participation in varsity or recreational sports have demonstrated a competitive spirit, solid teamwork and a commitment healthy living. Highlighting college and professional team favorites has suggested enthusiasm and loyalty. And photos of mechanical (repairing a car), construction (putting up drywall) or landscaping abilities (building a fire pit) can promote talents important to businesses employing these skills.

On the technical side, we stress the importance of having a strong contrast of text and background colors so words can be easily read and provide examples on Canvas of the best efforts of previous students.

Prior to the subsequent class, we ask students to read and comment on the online article, “6 New LinkedIn Job Search Strategies” (Keath, n.d.). We also ask them to follow its advice of identifying five people they could ask to write recommendations to post on LinkedIn.
Recommendations: Independent Proof of Claim

Our sixth branding assignment, assigned the fifth week of class, starts with a discussion of the assigned article and its emphasis on posting recommendations on a LinkedIn account. This last assignment, the only one without a visual design element, is for students to identify a minimum of five contacts from whom they could secure outstanding references to post on their LinkedIn accounts and have students consider: *What talents would you want these references to promote about your “brand”?* We indicate that the value of references (not endorsements) is they appear to be relatively unbiased independent verifications of student branding claims see them as a human to human connection, more valuable than a brief list of references at the end of a resume. We ask students to consider what employers, managers, customers, and leaders of service and political organizations would potentially write--or videotape-- as these are people who can testify to their success in a work environment. We also suggest they consider requesting recommendations from coaches, relatives, alumni, friends, neighbors, professional colleagues, teachers, and church and social club members as they might provide evidence of positive personal qualities and skills.

We encourage students to make these requests through email, phone calls, face to face interactions and the LinkedIn request tool and to suggest content for a 1-2 paragraph personal reference--and, if they are confident enough in the relationship, to ask permission to edit it for length, content, grammar, spelling, and diction prior to asking the reference to post it. We also point out students can remove any recommendation that they believe does not advance their career objectives.

As additional advice, we encourage students to consistently review their LinkedIn profiles to update and improve them.
Why These Exercises Work

These exercises proved to be both popular and valuable because they use students’ experiences with social media to lay the groundwork for highlighting the principles of networking through visual design and social media that can help identify opportunities that students might not have known about through their own limited networks. And these exercises relate directly to student career aspirations, helping them see the significance of promoting their unique brand of talents, accomplishments, and qualities in a variety of media as a foundation skill for gaining co-ops, internships, and full time work—and as a career building skill to be employed throughout a lifetime.

And these exercises help highlight the importance of seeing oneself through the eyes of potential employers, a key to tailoring career information to particular jobs. Specifically, they help students define their audiences, improve their storytelling abilities, show their talents using visual design tools, focus on meeting the audience’s needs, and sharing their ideals and passions to make emotional as well as rational connections with their target audiences. Of particular importance, these exercises help students understand the social construction of identity—how to employ a variety of narrative forms to promote oneself in a variety of ways to a variety of audience (Somers, 1994). Students also expressed excitement about sharing their stories in multimedia formats, commenting that these tools are much more “high touch” than career materials composed solely of words.

They also work because students can immediately use the materials they have created in a career search and hear classmates share positive and real-time feedback about the success of these tools in enhancing their career portfolios. And these exercises help highlight the importance of seeing oneself through the eyes of potential employers, a key to tailoring career
information to specific jobs. Of particular importance, these exercises help students understand the social construction of identity—in a variety of narrative forms/getting noticed required promoting oneself in a variety of ways to a variety of audiences.

An additional benefit is that students get to meet and network with each other during the first week of class, and to gain the benefit of both peer and faculty feedback on the career branding tools they employ during the semester.

In short, these exercises sensitize students to the importance of implementing a branding plan that demonstrates their ability to use a variety of contemporary multimedia resources to answer the question, Tell Me About Yourself.

References


Quality of Life in Mental Health Professionals Treating Military Service Members and their Families

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Quality of life in Mental Health Professionals Treating Military Service Members

Statement of problem

Trauma is characterized by the reaction of individuals after experiencing an event that involves threatens their lives, causes serious injury, or threatens their wellbeing or that of others. Traumatic events are associated with vary degree of physical and mental health issues. Children or adolescents that have grown up in poverty stricken environments have an increased susceptibility for trauma. As well, it has been shown that they are twice as likely as adults to experience or become a victim of serious violent crimes (Parker & Henfield, 2012).

With trauma experiences increasingly related to violent crime, sexual abuse, or military combat, a clinician will have more clients needing treatment for the emotional disruptions and the distress that it creates. Vicarious trauma is recognized as the result of these clinicians internalizing and re-experience the clients’ trauma throughout the course of treatment. The clinician can experience feelings of emotional pain, sadness, and distress as clients retelling their experiences. The clinician’s symptoms can be similar to those of Post-Traumatic Stress Disorder (PTSD). Whether combat trauma or other trauma as sexual abuse, the clinician can experience the stigma of the events and isolation which may be similar to that of the client (Parker, Henfield, 2012).

The presence of PTSD symptoms in clinician as a result of the exposure to the telling and retelling of experiences of their client’s increases their vulnerability to vicarious (VT) or secondary trauma (ST). Secondary trauma is defined as the symptoms and reactions that are held by clinicians as a result of similar symptomology of the clients as a result of their traumatic experiences. The symptomology is similar to those of PTSD in those having experienced trauma first hand.
Purpose Statement

The purpose of this study is to gain understanding of the influences of trauma can have service members and the professionals providing treatment. Identifying triggers and personal characteristics from the professional’s history or experiences can improve self-care routines both as an individual and within the organization to ensure quality client care and positive treatment outcomes.

Literature Review

Framework and Foundations

In establishing and understanding of compassion fatigue, burnout, and compassion satisfaction, it is necessary to define the theoretical framework used in approaching research. These terms and the methods used to measure them may be ones that have been defined and detailed based on current experiences currently; however, the thoughts surrounding the influence of these concepts has been present for many years.

Jung (1966) introduced the concept of self and “the wounded healer” in his explanation of behaviors. Self is the personal identification individuals form based on your experiences and “the wounded healer” is described as the clinician that has experienced life events in their life to cause negative emotional reactions. The idea of “wounded healer” demonstrates a paradox of the clinician being aware and engaged in the care of their own wounds while being available and successful in healing the wounds of others. The cost of caring is defined as the mental health effects that result from clinicians listening to their clients’ stories of pain and suffering and fears. The clinician begins to feel the similar pain, fear, and suffering thus identifying as secondary trauma (ST; Wang, Strosky, & Fletes, 2014). These reactions can be on many levels and with more or less intensity. These reactions influence the clinician’s experiences treating clients of
trauma. As a result of common trauma experiences, the client’s recalling of their trauma can trigger similar reactions in a clinician having experienced similar events or by simply living the trauma experiences as clients tell and re-tell their storied in counseling sessions. It requires the clinician to be mindful of their own emotional reactions and examine these hurts and difficulties within themselves (Laro-Hayes, 2013).

Clinical professional role

Laro-Hayes (2013) describes the clinical professional having the important role of providing external support to people having experienced trauma who are and have been hurting and having developed maladaptive ways of coping as a result. This support is gained and maintained through the clinician and client’s senses of self that has been influenced by trauma. Trauma experiences that may have been personally experienced by clinicians and clients or the clinician secondary experience of the client’s trauma from the recounting of can have similar distressing effects. These experiences and emotional reactions are part of trauma treatment and are significant in the success of treatment for the client. The clinician’s experiences and emotional reactions can create an unstable, uneasy therapeutic relationship that may interfere with the therapeutic process. The common traumatic experiences determine the clinician’s belief system is personal awareness, coping strategies (positive and maladaptive), life experience and personal history, and clinical training and experience with trauma and traumatic experiences.

As a result of traumatic events that have caused psychological injuries, clients will build a protective wall to ensure the no one is able to hurt them. Despite this wall, the client expects betrayal and loss of trust from anyone within their lives, including the clinician. The clinician may be the only support that is able to penetrate the resistance enough to effect positive change within the client. The clinician poses a double role for the client. The clinician has the power to
initiate and facilitate healing and at the same time can result in more hurt. The client enters treatment to establish a genuine relationship that begins their therapeutic journal but also fear that the same relationship it will result in more hurt and betrayal. The clinician has to have the ability to maintain balance of this continuum and be aware of the client’s struggles and their own personal struggles.

Trauma specialists have unique challenges by virtue of their work. It is not unusual for them to experience impasses during treatment or moments of anger, aggression, and a many other transferences related behaviors from the client. In addition, due to these factors, early termination is not an unusual occurrence either. All participants in the therapeutic process can self-protect or mimic and invite trauma-related emotions and behaviors from each other. The clinician’s challenge is to allow space for the client to have opportunity for emotional reactions and examining how the client’s own experiences can create any variance of behaviors from their client, i.e. denying, avoiding, repressing, etc.

**Combat Trauma**

Combat has been an avenue used for centuries to maintain order in a non-diplomatic, aggressive way between opposing sides. Those individuals that are actually participating in the fights are expected to carry out their roles in the mission and manage any personal, psychological experiences these events create. As a result, they carry around these memories and the emotions that these memories invoke. The ongoing recollection creates persistent, consistent distress for those participating in combat.

Combat stress has been termed as “combat fatigue” or “shellshock” early in our history. A “service member’s heart” was use to describe the post-traumatic stress symptomology that exists within combat veterans in an effort to define the impact that these events have on them
psychologically and emotionally long after any physical injuries have healed. When combat warriors are seen succumbing to the pressures of their traumatic experiences, where does that leave others? The practical struggle is seeing the strongest crumble under the weight of their own emotions and fears and not being able to overcome the demons that they face. Non-combat individuals feel disconcerted when these people of strength struggle. If these “strong warriors” struggle and become emotional reactive, where does that leave the one that feel that they are not? (Laro Hayes, 2013).

Other abuse trauma

Wang, et al. (2014) describe that traumatic experiences can include many areas. The most significant experiences that create more emotional reactions and symptomology include combat trauma, domestic violence, sexual and physical abuse, sexual violence, rape and torture. In addition, they reported that victims of criminal violence and those experiencing unexpected deaths did not correlate strongly to secondary or vicarious trauma. Clinicians that regularly work sexual abuse victims reported more disruptive perception of safety, trust, and self-esteem.

Modern Challenges

Research recognizes that combat related trauma is a common occurrence in the US military. The US participation in world conflicts and wars has increased significantly. It is estimated that over 38 million men and women have been charged with combat actions to date. As a result, the use of more sophisticated weaponry creates far more devastation. However, advances in medicine and emergency treatment have decreased service member fatalities but have significantly affected service member psychological trauma resulting in more PTSD related symptoms. These conditions can be disabling and create long term psychological injuries from the memories of the physical devastation and are significantly more common. In World War II,
there was over 400,000 lives lost during both combat and support actions with an additional 500,000 psychiatric injuries alone. In World War I, World War II, and Korea combined estimates the number of service members removed from frontline for psychological injuries was greater than the number of fatalities of those wars (Cantrell & Dean, 2005). The “hidden” symptoms that miss medical detection can create significant distress with long, lasting deficiencies in emotional, behavioral, and cognitive functioning.

Factors that will contribute to the lifetime mental health effects on service members include deployments, length and frequency, the shortness of time between deployments, witnessing more civilian casualties, and wide spread exposure to devastation. These factors not only affect direct combat service members but support functions as well. No one in combat is immune to witnessing traumatic events. These individuals may not be aware of what they personally need when returning from combat. However, they will experience the emotional distresses but won’t seek treatment. (Laro Hayes, 2013).

**Clinical professional traits**

The personal experiences of clinicians can affect the beliefs of the client. A clinician who has not experienced combat trauma may be seen as not being able to understand or would be judgmental. Clinicians must be able to hear clients’ story while being emotionally affective and reflect genuine positive regard for the client. Hearing the clients’ story entails understanding experiences to minor details without the client feeling as if they are being dismissed or blamed for the effect that it has on their lives. Demonstrating respect for the client and their story is critical for solid, therapeutic engagement. To demonstrate denial of a clients’ experience creates and disconnect that will result in the client feeling as alone as before seeking help.
To work effectively with military requires that clinicians have knowledge of the military culture and its effect on the thinking of service members. Clinicians must be attuned that when working with military personnel and their families, early termination is probable due to early permanent change of station (PCS) and other similar reasons. Military clients have the tendency of minimizing their reactions and their experiences for reasons that they feel may affect their families, their military service, or their privacy. Combat experiences may not be shared as freely for fear of placing an unwanted burden on someone that has not experienced similar things. This behavior is protection of those closest to them and including the clinician. Despite these being external factors, clinicians can feel that the lack of progress is a reflection of their abilities and lose motivation in the therapeutic process (Laro-Hayes, 2013).

Factors associated with trauma specialists, how treatment is delivered, and its effectiveness has been identified as experience level, education or specialized training, and any history of personal trauma. These factors effect the presence of Vicarious (VT, or Secondary Trauma (ST). In new or inexperienced therapists, vulnerability to secondary trauma is increased. External factors as the level of professional support or supervision in the workplace play a role in how well the clinician is able to remain resilient and objective in trauma work.

Preferred treatments for Post-Traumatic Stress Disorder are Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE). Both methods require the client to tell and retell their traumatic experiences in an effort to desensitize them or normalize their emotional reactions. Breaking through the client’s avoiding of memories and their reminders is a key component of any PTSD treatment. Research has found that clinicians suffer the accumulative effects of these sessions over multiple clients concurrently. To establish resiliency based on one client and their experiences is quite different than multiple clients with varying degrees of
intensity. Listening to the telling and retelling of stories from multiple clients creates anxieties, depression, and other PTSD type symptomology within the clinician.

The risk factors associated with increased potential of maladaptive results of vicarious trauma in the therapist include increased caseloads, severity of client cases, lack of perceived support through consultation and supervision, and providing treatment that is not evidenced based. Having a personal history of trauma can have a significant impact as well. If a clinician has trauma history and has received their own treatment, it may buffer them from vicarious trauma symptoms. The commonality of traumatic events between clinician and client can affect the impact of vicarious trauma (Wang, Strosky, & Fletes, 2014).

**Therapist challenges**

There are common themes and challenges that exist when working with clients who have experienced trauma. The culture around how they experience events and how they self-identify after the event is a consideration. For example, someone who has been sexually assaulted may identify as an assault victim afterwards. However, in the case of combat trauma, the military client typically identified as a service member prior to combat and may continue to identify as same after. The military culture becomes a mitigating factor regarding the mindset that, as military, they are strong, do not show weakness, and able to handle all situations. And if they are do seek treatment it is often within their own culture or from private resources where they feel they are protected from being seen as “weak” by their peer group.

Individuals who experience trauma that is work related, as military or emergency personnel, do so from their voluntarily choosing this career with the understanding that they may be put in harm’s way and experience violence in the course of their work. Clients in these situations may choose not to seek help for fear of seniors knowing their struggles and the stigma
attached with mental health treatment. This group often accepts the attitude that they do not need help and should be able to deal with it alone. When they do seek help, it can be through private, non-work related assistance to maintain strict confidentiality. Because of the stigma of seeking help and the concerns with privacy, this group typically has a negative view of seeking treatment.

Treatment professionals must be aware that younger military clients and females who have experience combat trauma in addition to sexual trauma is common in today’s military culture. Younger service members may have differing attitudes surrounding the military as a lifestyle and as a mission than those from older generations. The “mission first” mindset allows service members to distance themselves from others which interferes with professionals helping these service members.

The military culture as a whole exhibits the “mission first” mindset and have commonalities between groups, either between service branches or job duties. However, subcultures exist between groups that are distinguished by the uniforms, language, job duties, structural hierarchies, and comradery. Experiences of the service members of these subcultures may look vastly different from other military service members. An example would be military healthcare workers who have been deployed to combat have a very different experience of casualties and fatalities that can be more frequent and intensity. As a result, their experiences create its own set of emotional concerns from the exposure and can affect their role as a service provider (Laro Hayes, 2013).

Quality of Life

Clinicians who have experienced vicarious trauma through their clients function both personally and professionally within a decreased quality of life. The quality of life reduction can
be marked with poor sleep, nightmares, anxiety, depression, intimacy issues, and increased stress. Having a reduction in quality of life creates suffering that greatly affects their life and wellbeing. As a result, quality of care and client care outcomes can be compromised. A decreased quality of life becomes a quality of care issue in addition to a personal care one (Wies & Coy, 2013).

**Compassion Fatigue**

Secondary trauma has been defined more broadly as compassion fatigue. Compassion fatigue is the reduction of the client’s ability to express empathy resulting from their personal reactions to the client’s traumatic experiences. It affects the consequences associated with emotional and cognitive elements of secondary trauma exposure that may be similar but not directly the symptoms of PTSD.

Vicarious trauma and secondary trauma are often used synonymously however there is a subtle difference. Vicarious trauma is recognizes the accumulative effects of exposure to multiple clients and experiences. Secondary trauma is associated with a single event. Vicarious trauma is problematic as new information from life experiences is attempted to be assimilated into existing beliefs systems of the world or self. This assimilation can be related to the client or clinician’s beliefs as a result. Trauma specialists experience negative effects of indirect exposure to a client’s trauma including distressing emotions, decreased self-trust, disassociation, and decrease quality in personal. Vicarious and secondary trauma compromises the clinician’s ability to find meaning and purpose in their work that results in feelings of hopelessness and internal suffering through their client’s traumatic experiences (Wang, et. al, 2014).

Compassion Fatigue can be present as a result of physical and psychological distress often seen in caregivers with accumulating effects from their secondary exposure to trauma. The
feelings associated with Compassion Fatigue are derived from multiple disappointments in caregiving that promotes what is known as “helper syndrome”. Compassion Fatigue is referred to as vicarious trauma can manifest with symptoms of avoidance, fear, and hypervigilance similar to those of PTSD when the trauma is experienced first-hand. Burnout is usually diagnosed through exhaustion, frustration, and depression earmarked by over involvement with client trauma and lack of support within the work environment (Van Mol, et. al, 2015).

Care takers in social services agencies who provide services to the poverty stricken or underserved clients often experience this type of stress. In addition, clinicians with sexual assault clients, forensic examiners, and those in rape crisis is well researched and demonstrated frequent symptoms of vicarious or secondary trauma leading to compassion fatigue. Vicarious trauma symptoms include the clinician can experience increase nightmares, caution for safety of themselves and their families, loss of sexual interest or discomfort, and an increase intensity of personal boundaries. They often become increasingly distrustful people and situations that they encounter. This symptomology is similar to PTSD (Wies & Coy, 2013).

**Burnout**

Burnout is described as the result of stress in working with difficult cases and clients. Burnout can be associated in three ways: emotional, exhaustion, and personal distancing and reducing feelings of accomplishment. It can also be described as the general overwhelming feelings from experience traumatic events indirectly through client experiences. (Parker & Henfield, 2012). Van Mol, et. al. (2015) states burnout can be seen as emotional and behavioral in its effects.

Job stress that can lead to burnout can manifest in a variety of ways depending on the clinician and the work environment. The negative effects of job stress can reduce enjoyment
from work and the work environment. Lack of enjoyment creates long-term absenteeism and reduction of skills from leaving the job prematurely and being unemployed. It can also create physical symptoms of headaches poor sleep, backaches, and stomach problems. Mentally, it can lead to irritability, poor concentration, and reduction in self-esteem (Van Mol, et al., 2015).

**Compassion Satisfaction**

Compassion satisfaction is the third area quantified by the ProQOL evaluation instrument. Stamm (2005) defines compassion satisfaction as the opposite of compassion fatigue. Specifically, compassion satisfaction is the feelings of fulfillment and pleasure from providing healing and helping through therapeutic work. In turn, it promotes a sense of efficacy in one’s ability to promote positive healing and broad impact on the world. Its primary focus in on the providers or helpers in the psychotherapeutic process most often related to trauma specialists (as cited in McKim & Smith-Adcock, 2014). In addition, Stamm states that compassion satisfaction is the positive side of helping others and through that achieves satisfaction from being able to do the job well (Hunsaker, Chen, Maughan, & Heaton, 2015).

**Research Questions**

RQ1: Does age, gender, prior military experience and prior military combat experience correlate with compassion fatigue, burnout, secondary trauma, and compassion satisfaction when working with military service members?

RQ2: Does years of professional experience, professional license held, age, and gender correlate with compassion fatigue, burnout, secondary trauma, and compassion satisfaction when working with military service members?

RQ3: Does personal history of non-combat trauma in mental health professionals correlate with compassion fatigue, burnout, compassion satisfaction, and secondary trauma when working with military service members?
Discussion

Trauma experiences and treatment has become more common in psychotherapy. Clients suffering from trauma history have a unique set of challenges and obstacles that affect all areas of their lives. Trauma effects interpersonal relationships, trust, and betrayal. Clients seek treatment out of overwhelming emotional reactions that they are unable to manage.

Military population and combat trauma has significant characteristics that are not present with other forms of abuse. Combat experiences of loss of life and devastation are unique in the environment that it occurs and how the military culture addresses and creates personal struggles for military service members. Experiencing graphic violence between opposing sides and the same within the opposing side creates a chaotic, out of control feeling. The military culture establishes a “mission” mindset that requires them to respond to discord and violence in order to gain advantage over the opponent. This mindset once returning from combat can create PTSD symptomology. These symptoms come from an inability to manage the emotions created from witnessing significant negative events. As well, the service members’ families also must assimilate the changes in their service member when they return. Military service members experience related to combat. The changes in military culture and attitudes have identified sexual assault and childhood sexual and physical abuse as a presence that combat trauma compounds.

Therapeutic challenges require clinical professional to understand military service member and the culture that they are part. Military culture promotes comradery and inclusion by service members by virtue of shared training and “mission” mindset taught to them. This culture can make it hard for service members to seek and accept help with emotional issues. Strength and weakness is defined by the service members’ ability manage their personal struggles.
Quality of life can be measured and quantified by use of the ProQOL instrument. This instrument presents statements that the participant scores on a Likert scale of 1 to 5 regarding their level of agreement or disagreement. The ProQOL measures compassion fatigue, burnout, and compassion satisfaction. Each area contributes to the clinician’s ability to maintain empathy in the therapeutic process of trauma work and it success. The scores from this scale and variables of gender, experience, professional license, military experience, etc. can identify areas of concern and the needs to strengthen negative reactions. Increasing education, support, number and intensity of cases, and personal and peer mindfulness can increase satisfaction and reduce fatigue and burnout. Identifying what and how factors effect quality of life facilitates efforts to improve the work environment and personal beliefs improving overall success of trauma treatment.
References


Keywords

quality of life, PTSD, military combat, combat trauma, ProQOL,
Comparative Analysis of Self-Efficacy Beliefs among University Teachers of Distance Learning

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Abstract

The current research has been formulated to compare the Self-Efficacy beliefs in teachers at University level. It is greatly interested in this study to explore factors of self-efficacy beliefs. Locus of control, persistent behavior, classroom anxiety and professional mastery beliefs are the substantial indicators of self-efficacy beliefs. The main objective of study is to compare self efficacy beliefs in teacher of Distance Learning Education. Population of the study consisted on teachers of distance learning education Government College University Faisalabad. Twenty percent of total population was selected as sample i.e.136 respondents draw through purposive sampling technique. Moreover, data was collected with the help of questionnaire for teachers. The data analysis was done through statistical package for social sciences (SPSS) version 17. Multivariate analysis was done to check the association between variables. Male tutors have greater level of efficacy as compared to the female tutors in the Distance Learning Education Government College University Faisalabad.

Key Words: Self-Efficacy, Distance Learning, Locus of control, Persistent behaviour, classroom anxiety, Professional Mastery, Multivariate Analysis

Introduction

The idea of self-efficacy is claimed that every individual assess their skills to perform the certain tasks successfully. There are number of different researches that depict a strong interdependence between the level of self-efficacy and academic performance. In an online educational management system that needs students’ higher sense of freedom, as well as a greater
level of persistence and effort in the learning tasks. To be aware and know the intensity of self-efficacy of tutor seems particularly relevant.

Self-efficacy is defining as the person’s abilities and capabilities to accustom and achieves the tasks to expertise on the specific goals. Bandura (1997) defined, “Self proficiency as people’s decisions to adapt and assassinate courses appropriate attaining appointed types of performances. It is anxious not with the abilities one has but with judgments of what one can do with whatever abilities one possesses”. The distance education has recognized as a podium of the formal educational system after consciousness of the fact that merely formal educational system does not accomplish to necessitate the total population. In Pakistan the stipulate for education through formal system has constantly run in advance of resources the vastness of their population. Therefore, failing the demand in formal system, the need of non-formal education becomes palpable in concept of distance education.

Education is anxious for the absolute development of person. Education improves person’s capabilities, skills, adeptness and ideas. Education guides the attention of nations as vigorous as address and conserves the accomplished and present of the nations. Augment the expertise of advantageous and specialized manpower in association due to education. Teaching is a lot of acute profession in society. Teaching is major exigent occupation in the world. They are means of support to run the education system. “They bear the weight and responsibility of teaching, and apart from parents, are the main source of knowledge and values for children. Teachers are essential for the effective functioning of education system and for improving the quality of learning process” (Sartial and Tomer, 2004; Nadeem, 2011).

Teaching is a demanding and circuitous profession the job of teacher is both tough and demanding in the field of education. Hanif (2004) stated, “Teachers draw upon physical, emotional and intellectual resources in order to be effective in the classroom. Like all professionals, teachers are also overwhelmed by multiple and complex challenges. They lag behind their counterparts in relations to the opportunities for self development and professional enhancement”.

According to Bandura (1977) teacher efficacy is a particular type of self-efficacy. It is cognitive processes in which beliefs are constructed about an individual’s capacities to perform
at a given level of accomplishment are constructed. Effort put forth, persistence in facing obstacles, and resilience, all are considered to be influenced by self-efficacy.

Perceived ability named as Self-efficacy, “refers to the confidence people have in their abilities that they can successfully perform a particular task” (Bandura, 1977). The significance of a teacher’s self-efficacy has been proven by researchers of self-efficacy to be an imperative aspect of positive student academic achievement (Bryant, 2010). A teacher’s self-efficacy is a teacher’s own belief on performance of creating constructive scholastic changes.

This study was aimed at to compare self-efficacy between males and female teachers. It is greatly interested in this study to explore factors of self-efficacy beliefs. Locus of control, persistent behavior, classroom anxiety and professional mastery beliefs are the substantial indicators of self-efficacy beliefs (Woolfolk, 2004).

Though self-efficacy is an important access on behavior, it is not the alone influence. Behavior is an action of abounding variables. In adeptness settings, such as college education, added important variables cover skills, aftereffect expectations, and the perceived bulk of outcomes (Schunk, 1991). When the all-important abilities are lacking, self-efficacy will not aftermath competent performances. According to Bandura (1997), already adeptness behavior is formed, they are not stable. They can alter in backbone because the alone is consistently evaluating new information. However, already adeptness behavior accepts been accustomed over continued periods of time and based on a ample bulk of information, they are absurd to be changed. Because self-efficacy behavior is specific in nature, it is absurd to altercate “general” or “global” self-efficacy.

Objectives of the study

1. To explore the sense of self efficacy beliefs in teachers of distance learning education.
2. To explore the sense of self efficacy beliefs in teachers on locus of control.
3. To explore the sense of self efficacy beliefs in teachers on persistent behaviour.
4. To explore the sense of self efficacy beliefs in teachers on professional Mastery.
5. To explore the sense of self efficacy beliefs in teachers on class room anxiety.
Review of related Literature

Although women do have a noteworthy role in the medical sciences like clinical psychology and nurses discipline (Halford, 2003).

Locus of control is determined by three elements of control. These are ideology, motivational and self-important orientations. Relationship among these dimensions has been observed and some theoretical similarity has been found among ideology (structured control setting) and motivation orientation. Motivational orientation is anxious with the strategies that teachers tend to use to improve the academic and social feature of students’ life. The organize ideology dimension is purposely anxious with the maintenance of the classroom. Self-important orientation compares the association along with teachers’ self-efficacy beliefs and efficacy expectations. Efficacy potential confirms the self-efficacy beliefs on individuals have control in themselves (Hoy& Woolfolk, 1990).

Locus of control and anxiety are the significant components of self-efficacy beliefs. Individuals’ with self-efficacy belief can exercise some control over a demanding situation. However insight of lack of control is associated to increased levels of anxiety (Endler et al., 2000). According to Lang (1977) “anxiety is characterized as a set of loosely coupled components embodying apprehensive cognitions, physiological arousal and avoidant behaviour” (as cited in Bandura, 1997).

Self-efficacy viewpoint have a noteworthy correlation levels of persistence. self-efficacy viewpoint has a cause on the selection of individuals’ actions and activities, the hard work they spend on those actions and activities, how long they carry on with them when they face problems and how they search out the manage strategies for them (Bandura,1997). Individuals with high self-efficacy can exhibit more persistent behavior on difficult tasks than those individuals with low efficacy (Luthans, 2002; Myer, 2005).

Self-efficacy is an important variable in understanding variable in considerate the individuals’ success behavior that what knowledge they acquire and how they use it in successful situation (Schunk, 1982). Self-efficacy has a significant affect on the activities students are involved in. They exercise more effort; they show deeper interest, a stronger locus of control and have a higher level of achievement (Schunk, 1982).
Hypothesis

Multivariate analysis was done in this paper that test the following hypothesis

H0: There is no significant association among the, persistent behavior, professional mastery, locus of control, class room anxiety and self-efficacy.

Method and Procedure

The detail of material and methods applied to attain required purposes of this research. Precise method is a combination of different set of laws, techniques, and ways that the groundwork of research is based. During research scientific methods offer a line of action for authentication of available facts (Nachmias & Nachmias, 1992). Current research focus on the topic “Comparative Analysis of Self-Efficacy among Distance learning teachers: A case of Government College University Faisalabad”. All the male and female teachers who are teaching in the directorate of distance learning education Government college university Faisalabad consisted of the population of the study.

Sample

There are total 678 teachers (237 female and 441 male) in the distance education. A sample of 136 respondents was draw through purposive sampling technique that is the twenty percent of the total population. The data was collected with the help of a “Questionnaire for teachers”. Participants were personally approached. 68 male and 68 female teachers returned the questionnaire after filling.

Delimitations

The research has following delimitations:

1. The study was delimited to GCUF (Government College University Faisalabad).

2. The Study was covering the teachers of distance learning education GCUF.

Instrument of Research
In the context of data gathering about efficacy of teachers created by Tschannen – Moran & Hoy, (2001) was implemented this instrument for the measurement of tutors beliefs towards their own skills in the local circumstances of Pakistan. He fund this very useful. Researcher follows the same scale in this research. There are 50 questions/items at efficacy scale. 5 point Scale was used. The reliability of teacher self-efficacy scale was calculated through reliability on data collected pilot study. Sample consisted of 20 teachers from Distance learning. The reliability of scale comes out 0.68

Analysis of Data

Data analysis was done by applying simple linear regression Multivariate analysis. In this research, to check the effects of independent variables on the response variable multiple regression analysis was conducted. Regression model was used to analysis of cause and effect relationship between explanatory variables and response variable.

Relevance of the Model

This model is applied to check the effects of more than two variables on the respond variable. However, the factors that shape the community attitude toward life insurance were analysed through liner regression model. To check the suitability of the model assumption of the model was checked. The linear relation was analyzed by drawing the graph and the straight line shows that model is applicable (Gujarati, 2003).

Stepwise Regression analysis was applied to complete the analysis procedure. Analysis of data was done by using (SPSS) statistical package for social sciences version 17.0.

Table 1: Influence of various independent variables on dependent variable: a multiple linear regression model

<table>
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<tr>
<th>Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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<td></td>
<td>B</td>
<td>Std. Error</td>
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<tr>
<td>(Constant)</td>
<td>1.067</td>
<td>0.188</td>
<td>5.684</td>
<td>0.000**</td>
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</table>
Locus of Control  0.440  0.082  0.283  5.373  0.000**
Persistent Behavior  0.266  0.047  0.302  5.659  0.000**
Class room anxiety  0.133  0.057  0.126  2.328  0.021*
Professional Mystery  0.143  0.082  0.092  1.738  0.003*

Dependent Variable:  Self-Efficacy

$R^2 = 0.61$  \hspace{1cm} F-value = 22.45  \hspace{1cm} Sig. = 0.000**

The value of R-Square is 0.57. It shows, 61% change in Self-Efficacy in the faculty members of GC University in Faisalabad was explained by four variables such as Persistent behavior, professional mystery, class room anxiety and Locus of Control. F-test may also judge the overall significance of the model. The F-value is 22.45 which have significant at < 5% level of significant. It also suggests the high significance of the model.

**Impact of Locus of Control**

The coefficient for Locus of control had a +ve sign with the value 0.440 and is highly significant at 5% level of significance. This shows the locus of control has significant impact on the development of self-efficacy. Self efficacy can be increased or decreased through the level of teaching methodology, critic and mastering of skill activities performed by the teacher.

**Impact of Persistent behavior**

The coefficient for Persistent behavior had a +ve sign with the value of 0.266 and is highly significant at 5% level of significance. It shows the persistent behavior has positive impact on self-efficacy.

**Impact of class room anxiety**

The coefficient for classroom anxiety had a +ve sign with the value of 0.133 and is significant at 5% level of significance. It shows the class room anxiety from the teacher has positive impact on self-efficacy. Significant association between both variables depicts that through persistent behavior we enhance self-efficacy.

**Impact of Professional Mystery**
The coefficient for professional Mystery had a -ve sign with the value of 0.143 has significant at 5% level of significance. It points out that professionalism among teachers is very essential for the self-efficacy.

Conclusion

It was concluded that null hypothesis was rejected, there is significant association among the Persistent behavior, professional mystery, class room anxiety, Locus of Control and self-efficacy. It was also concluded male has more self efficacy as compared to the female teachers in the Distance Learning Education Government College University Faisalabad.

Discussion

The male teachers had more control over their work as compared to the female teachers. Bandura (1997) claims that Success or achievement constructs a strong belief in an individual’s own self-efficacy beliefs and control on their work.

It was further explored that male teachers have more skills of teaching without the help of others as compared to the female teachers. Myers (2005) reported that Efficacy is an individual’s belief regarding his or her capability to execute an assignment efficiently, reach a goal, apprehend about the consequences of performance, and to overcome obstruction for achieving the desired outcomes, required to deal with prospective circumstances. Individuals who have strong feelings of self-efficacy are more persistent, less anxious and are more rationally successful and mostly teach the class without the help of the other teachers because they have absolute trust on their abilities.

The male teacher reported favorable response towards the option that teachers feel worry about the style of teaching in the class as compared to the females’ respondents.. Stipek (1993) found efficacious teachers exercise trouble solving techniques and tasks to improve the attainment scores of students. If they feeling worry then they adopt new strategy of teaching. Roughton (2009) found that the attitude of the teachers can be affected by the people towards teachers whether negative or positive. Teachers own attitude does matter to allocate the responsibilities by the organization which will help him/her to do best of expectations Perceptually teachers develop their style of performance according to their attitude with their own behavior towards achievements.
References


Analyzing *South Park*’s “Proper Condom Use” as an Introduction to Critical Media Theory

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Abstract

Popular culture figures in television, movies, comics, video games and online videos have captured the imaginations of young people. The themes and characters of shows students watch regularly help shape their views on contemporary issues, especially as they compare their experiences with those portrayed on their favorite shows. This paper examines how “Proper Condom Use,” an episode of *South Park*, one of the most popular shows among young viewers, can be used as a springboard for in-class discussion of critical media theory through an analysis of this episode’s visual and aural humor, themes, characters, audience, and genre.

Our experience in exploring this episode with adult students confirms it is an excellent way of generating lively feedback, while also introducing students to concepts relevant to critical media theory, including imagery, character, theme, genre, and audience.

Teaser text: Delight students: introduce them to critical media theory by guiding them in a “literary” explication of “Proper Condom Use,” an episode of the popular and transgressive cartoon, *South Park*.

Popular culture figures in television, movies, comics, video games and online videos have captured the imaginations of young people. The themes and characters of shows students
watch regularly help shape their views on contemporary issues, especially as they compare their
experiences with those portrayed on their favorite shows (Duff, 2002). Lisa Patel Stevens points out that it helps to create student engagement to use non-print materials as pedagogical artifacts as students regularly engage in dynamic multiliteracies through their personal media choices, the content of which constitutes part of their conversations with fellow students (2001).

This paper highlights how we organize a class using an episode from *South Park*, “Proper Condom Use,” to introduce topics relevant to literary analysis as a platform for using similar frames in analyzing more complex media. Specifically, it describes an early in-class exercise designed to generate class discussion in weekend and evening classes at a Midwestern college.

These classes are populated largely by diverse adult students in their late twenties or early thirties, many of whom are parents, pursuing associate degrees on a part time basis. Our experience in exploring this episode with adult students--nearly all of whom report having seen one or more episodes of *South Park*, Comedy Central’s most popular show--confirms it is an excellent way of generating lively feedback, while also introducing students to concepts relevant to critical media theory, including imagery, character, theme, genre, and audience (See Hull, 2003 & Vasudevan, 2010). This exercise takes 60 - 75 minutes to complete, including showing the 22-minute episode.

**Pedagogical approach**

We introduce the conflict at the center of *Proper Condom Use* (Parker & Stone, 2001), which concerns how, when, and through what agents sex education should take place. This episode raises questions about the paths children should follow to adulthood. To stimulate discussion and establish a premise for later class analysis, prior to viewing the video, we post a quotation by Marie Winn that highlights the competing ideologies that students can see revealed
in this episode. She points out that we “have seen, in an amazingly short span of time, a transformation of society's most fundamental attitudes toward children. Where parents once felt obliged to shelter their children from life's vicissitudes, today, great numbers of them have come to operate according to a new belief: that children must be exposed early to adult experience in order to survive in an increasingly uncontrollable world. The Age of Protection has ended. An Age of Preparation has set in” (Winn, 1983).

We then play *Proper Condom Use* from start to finish, pausing at intervals to introduce a literary vocabulary and asking students to answer questions about each segment that specifically highlight a means of analyzing a literary work.

**Visual and Aural Humor**

We begin by asking students to identify visual and aural elements, the sights, sounds, colors, vocal inflections and actions (Nixon, 1999) that are key to *South Park*’s comedy. In the opening scene Stan and Kyle are burning a Jennifer Lopez doll with a magnifying glass, during which Stan yells, “Scream for me bitch.” Cartman, the most controversial of the main characters, then shows them how to “milk a dog,” a technique taught to him by mischievous fifth graders. We pause the episode, and students volunteer specifics of what they saw and heard and also indicate how these sensory--and transgressive--elements add interest to the story.

**Character**

We next introduce the concept of character, with definitions of protagonist and antagonist, that drive *South Park* stories. We ask students to identity traits of their favorite character and explain the role that character typically plays, including what makes that character interesting. We also ask whether this character is flat, displaying little change within or throughout episodes, or evolving, demonstrating growth and understanding. Students highlight
that within the cartoon format of *South Park* characters typically remain largely flat, though students point out that some characters admit to seeing the error of their ways at a particular episode’s end.

**Themes**

**Experience vs. Expertise**

We show subsequent scenes and ask students to analyze how elements of plot, motivation, tone, and values highlight specific themes within the episode, all of which can be identified in one or another of the short stories we analyze in subsequent classes. For example, a major theme of *South Park* is parodying the reliance on expertise rather than trusting personal experience. When Stan “milks” the dog, and when Randy and Sharon, his parents, observe his behavior, they say they will ground him for 10 months. Yet they cannot bear to speak with Stan about sex: their notions about childhood innocence destroyed, they do not provide age-appropriate information. Instead, they call a PTA meeting, assuming sex education at school is a “safe space” between their children, their children’s friends, and MTV—and that with comprehensive sex education, the children will subsequently engage in sexually responsible ways, and not in behaviors that lead to pregnancy and STDs.

*Principal Victoria:* Okay, parents. I know a lot of you want a chance to speak, but we have to talk one at a time.

*Sharon:* Look, our kids are learning sexual things on the street and on television. There’s no way we can stop it. The schools have to teach them sexual education at a younger age.

*Principal Victoria:* School policy has been to teach sexual education later. In fifth grade.
Mr. Tweek: It isn’t soon enough!

Stuart: Yeah. Why, just this afternoon our son was caught beating off our dog.

Chef: Look, parents. Do you really want your children learning about sex? Part of the fun of being a kid is being naïve! Let them be kids for a while.

Ms. Choksondik: Naïve at what cost, Chef? Parents, we have to face facts: Children in America are having sex at younger and younger ages. STD’s are affecting younger and younger kids all the time. The only way we can combat that is by educating children before they have sex.

Chef: The first thing that kids learn about sex shouldn’t be some bitch-scare tactic about STD’s.

Sheila: No, she’s right! With all the teen pregnancies that are out today, I think my boy does need to know about sexual education. From the school.

Students point out that this dialogue represents support for the view that common sense and experience lead to better decision-making than its opposite: relying on so-called experts. While the parents are concerned about their children, rather than teaching them about sex themselves based on their own experience and insight, their traditional role, they want to avoid discomfort and assume the school has experts who can teach their children more effectively than they can.

Students point out that this proves to be a false assumption. Miss Choksondik, an advocate for teaching sex education to the fourth grade children whom parents may presume has been licensed by the state as an expert in the subject matters she teaches, admits she has had little sexual experience. Chef, who represents the voice of experience and a character who has a reputation for having sex with many women, serves as a foil to this groupthink, asserting,
unsuccessfully at this point in the episode, that sex education should not be taught in schools, especially to 8-10 year-old children.

**Scare tactics are the best way to influence future behavior**

Another theme students highlight is the ineffectiveness of fear as a way of changing behavior. To implement the sex education program, adults use scare tactics to prevent their children from engaging in what they perceive as unsafe behavior. For example, when Wendy and Bebe indicate they believe the lessons will be fun, Miss Choksondick, responds emotionally, intent on making the girls so “scared straight” of sex that they will never even think about it as an option. “Fun, you think this is going to be fun! Well, let’s start with our first lesson then, shall we? She writes SEXUALLY TRANSMITTED DISEASES on the blackboard, asserting, That’s right, because unless you get boys to wear condoms you can and will get a sexually transmitted disease from them! ...Gonorrhea, herpes, chlamydia, HPV, syphilis, hepatitis B, hepatitis C, the list goes on and on.

This satirizes sex education classes as the lessons are inappropriate for this age group and scare tactics about negative consequences lead to fear of sex rather than a lifelong commitment to responsible sexual behavior, the program’s stated purpose. This scene allows for a conversation on the effectiveness of fear appeals in reducing harmful behavior. Many students report having experienced similar fear appeals in high school about sex education, and about smoking, driving and texting, and drug use as well.

**Unintended Consequences**

Another theme is the role of unintended consequences, a key driver of the plot.

On the second day of sex education, Miss Choksondik focuses the lesson on pregnancy, stating:
Alright girls. Yesterday we went over the myriad of diseases you can get from boys, but today we’re going to talk about the most horrible thing they can give you of all. Pregnancy! That’s right, since you girls have decided to be sexually active; teen-pregnancy is at an all-time high! You seem to think it’s gonna be fun and neat to have a baby, well let’s watch a little video shall we?

She shows them a traumatizing video during which the narrator states, “...later the contractions are happening closer together. Mom sure is in a lot of pain. Now we can see the crown of the baby’s head, stretching the vaginal walls in ways never before thought possible by Mom. Finally, the miracle happens, and the baby is born. But mom’s not done yet! She still has some afterbirth to push out of her.” This terrifies the girls who later run away from the boys when they meet in the cafeteria.

It becomes clear that the children are too young to understand the ideas that teachers are presenting, and no parents are present to object to this content. For example, when the girls learn about STDs and AIDS, their reaction is to reject the boys unless they wear condoms. Fear replaces friendship.

**Wendy:** Stay away from me Stan!

**Stan:** Why?

**Wendy:** Are you wearing a condom?

**Stan:** A what?!?

**Girls:** [all screaming loudly] AAAAAAGGGHHHHHHH!

**Bebe:** Do any of you have your condoms on?

**Kyle:** No.

**Girls:** AAAAAAGGHHHHHHHHH!
**Wendy:**  don’t you know that without wearing a condom you could get a disease?

**Kyle:**  Nun. Uh.

**Bebe:**  yeah huh.  If you don’t wear a condom, you’re gonna get AIDS!

**Wendy:**  You guys have to wear condoms.  Now, please, just, just go away.  We don’t want your AIDS.

The girls are terrified, not just of having sex, but of boys in general—without insight into actual sexual behavior. The boys are so upset about the conversation with the girls that they run to the drug store. The pharmacist is reluctant to sell such young children condoms, but the assistant explains, “**kids are going to do what they do, and it’s up to us to make sure they’re protected.**” The kids purchase condoms especially for boys their age, “**We just got in the new Gladiators for kids. ‘Lil Mini’s. They’re specially designed for kids under 10, and they’re only $5.95 for a box of fifty.**”

The next scene shows the boys trying to use the condoms. They are confused, evidenced by Butters passing out rubber bands to all of the boys to make the condom “stay on.” He exclaims, “there isn’t nothing’ that’s getting’ in my wiener through this thing!  And it’s even got a little reservoir at the end so you can pee in it!”

When the teachers hear about the condom purchase, and without knowledge of its context, they almost gleefully decide that they must start teaching sex ed. to students in kindergarten, oblivious to the fact that the kids only purchased condoms in the first place because of their scary lessons at school. These scenes are used to generate conversation about experiences students have had when they believe their voices were not heard at home or in the classroom.
Importantly, we point out that the children do not seek these remedies. The adults have bought into the idea that says that kids are having sex at younger ages, when in reality the *South Park* kids have no desire for sex or any real understanding of what sex is. The parents do not talk to their children about sex, ask them questions about their experience, or see if the children have questions for them. This spoof of the push to have sex education taught in schools at younger ages suggests that adults often project their ideas onto children, resulting in a misunderstanding on the part of naïve students, with the boys and girls each believing the other to be responsible for spreading disease.

Students laugh at the unintended consequences of the sex education program: the boys and girls skirmish, with the girls protecting themselves behind a steel fortress and the boys, riding in battery operated cars, on the attack, using water guns to break through this defense. In this battle, Kenny, hiding in his jacket, dies, a *South Park* plot convention, when struck by a boomerang. His death shows that the children are not the idealized innocents of their parents’ imaginations, another fruitful area for class discussion.

Nonetheless, while ignorant of carnal knowledge, the *South Park* children can be cruel and can experience fear, regret, anxiety, and especially in Kenny’s case, be subject to repeated extreme violence—and students can reflect on bullying they experienced in school and the emotional stress it created.

Similarly, some students report that like the *South Park* parents, their parents seemed only dimly aware their children were experiencing these negative emotions. In this episode this feeling serves as a source of the parents’ feelings of inadequacy, resulting in their histrionic outrage and grief over evidence that their children are leaving the Garden and facing uncertain and terrifying consequences which the parents cannot control.
Hypocrisy

Hypocrisy is another prominent theme. While Miss Choksondik and Mr. Mackey are busy teaching the kids about safe sex, they have unprotected sex themselves. Students point out that this illustrates the limitation of education as a predictor of behavior: while the teachers tell parents that sex education will lead their children to make responsible decisions, the teachers themselves fail to practice what they preach. After Miss Choksondick scares all of the girls into believing they will instantly contract a deadly STD from even being in the same room as a boy who is not wearing a condom, she is so desperate for sexual contact that she ignores her own rules, offers Mr. Mackey a drink, strips naked, lowers her head off-screen, and is later portrayed with disheveled hair. These scenes are ripe for conversation with students’ perceptions of adult insensitivity and hypocrisy.

Genre

We point out that in this South Park episode, a monolog, which we teach is a convention of satire and burlesque, lampoons the idea that if evil influences are not headed off early, a social apocalypse will occur—and the naive hope that experts can fix all issues children face. The monolog is delivered by Chef, the voice of experience in which he calls for rationality and truthfulness from parents.

Chef: Schools are teaching condom use to younger students each day. But sex isn’t something that should be taught in textbooks and diagrams. Sex is emotional and spiritual. It needs to be taught by family. I know it can be hard, parents, but if you leave it up to the schools to teach sex, you don’t know who they’re learning it from. It could be from someone who doesn’t know, someone who has a bad opinion of it, or even a complete pervert.
Miss Choksondik: He’s right. I never knew how special and personal sex was until just recently.

Sharon: This whole mess started because we couldn’t talk to our boys ourselves.

Sheila: It’s easier just to leave it up to the school, but it’s just not a school subject.

Principal Victoria: Then it’s decided: no more condom classes in grade school.

Stan: But Chef, when is the right age for us to start having sex?

Chef: It’s very simple, children. The right time to start having sex is…seventeen.

Kyle: Seventeen?

Sheila: So you mean seventeen as long as you’re in love?

Chef: Nope, just seventeen.

Gerald: But what if you’re not ready at seventeen?

Chef: Seventeen! You’re ready!

Stan: Well, I guess we got a while to wait before we have to worry about sex and diseases, huh?

When the parents see the error of their ways, they show they can reflect on their actions and learn from experience. We point out viewers sympathize with them because they realize their behavior springs from a positive motive to protect their children from future harm, in Kenneth Burke’s words, “a comic corrective” which serves as a relief valve from the tensions of the ware between the girls and boys.

Consistent with South Park’s transgressive nature, the episode ends with Cartman again “milking” the dog, indifferent to what he now knows is objectionable to the parents, as he finds it
personally gratifying. Students point out this is another indication of a self-absorption and “will to power” that defines his character.

**Audience Analysis**

After students have viewed the entire episode, we address the issue of audience analysis, asking students to identify what they find compelling in this episode and also how they see it appealing to other viewers (Duff, 2002).

Students identify plot elements that support differing value sets. The scriptwriters present a conservative perspective of traditional morality, where sex education comes from home and is not mandated by the government through the schools. Yet they mock conventional moral values by showing characters in highly degrading situations that stretch the limits of what is acceptable on a television show. They present a secularist world view with Chef’s declaration that the age seventeen is the right age to have sex—outside of love and marriage. Finally, they reflect a populist perspective that implies gaining carnal knowledge from older adolescents during puberty is preferable to teaching it to elementary school children before they have the experience or physical maturity to understand its role in human society.

**Conclusion**

Teachers can lead an analysis of “Proper Condom Use” as a way of introducing students to critical media theory, relating to young adult students in terms of their popular culture references and preferences. Within South Park’s ecosystem, the children remain ageless, indulging in the pleasures of childhood immaturity. They serve as outsiders, spectators to the futility of parents and others who try to impose adult burdens on them. Students laugh as they discuss the unintended consequences of the adults’ decisions and share similar stories from their own experience.
Our students report that they like this exercise as it introduces them to literary concepts, including theme, character, genre, imagery, and audience, in an accessible and humorous way. They also enjoy it because it offers them the opportunity to reflect within a familiar learning space on something they have experienced in their own lives: the use of fear appeals and worst case thinking intended to change young adult behavior--whether it be warnings about underage and unprotected sex, as in “Proper Condom Use,” or tobacco, alcohol and marijuana abuse as in South Park episodes “Butt Out” and “My Future Self ‘N’ Me.” In short, this exercise allows students to reflect thoughtfully as they share stories about their own school experiences with fear appeals while teachers can introduce literary concepts in an easily understood format.

Take Action Sidebars

Below are the discussion guides we have used for 1) analyzing “Proper Condom Use” and 2) for using similar literary concepts in subsequent analysis of short stories

Discussion Guide for “Proper Condom Use”

Images

What are the visual and aural elements that help create South Park’s brand of humor?

Character

With which character in South Park do you most identify? Explain the personality characteristics that you feel you have in common with that character.

Themes

Recall how fear appeals were used in school programs? Did you observe any unintended consequences in student reactions to them? Did you observe teachers or administrators practicing some of the actions the school discouraged in students, such as speeding or smoking?

As a series, South Park suggests that parents don't really understand what's going on in their young children's lives. Do you agree with this idea? Explain your answer with reference to your own school experiences.

Genre
What purpose does the ending monologue, a convention of burlesque, serve in this episode?

**Audience**

Why do you believe *South Park* resonates so strongly with a young and primarily male audience?

**Discussion questions for subsequent literary analysis**

Identify specific passages in London’s “To Build a Fire” and Crane’s “The Open Boat” that use descriptive language of colors, sounds, and other sensory experiences.

Describe how Ms. Brill’s character evolves from the beginning to the end of the story.

Explore how the theme of experience vs. expertise is developed in Gilman’s “The Yellow Wallpaper.”

What role does fear play in Jackson’s “The Lottery?” Identify text from the story that supports your analysis.

What are the unintended consequences of the grandmother’s actions in O’Connor’s “A Good Man is Hard to Find.”

How does the narrator in Walker’s “Everyday Use” view her daughter’s motivation in desiring to obtain her possessions?

Identify specific passages that create a satiric tone in Thurber’s “Secret Life of Walter Mitty.”

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**More to explore**  
Abstract: Bauman's (2000) 'Liquid modernity' proposes that late capitalism and post-modern society place downward pressure on the individual and thus lifelong learner to subsume the destabilizing and disenfranchising effects of neoliberalism (Grace, 2013). Theorists including Foucault (1996), Jardine (2012), Butler (in Dushinsky, Greco & Solomon, 2014), Hillman (1990) contend that the psychosocial fragmentation that occurs from confusing this post-modern effect with individual agency or choice are mistakenly—and perhaps deliberately, to preserve power—represented as decompensation on a personal level (psychopathology). This 'subjectification' (Foucault) effectively places the individual in a double-bind (Bateson, 1972) similar to the psychological distress that accompanies attachment disorders in affected child/parent relationships. The ‘macro’ effect of such is examined through Shepard’s (1998) anthropological, epochal study of human social organization, values and ontogeny.

This article explores the psychological, sociopolitical and philosophical implications of bifurcating ‘inner’ from ‘outer’ reality regarding awareness and agency in the face of global ecological crisis as a similar double-bind and attachment wound. In contrast to the long shadow of Cartesianism through modernity, which renders the natural world into mechanistic form from which human rationality is sovereign, Hillman’s call to re-engage the ‘world soul-ensnared’ as anima mundi, invites a holistic and interdependent reformation of psychology, pedagogy and human interrelatedness with Kosmos. Naess’ ‘ecological self’ is similarly examined as more holistic philosophical identification from which an ‘engaged’ (hooks,) loving
(Zajonc) and spiritual (Palmer) pedagogy can be reimagined as pivotal to healing this psychoideological rift with the ecology of life.

References:


Title: Building and Leveraging e-Portfolios for Hiring Purposes in the Field of Early Childhood Education

Topic Area: Early Childhood Education

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Abstract:

Technology is being used more and more in the field of early childhood education. With the technology focus and integration, early childhood education candidates are using these to apply for teaching and leadership positions and/or promotions. Recent literature suggests it is a way for potential candidates to showcase their technology skills and their match to a particular center or school based on the content of their e-portfolio (teaching approach, philosophy, etc.). In addition, potential employers are able to get a glimpse of the candidate’s skills, dispositions, etc. by having the opportunity to view the different elements in the e-portfolio either in the pre-screening process or in the final stages of hiring or promotion.
Counselor Self-Exploration as it Relates to the Communication Process

This article explores the pre-requisites of the helping profession as well as basic guidelines of counseling and emancipation from self. Additionally, a counseling session structure is proposed which may be especially helpful for beginning counselors. This structure includes the steps for identifying the concern, identifying the primary category of the concern, sharing the meaning of the experience and utilizing an appropriate response style.

Pre-requisites of the Helping Profession

1. We must sincerely want to enter the profession. We must want to work with individuals with concerns. We must have a continued passion and enthusiasm for what we have chosen to do or we will disintegrate into inadequacy.

2. We must be willing to give time. Counseling cannot be mailed in; it is a face-to-face relationship that requires a portion of our lifetime.

3. We must derive satisfaction from what we do if we are to replenish ourselves professionally. Most of us enjoy nurturing others. As counselors, we touch people and they grow. There are those who touch people and cause them to shrink.

Basic Guidelines of the Counseling Process

1. Clients come to counseling because they want change in their lives. We can help to promote change by either adding or reducing forces in our clients’ lives. Adding forces involves giving advice, suggestions and information. Reducing forces is a more important counselor role in that it addresses hindrances that may be preventing change within the client.

2. The primary goal in counseling is emancipation. To help or clients become self-directing by introducing them to the skills of decision making, problem solving, critical thinking, risk tolerance, and confidence building.

3. An effective counseling session is not concerned with whether the client leaves either happy or sad but rather that they leave the counseling session thinking.
4. The primary tool of the counselor is communication.

5. The foundation of the counseling process is that it is a relationship. As in all relationships we must remember that it involves the changing process of relating. It is a verb not a noun. It requires an individual’s commitment, agreement and investment.

Counselor Emancipations and Transformations as Readiness for Counseling

1. Clarity vs. Solutions: Counselors provide clarity of self and situations so clients can find their own solutions and make their own decisions. A counselor who gives advice is not helping the client learn how to become self-directed.

2. Observer vs. Reformer: Observation is to be with something without a point of view. Our emphasis is not to reform but to observe the behavior that is being demonstrated. Our focus is on the problem as well as the client presenting the concern.

3. Understanding through the Client’s Perception: We must see the world through our client’s eyes not our own if we want to understand our client’s world. Acceptance of our client is the residue of true understanding and acceptance. Understanding leads to mutual respect.

4. Communication vs. Conversation: We can define communication as sharing the meaning of an experience, while conversation can be defined as sharing the experience only.

5. Participation vs. Removed: We must invest ourselves 100 percent in being with those things we choose in life. To the extent that we do not, that is the extent to which we exist rather than live. The counselor must be “with” his client 100 percent.

6. Confiding vs. Confessing: Confiding is affective in nature while confessing is cognitive in nature. We gravitate to those we can confide in and likewise distance ourselves from those of whom we feel we have confessed. With confiding, we do not feel as if we have lost one iota of our self-concept or self-esteem.

Structuring the Counseling Session

1. Provide a supportive statement recognize the client’s efforts.
2. Identify the concern as stated by the client; not what we interpret what the concern should be.
3. First discuss what the client came in to discuss.
4. Follow the steps in sharing the meaning of an experience.
5. Utilize the appropriate styles of responding.
6. Incorporate techniques that facilitate communication.
7. End the session leaving the client thinking.

**Identifying the Primary Areas of Concern**
1. Problem solving
2. Decision making
3. Self
4. Relationships
5. Information and planning.

**Styles of Responding**
1. Supportive
2. Understanding
3. Probing
4. Interpretive
5. Evaluative

**Sharing the Meaning of an Experience**
1. Statement of the Item - *What is the concern?*
2. Physical Awareness - *Where is the pain or joy?*
3. Primary Emotions and Feelings - *Loneliness, inadequacy, fear etc.*
4. Attitude-Point of View - *My fault or their fault?*
5. Behavior - *What do you do?*
6. Considerations- Beliefs-Ideas ... *that may impact the concern.*
7. Images of the Past
8. Images of the Present - *How will you handle the situation now?*
9. Images of the Future - *How does the situation affect future plans?*

**Samples of Techniques in Counseling**

Listening, summarizing, reflecting, silence, open-ended questions, confronting, clarify, active listening, accurate empathy, evocative responding, etc.

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**Blending Competency-based Education with Self-directed Learning in an Online Course**

**Abstract**

Self-directed learning in an online learning environment is a growing phenomenon in society as Massive Open Online Courses (MOOCS), professional development, and competency-based education platforms emerge (Bonk, Lee, Kou, Xu, & Sheu, 2015; Lasse, 2012; Nemec, 2011). Bonk et al. (2015) present the findings from their qualitative data analysis, which highlight the positive effects of self-directed learning. Subject specific skill learning as well as general skills for career advancement are noted as positive outcomes from MOOC participation by the respondents to a survey (Bonk et al., 2015). Considering the academic area of self-directed learning, Chou (2013) provides case study evidence, which suggests a positive relationship between self-directed learning and academic achievement. As a course developer in an online learning environment, it is important to recognize the need to differentiate instruction and assessment in a self-directed learning environment to evaluate the attainment of the desired competencies. A study of current work in a developing self-directed online system of education is underway using a mixed methods approach. The non-experimentally designed research will use a survey similar to the Bonk et al. model for the qualitative data collection. The Moodle platform will be analyzed for time spent in the units of instruction in the 10 core courses of the program with successful completion of courses and graduation rates forming the quantitative data. Descriptive statistics and MANOVA analysis will be a part of the data analysis.
Keywords: self-directed learning, professional development, competency-based, course development, Moodle
Currently, IBL has become the central focus and method of delivery to support mathematics learning, especially within elementary schools in Ontario. In seeking how to optimally increase student achievement in mathematics, my research becomes one of investigating a vigorously espoused pedagogy among mathematics scholars today: inquiry-based learning. Therefore, identifying key methods and strategies, specifically as they relate to IBL, that serve to promote student achievement in mathematics is at the heart of my research. I describe the role teachers play in utilizing inquiry-based learning (IBL) methods to increase student achievement in mathematics. My study specifically focuses on investigating how elementary teachers implement IBL strategies/methods in their mathematics classrooms to promote mathematical understanding and proficiency among their students. In the context of my study, the term inquiry-based learning (IBL) will come to mean student-centered learning, where teachers take on a facilitatory role in promoting active engagement of learning through discovery, interaction and experiential problem-solving. In my research, I conduct a case study of my colleague, focusing on how she implements IBL strategies/methods in her mathematics classroom to promote mathematical understanding and proficiency among her Grade 5 students.
Title of submission: “People’s Passions Are Contagious”: Peer-Mentoring Experiences of Student Affairs Professionals in the Assessment Colleague Team (ACT) Project

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“People’s Passions Are Contagious”: Peer-Mentoring Experiences of Student Affairs Professionals in the Assessment Colleague Team (ACT) Project

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Abstract: We explored the benefits and challenges of peer mentoring for student affairs professionals who are learning about assessment. Benefits included gaining a different perspective, mentoring and being mentored, and having a trusting relationship. Challenges included role issues and fewer spring meetings. Findings have implications for training student affairs professionals in assessment.

Keywords: Peer mentoring, assessment, student affairs

Assessment has become increasingly important in student affairs. The field of student affairs defines assessment as “the process of collecting and analyzing information to improve the conditions of student life, student learning or the quality and efficiency of services and programs provided for students” (Blimling, 2013, p. 5). Student success outcomes have become increasingly important in higher education which prompted the field of student affairs to develop the Assessment Skills and Knowledge Standards (ASK) which “describe and prescribe assessment practices that are needed to address accountability initiatives” (Henning, Mitchell, & Maki, 2012, p. 12). These assessment practices apply to student programs and student learning (Elkins, 2015).

Despite the demand for assessment skills, many entry-level student affairs professionals lack preparation in this area (Young & Janosik, 2007 as cited in Herdlein, Riefler & Mrowka, 2013). Student affairs professionals may be intimidated by the assessment process and may believe they lack the expertise or time to evaluate their programs. (Elkins, 2015).

In order to promote a culture of assessment in student affairs, administrators may try various methods including having meetings on assessment topics and pairing participants with assessment mentors. The traditional mentor relationship consists of a mentor with years of experience and a protégé whereas the “step-ahead” mentor “is one hierarchical level about the protégé or in a position that would be the protégé’s next logical step in career progress (Darling, 1986)” (Ensher, Thomas & Murphy, 2001, p. 421). Peer mentors are at the same level regarding experience and status (Kram & Isabella, 1985 as cited in Ensher et al., 2001, p. 421).

Mentoring plays an important role in the success of student affairs professionals (Blackhurst, 2000). However, the importance of peer mentoring in higher education has focused mostly on faculty (e.g. Murakami, & Nunez, 2014; Thomas, Bystydzienki, & Desai, 2015). However, the experiences of student affairs professionals in a formal peer and step-ahead mentoring relationships in order to learn of assessment has not been examined. The exploration of this topic could add the perspectives of student affairs professionals to the peer mentoring literature. Therefore, the purpose of this study is to explore the experiences of student affairs professionals in peer and step-ahead mentoring relationships in learning assessment. The research questions are:

1. What are the benefits of peer mentoring in learning assessment?
2. What are the challenges of peer mentoring in learning assessment?
Literature Review

Assessment in Student Affairs

Student affairs professionals were asked to take a more active role in assessing student learning outcomes in order to demonstrate a connection between “our work” and the “academic mission of our institutions” (Upcraft & Schuh, 1996, as cited in Elkins, 2015, p. 40). By the early 2000s, student affairs professionals were expected to have skills in assessment (ACPA 2007 as cited in Elkins, 2015) and institutions developed assessment offices often in student affairs (Elkins, 2015). Whereas, senior student affairs personnel reported being committed to assessment, staff in residence life cited a lack of time and training as reasons for their resistance (Elkins, 2014 cited in Elkins, 2015). The assessment of learning outcomes needs more attention in particular (Elkins, 2015).

Although new student affairs professionals (those with 5 or fewer years of experience) believe assessment is important “at least 20% rated themselves as not at all proficient on 15 of 34 [assessment] skills” (Hoffman, 2015, p. 51). Respondents reported that graduate assessment courses and practical experience were the most helpful ways to learn assessment skills (Hoffman, 2015). Regarding how they anticipated learning assessment in the future, 84.5% believed they were very likely or likely to learn assessment on their own as part of their job or a workshop.

Peer Mentoring

Whereas the benefits and challenges of peer or step-ahead mentoring of student affairs professionals engaged in learning assessment have not been examined, the effects of peer mentoring in faculty contexts have been studied. Scholars discovered that women professors and administrators in STEM fields who joined peer mentoring groups at their institution reported benefiting from the personal and professional connections. Challenges remain as to how to facilitate the groups (Thomas et al., 2015). New faculty reported that they felt safe engaging in “backroom talk” with their peer mentor. At their meetings, they reviewed what “went well and what didn’t” and discussed their personal lives (Kensington-Miller & Ratima, 2014, p. 29). They came to know more about the university and received support (Kensington-Miller & Ratima, 2014).

Research Context

The Assessment Colleague Team (ACT) Project was implemented at a four-year primarily non-residential public university in the Midwest that offers numerous bachelor’s and master’s degree programs. Enrollment is approximately 15,000 students. The Division of Student Affairs employs approximately 120 individuals including graduate students. Roughly 900 faculty and staff are employed at this university.

Method

The Assessment Colleague Team (ACT) Project was implemented and funded by Division of Student Affairs at this university. This project ran for one academic year. Any unclassified professional staff members and graduate assistants that worked in the area of Student Life were eligible to participate and were emailed a flyer explaining the ACT Project including what it is, who is eligible and program activities. Individuals signed up for the program online and were matched with a colleague based on similar interests regarding assessment experience. Participants attended an initial kick-off meeting in the fall. They received an ACT Colleague Manual that explained the role of the ACT Colleague, how to provide constructive feedback, and tips for holding each other accountable.
After the kick-off meeting, colleagues were encouraged to meet to set goals and discuss assessment. These colleague meetings were supplemented by Student Affairs Divisional professional development activities on assessment, webinars, and existing professional development activities on campus that had to do with assessment.

Eleven program participants consented to take part in exit interviews. Seven participants are White, 2 are Latino/a and 1 is African American. Four participants were graduate students at the time of the interview and 7 are working professionals. Seven participants are women and four are men.

Interviews lasted between 30 and 90 minutes. Interview questions included: Tell me about your journey in developing assessment skills; Tell me about your experience with your ACT Colleague; What were some benefits to having a colleague? What were some challenges to having an ACT Colleague? What did you discuss in your meetings? Participants consented to the study and to having the interview audiotaped. The study was approved by the appropriate Institutional Review Boards. Respondents chose or were assigned a pseudonym. Interviews were taped and transcribed by the first author. Transcripts were sent to participants and respondents were asked to read the transcript and respond with any comments. One respondent indicated there were spelling and punctuation errors in the transcript. These errors were corrected.

The data were analyzed inductively using the constant comparative method (Glaser & Strauss, 1967). Initial coding was completed which was followed by axial coding (Glaser & Strauss, 1967). Team members looked within and between transcripts to ascertain themes.

Findings

Participants discussed the benefits and challenges of peer mentoring. The themes for benefits included: Gaining a different perspective, mentoring and being mentored, and having a trusting relationship. The challenges included role issues, particularly for those who were in step-ahead partnerships. Second, the peer mentoring meetings became less of a priority in the spring.

Benefits of Peer Mentoring

Gaining a different perspective. Gaining a different perspective was the most reported benefit of peer mentoring. Everyone worked in the field of student affairs but had different expertise. For example, one person in the dyad worked in Greek Life whereas the other person worked in residential life. Participants learned about other areas of student affairs and asked questions that strengthened assessment efforts. In addition, individuals learned more about each other’s areas. Third, individuals realized that assessment could be accomplished in other ways and they received new ideas about how to assess their programs. Participants also gleaned new ideas about how to assess for things and apply this knowledge to their own context.

Mentoring and being mentored. Mentoring occurred in the peer mentor project and most enjoyed mentoring their partner and/or being mentored. Lisa enjoyed mentoring her partner as he was a graduate student and she was a working professional in student affairs because she learned “what [he] is passionate about and why he is doing assessment” as well as asking about his goals after graduation. Respondents mentioned enjoying having to defend choices regarding assessment because this made them think more critically about their choices.

Although only one participant indicated that her peer mentoring experience made her remain in the ACT program and become more interested in assessment, we believed this finding might be underrepresented. Jessie Mae admitted that prior to joining the ACT project, she was “not remotely” interested in assessment. Her peer mentor helped Jessie Mae become excited
about assessment. Jessie Mae stated, “[My partner’s] intentionality helped me stay on track and want to continue to do it. People’s passions are contagious.”

**Relationship of Trust.** Implicit in many of the findings was a relationship of trust. Peer mentors met informally throughout the year and learned more from each other. The most successful partnerships were based on trust.

**Challenges of Peer Mentoring**

**Role issues.** In general, participants mentioned few challenges in the peer mentoring dyads. Although few individuals discussed this challenge, we believed that this finding was significant. In step-ahead dyads, there were sometimes role issues that surfaced. Betty was a step ahead of her partner. She stated,

> Yeah. [Meeting] was hard for me because I think at times I fell into the mentor role for her which was great but she was really struggling in her work life and it put me in this really weird spot because she was supervised by a colleague so it was really hard.”

In contrast, Denny did not want to be mentored by his partner. He stated:

> I would say what was less effective is that sometimes there was role confusion a little bit. She wanted to be a mentor in more than just assessment so 15-20 minutes of the hour was: How are you doing in classes? What’s your job like? How is that working with your supervisor? This is role confusion because you are not that mentor. I already have another mentor on campus where I go to have those conversations. That was less helpful.

Challenges arose when individuals had differing expectations concerning their roles or purposes.

**Meetings were less of a priority in the spring.** The spring semester tended to be busier for many of the participants. The peer mentoring meetings seemed like less of a priority for some. Denny’s comments were representative:

> With the second colleague what was less helpful is probably the fact that she wasn’t a participant from the beginning and also the schedule. It wasn’t a priority on her list so it didn’t become as much of a priority for me. That’s why it only went to once a month meetings instead of trying to push to meet every other week and continue progress on this.

**Conclusions and Implications**

Respondents benefitted in several ways from their meetings over the academic year. The peer meetings broadened their worlds. They gained new understandings about their projects and offered insights to their partners. They learned about other areas of the university which enriched the assessment in their own area. In short, all participants were in the field of student affairs, but not being familiar with each other’s particular contexts, they were outsider within. Expanding one’s knowledge about other areas of student affairs created interconnections between areas. It also exposed graduate students to other areas in which they may want to become employed. When organizing learning groups and dyads, student affairs professionals should recognize that everyone brings knowledge and experience that inform their ability to teach others and learn from others.

In addition to learning about other areas in student affairs, individuals enjoyed defining and defending the assessment choices they made and they also applied ideas they learned from
their respective partner to their context. The colleague team meetings gave partners the time and space to engage in critical thinking. Critical thinking “refers to the use of cognitive skills or strategies that increase the probability of a desirable outcome” (Halpern, 1999, p. 69). Making decisions, analyzing arguments and solving problems involve critical thinking (Halpern, 1999). Second, adults more often want to learn something they find useful in their lives and the dyad conversations helped them achieve this goal (Knowles, 1984).

Colleagues not only engaged in critical thinking but they also mentored each other which confirms previous literature on peer mentoring (Driscoll, Parkes, Tilley-Lubbs, Brill & Bannister, 2009). In the traditional mentoring relationship, the mentor dispenses knowledge and the protégé receives this information and has little to give. It is rather the “banking” model of education (Freire, 2007) in the traditional mentor relationship. However, participants in this study noted that they were teachers and learners in the peer mentoring process. Lindeman (1926) and Knowles (1984) note that adults come to learning opportunities with a variety of experiences that helps them learn and teach others.

While there were benefits to peer mentoring, there were also challenges. The findings from this study confirm others (Brown, Nairn, van der Meer, & Scott, 2015) that note that role conflict emerges particularly in next-step mentoring relationships where parties are at different levels of the organizational structure. To ameliorate this problem, perhaps in an early meeting, partners in next step relationships can discuss expectations for topics of conversation and come up with some tenets to abide by. Brookfield and Preskill (2005) suggest establishing discussion rules. In next step peer mentoring relationships, establishing expectations might be helpful, particularly when individuals are in a small student affairs division or people work on a small campus.

Last, participants noted that there were fewer reminders from ACT Team Leaders in the spring and the spring term was busier which led to fewer meetings with one’s ACT partner. Program leaders may want to reinvigorate the dyad colleague meetings in the spring. This could be accomplished by remaining vigilant regarding email reminders, changing or increasing incentives to meet, and perhaps having the dyads regroup to review their goals and make new ones.

**Limitations and Future Research**

There are limitations to this study. First, all of the participants were from one university in the Midwest. Universities that have smaller or larger student affairs divisions and programs may have different results. Second, respondents were all volunteers that participated in the Assessment Colleague Team project and worked in the Division of Student Affairs. Those who did not volunteer for the program might have different experiences in peer dyads. Participants requested either peers or next step peers. Results might differ if participants were assigned to dyads based on different criteria. Third, many participants were new to the field or believed they had little experience in assessment. Participants with more assessment experience may recognize different benefits and challenges to peer mentoring in the area of assessment.

In order to obtain a more detailed examination of the ACT program and of the peer mentoring experiences in general, perhaps dyads could keep journals of their meeting experiences as part of a formative evaluation of the ACT program and of their peer mentoring experiences. What types of learning occurred in the dyads? What enhances learning in the dyads? Last, a closer investigation of the power and control issues involved in peer mentoring in student affairs is in order, particularly in the step-ahead pairings. How do power dynamics influence the learning of assessment?
References


Mindfulness through the Medicine Wheel

• Indigenous Education or
• Health Education or
• Cross-disciplinary areas of Education

presentation format Workshop,

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This workshop will lead participants through the four quadrants of the Medicine Wheel, i.e., Mind, Body, Emotions, and Spirit, as exploratory points of self-awareness. As a very adaptable instrument, it can be tailored specifically to direct the attention of students and/or employees using various stimuli, e.g. a short video, reflection, meditation or walk, in order to deepen personal awareness within the context of the classroom/work environment.
Mindfulness through the Medicine Wheel

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Abstract

Although there are many variations of the Medicine Wheels, all can be instruments to assist people of all ages, races and faith to increase one’s self-awareness. Each can illustrate an individual’s relevance of the moment in creation and connection to the Sacred Mystery. During my doctoral studies (2002-2007), I participated in an “Intensive” course. Each day in class we centered ourselves and reflected on the whole person incorporating the four directions of the medicine wheel, i.e., East, South, West, and North along with the four quadrants, i.e., mind, body, spirit and emotions.

This workshop employs Graphic Intelligences (Bennett 2011) by applying a placemat activity developed since then to help high school students and employees of Covenant Health, Lethbridge better understand themselves and their relationship to specific topics. The high school where I teach has approximately 18% aboriginal population mainly Blood and Piikani Nations, the Medicine Wheel used is rooted in the Blackfoot tradition.

In my classes, the Medicine Wheel assists students to convey observations during various educational activities both academic and non-academic. As well, it forms the basis in a mindfulness walking exercise to break up a two-hour class. A list of descriptive words for each quadrant is provided. All students are able to identify one word or find one of her/his own that best describes each part of the Medicine Wheel at that moment in time. Then, using the descriptors as a spring board, the students are able to write a rationale for identifying those descriptors.

In the workshops, the Medicine Wheel provides a simple way for employees (various ages, nationalities and educational background) of Covenant Health, Lethbridge to articulate his/her observations after viewing short videos on specific values of the organization. This provides a safe way to quickly document self-awareness and then choose a part of the Wheel that she/he is willing to comfortably share with another employee using Think/Pair/Share (Bennett/Rolheiser 2001). Thus building trust, understanding and relationships.
Title: The Impact of Technology and Course Design on Traditional and Distance Student Engagement, Success, and Satisfaction

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Abstract

Distance education and online learning are not new phenomena, and a plethora of information exists about best practices for teaching students located remotely. However, focusing on online technologies and the design of course sites for only distance education does not leverage the true power of these technologies for students, regardless of their location. The real potential for technology’s transformative effect on higher education is to harness the disruptive power of online technologies to impact the ways that we teach all students. Technological innovations in teaching provide clear opportunities for enhancing student engagement (as measured by level of interaction with online course materials and activities), student success (as measured by student performance and overall course grades), and student satisfaction (as measured by faculty course evaluations) for all students.

The Warrington College of Business at the University of Florida has experienced an evolution of change in course design support for faculty teaching in high-enrollment courses that include both traditional and online students. The college has been involved in teaching core and elective courses in the undergraduate program with enrollments in the hundreds since the 1970s. Beginning with lecture capture in traditional classrooms that progressed from simulcast to cable television to VHS recordings to online streaming videos, the college has leveraged this resource into an online program that enrolled its first students in 2001. However, at the time of the online program rollout, faculty had very little support related to video production, technology innovations, or support for online course design. In 2014, with the creation of UF Online (http://ufonline.ufl.edu/), resources became available to support faculty, and a transition began. Working with faculty, instructional designers in the Center for Teaching & Learning helped to create online course websites in the university’s learning management system, supported the integration of learning activities and technology tools into the course sites, and encouraged shifts in the methods of video production. Additional course activities were incorporated into courses such as online business simulations, online discussions, student projects and blogging, and team-based learning. In addition, several courses transformed their assessment practices. All these changes had an impact on the learning environment and experience for both traditional and online students.
Student involvement is one of the most important predictors of success in college (Astin, 1993), and increased student involvement with both faculty and fellow students provide for the strongest positive involvement (Astin, 1996). Historically, in high-enrollment courses, little opportunity existed for in-person involvement and interaction. This was due to the faculty resorting to passive activities that left students primarily consuming lectures and completing mostly multiple-choice exams. Even though considerable research indicates that active or cooperative teaching approaches that engage students in “doing” have benefits for student learning, many instructors still teach their courses using traditional lecture methods (Faust & Paulson, 1998). McKeachie wrote in the Handbook of Research on Teaching (Gage, 1963, p. 1125) that "college teaching and lecturing have been so long associated that when one pictures a college professor in a classroom, he almost inevitably pictures him as lecturing." The fundamental transformation of education from lecture-based to activity-based learning can occur when technologies that allow for activities other than simply watching lectures are added.

In addition to the benefits for the student learning experience, these technologies have an impact on both students’ course persistence and institutional retention. Based on data from the National Survey of Student Engagement (NSSE) gathered from 18 different universities, Kuh et al. (2001) found that the probability of student persistence increased as students engaged in “educationally purposeful activities.” The addition of simulations, projects, and discussions are activities that contribute to creating a more active student learning experience.

References


Coming to the Table of Mission Statement Based Bargaining:  
An Incarnational Paradigm.

Educational Administration or  
Human Resource Development

Paper Session

To bridge the apparent gap between a process of collective bargaining driven by economics only and one motivated by the parties’ mission statements, Lonergan’s Transcendental Precepts and Functional Specialties (Lonergan, 1972) were employed to create Mission Statement Based Bargaining. Every bridge requires a sound foundation, so in the construction of this new paradigm, envisioning “a community of truth” (Palmer, 1998) before reflecting on collective bargaining within the framework of a mission statement is paramount.

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Coming to the Table of Mission Statement Based Bargaining: An Incarnational Paradigm.

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Abstract

Whether management or union, this session sets the table for both organizations to live their Mission Statement within the six stages of collective bargaining i.e. fact finding, priority setting, proposal development, proposal exchange, negotiation, memorandum of agreement. With Lonergan’s Transcendental Imperatives (Lonergan, 1972) i.e., Be attentive! Be intelligent! Be reasonable! Be responsible! as a template, this presentation will walk participants through these six stages of collective bargaining by means of Lonergan’s Eight Functional Specialties (Lonergan, 1972) as outlined in this flowchart developed for Holy Spirit Catholic A.T.A. Local #5.

Although this new paradigm for collective bargaining came out of the Catholic tradition, it is not mutually exclusive to Catholic Schools or Catholic organizations. My preliminary research demonstrated the need for a new paradigm in order to bridge the apparent gap between a process of collective bargaining driven by economics/politics and one motivated by the parties’ mission statements. Since every bridge requires a sound foundation, it was deemed necessary, in the construction of this new paradigm, to envision “a community of truth” (Palmer 1998) before reflecting on collective bargaining within the framework of a mission statement. Since this reflection requires fleshing out a mission statement throughout the collective bargaining process of a Catholic school division, it seemed fundamental to view collective bargaining in the light of a theology of Incarnation which provided a way of coming to the table of Mission Statement Based Collective Bargaining.
### Hawaii International Conference on Education, 2017

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ADVANCING NUMERACY: AN EXAMINATION INTO FIJI LITERACY & NUMERACY ASSESSMENT (LANA) AS A DIAGNOSTIC TOOL FOR NUMERACY LEARNING.

Abstract

This is a study done to investigate the effectiveness of Fiji Islands Literacy and Numeracy Assessment (LANA) programme in primary schools. This assessment is conducted for Years 4, 6 and 8 in Fiji Primary schools to diagnose learning deficiencies in literacy and numeracy. This study was done in Suva, Fiji Islands, to ascertain the role of LANA in the diagnosis of students' needs in numeracy skills. The literacy assessment of this programme will be done at a later stage as the researcher for this study is a specialist in Mathematics and therefore has focused on numeracy skills assessment. The study adopted a mixed methods approach, using ‘talanoa’, traditional Fijian dialogue, and survey methods as its key instruments for data collection. The sample population comprised ninety teachers from twenty primary schools in the central division of Fiji. The study argues that although there has been extensive emphasis on improving numeracy in Fiji, it has had inadequate impact on improving the numeracy skills of primary school children. The findings revealed that a large proportion of teachers understand that the role of LANA is to diagnose numeracy learning gaps. However, they often ignore this role of LANA and use it as summative assessment. The findings also reveal that teachers perceive LANA as another national examination rather than a diagnostic tool for assessment and therefore teaching pedagogies are aimed at achieving the more difficult learning outcomes. This perception is so derived because one of the key indicators of a high performance rating from staff performance appraisal is a high achievement in LANA; the higher the pass rate in LANA, the better the appraisal rating of teachers. The study found that teachers are teaching students to pass LANA exams rather than focusing on numeracy skills acquisition. The study also found that teachers do not have the necessary skills to develop pedagogies to assess if the learning outcomes of their lesson have been achieved. Recommendations to address the issues arising from this study include a
range of initiatives to provide professional development and skills enhancement for the primary teacher workforce in Fiji.

1.0 Introduction

The Fiji Islands Literacy and Numeracy Assessment (LANA) is a standardized assessment prepared by the Fiji Ministry of Education to be undertaken by students in years 4, 6 and 8. It is a national formative assessment in which students are tested on their understanding of concept. It assesses literacy (English) and numeracy (Mathematics) skills only. Although the assessment is administered to diagnose the learning gaps in both literacy and numeracy, this study focused on the teachers' effort to use LANA as a diagnostic tool for numeracy learning.

The Fiji Education system has undergone a number of reforms recently which has impacted the teaching and learning process. This study was conducted in selected primary schools in the central division of Fiji. Total school roll, distance from the main urban centers and the ethnic makeup of the schools were some of the features taken into consideration during the selection of the sample.

1.1 Statement of the Problem.

In Fiji, numeracy has always been an area of concern as reports show that students achieve poor scores in mathematics examinations. A report by the Minister of Education (2014) highlighted the very low average on Mathematics scores of students in the Year 12 and Year 13 national examinations as compared to other key learning areas. This problem has been attributed to non-mastery of the basic mathematical concepts at the foundation years of learning.

1.2 Purpose

The purpose of the study is to ascertain whether teachers are using LANA to diagnose numeracy learning gaps.
1.3 Significance of the Study

This study is significant and timely given the ongoing deliberations of the mathematics achievement of students and their inability to solve mathematical problems. It will also inform the development of teacher training programs at the Fiji National University regarding relevancy of assessment and its commitment to the teaching learning process. It would also provide platform for further research in the area of assessment and instructional practice.

1.4 Research Questions

The main research questions that guided this study were;

(i) What impact does LANA have on the teaching strategies used by the Fijian Primary School teachers?

(ii) What are teachers doing to fulfill the objectives of LANA?

(iii) Are the teachers utilizing LANA feedback to improve numeracy learning?

2.0 Background

2.1 What Is LANA?

Literacy and Numeracy Assessment is the standardized assessment method which is carried out in Year 4, Year 6 and Year 8. It is a national formative assessment in which students are tested for their understanding of concept and not knowledge at crucial levels in the system. It assesses literacy (English) and numeracy (Mathematics) skills only.

LANA satisfies a criterion-referenced category of assessment where the students’ performances are assessed in relation to an expected standard or specific objective. The test items used reveals the students strengths and weaknesses in terms of knowledge or skills (Hart, 1994). It follows an outcome based prescription, which means that the objectives outlined in the mathematics and English prescription for teachers are rewritten in outcomes form for parents and students. This is done to give meaningful feedback to allow an understanding of what students have achieved and have failed to achieve. LANA uses new
analyzing software (Rasch Scale) that places items on a graduated scale of concepts/skills ranging from easy to more difficult.

2.2 Purpose of LANA

Proficiency in literacy and numeracy is essential if young people are to fully develop their potential in their careers and as effective members of their community and society. Where there are low levels of literacy and numeracy in the adult population it is an indication of low basic skills and low employment levels (UNESCO, 2011).

The purpose of LANA is, first, to empower teachers to be able to use appropriate assessment activities to gather evidence on what students can or cannot do in any given area of study, or outcomes, in order to provide specific assistance to students (MOE, 2010). According to Tombari & Borich (1999, p.3), assessment occurs overtime during which the role of the teacher is to help the learner improve. This makes assessment of students with regards to goals and objectives important (Goldenberg, 2004).

Secondly, as has been noted, to improve the curriculum and teaching methods, it is very important that the assessment methods are also improved (Torrance, 1995). This suggests that assessment paves the way for the effectiveness and efficiency of the teaching/learning process in the classroom. Thus LANA empowers teachers' capacity to identify weaknesses in Literacy and Numeracy and take immediate remedial action.

Thirdly, assessment also has a focus on accountability. It supports progression in learning. LANA leads to actions that will support further learning and attainment of mathematical skills (Broadfoot, 2007). Actions would only be taken by the teachers to improve teaching; students would also be motivated to improve themselves by putting in more effort to learn. Therefore, LANA empowers both, the teacher and the learner in the classroom. It can also be referred to as assessment for learning rather than assessment of learning. Assessment of learning is summative in nature. It provides feedback on what learning has taken place. Assessment for learning on the other hand is formative in nature and provides feedback for the improvement of learning. This indicates that the analysis of the result of assessment creates a benchmark on which the teacher and the learner can progress from.
2.3 LANA as a diagnostic tool for assessment.

Assessment has taken a turn from the traditional examination to a more outcome-based, child-oriented, parent friendly comprehensive reporting. This suggests that there is also a shift in the teachers’ role from that of the transmitter of knowledge to a facilitator of learning. Zevenbergen et al (2004,p.5) states that...

*Good pedagogy is about high intellectual engagement and helping students see and make connections; it is learner centered, where each individual's knowledge and culture is valued and learners feel supported in their learning*

LANA was introduced, following the attempt by the Curriculum Development Unit (CDU) of the Ministry of Education, to localize and contextualize the teaching learning process and to make assessment more student-centered and less teacher directed. Students do not ‘pass’ or ‘fail’ LANA, rather they are only able to determine the skills that they have not mastered from the given outcomes. From the result of LANA, teachers are able to plan for remedial activities that would assist the learner to master the skills.

LANA uses multiple choice test items which comprise of a question, 3 functional distractors and a correct answer. The distractors are usually taken from the common mistakes that student's make. Teachers are expected to do the analysis of the student’s Response Record Sheet (RRS) and determine where the learner has misunderstood the concept. Based on this analysis, teachers are expected to plan for remedial intervention lessons.

3.0 Literature Review

3.1 What Is Assessment?

The term assessment has its roots in the Latin word ‘assidre’ meaning ‘to sit beside’ (Weber, 1999). Many writers (Hart, 1994; Weber, 1999; Chaswe, 1999; Tombari & Borich, 1999; Linn and Gronlund, 2000) have equated evaluation, measurement and testing to assessment. They all concur with the view that although there may be inconsiderable differences in the context where the term (evaluation, measurement and testing) are used, they are part of the assessment process as a whole. Murray & Ward (1999) have highlighted alternative assessment which refers to assessment procedures other than traditional test items. These include performance-based assessment, observations, rating scales, and portfolios.
With reference to the root of the word assessment as highlighted by Weber, assessment in the educational context is perceived as a process of sitting beside the learner with a purpose of bringing out the potential that exists within them, creating an opportunity for them to demonstrate what they know (knowledge); what they can do (skills); what they feel (emotion) and what they understand (comprehension) (Conner, 1999; Trotman, 1999).

In the Mathematics context, assessment should reflect processes that are required for doing mathematics which include reasoning, problem solving, communication and connecting ideas. This implies that assessment must enhance mathematical learning and support good instructional practice. According to the National Research Council of the Mathematical Sciences Education Board, assessment is the means by which teachers determine what students know and can do. It provides information to teachers, students, parents and policymakers about what students have learned; the mathematical terms they recognize and can use, the procedures they can carry out, the kind of mathematical thinking they do, the concepts they understand and the problems they can formulate and solve (BMSE, 1993).

Norm-referenced assessment and criterion referenced assessment are two methods of assessment generally used in classrooms (Townsend et al, 1981). Tombari & Borich have defined norm referenced assessment as an assessment where the child’s performance is assessed against the performance of other children in the group. Criterion-referenced assessment on the other hand is the assessment of a child’s performance against some pre-determined standards (Tombari & Borich, 1999). Literacy and Numeracy Assessment (LANA) favors the latter where the criteria of mastery of literacy and numeracy skills are specified. LANA is designed to assess understanding of concept rather than knowledge. It is planned to assist learning rather than just gaining result from the test. It is a diagnostic tool for learning.
Coxon (2000) in her report on curriculum, pedagogy and assessment in Fiji primary schools stated that there is a lack of creativity in the teaching and learning programs of primary schools. This implies that assessment is designed to test students on the curriculum content rather than, or little, on students understanding. This is demonstrated by the fact that testing and examinations are prevalent to such an extent in schools that there are no provisions for the assessment of creativity and flexibility as important aspects of the teaching and learning process. A research by the National Research council of the Mathematical Sciences Education Board suggests that assessment and instruction can be combined, either through seamlessly weaving the two kinds of activities together or by taking advantage of opportunities for assessment as instruction proceeds (BSME, 1993).

3.2 Purpose of Assessment

Gredler (1999), for example, highlighted an eighth year study conducted by Tyler in 1932. This study demonstrated a variety of activities that could be used to assess educational objectives that will contribute to teacher expertise and also be of significant benefit to students.

Tanner and Jones (2006) have noted that students are usually assessed for pedagogical reasons. They pointed out eight reasons for assessing students, four of which are reiterated by writers such as (Sadler, 2000; Gradler, 1999; Chinapah, 1996; and Corner, 1999). Carr & Harris (2001) in their own studies also noted that assessment provides means for measuring success at several levels.

3.3 Assessment in Mathematics

According to the Mathematical Sciences and Education Board, assessment in mathematics explores what students know and can do. It also communicates to teachers, parents and policymakers what concepts students have learnt; the mathematical terms they recognize and can use, the procedures they can carry out, the kind of mathematical thinking they do, the concept they understand and the problems they can
formulate and solve (MSEB, 1993). This suggests that assessment should reflect processes that are required for doing mathematics which include, reasoning, problem solving, communication and connecting ideas.

For the reasons stated above assessment in Mathematics should therefore seek to enhance mathematics learning and support good instructional practice as noted by the MSEB (1993). It must also ensure that assessment tasks are ‘interwoven’ with the instructional design to maximize conceptual learning and at the same time gives the teacher the opportunity to receive feedbacks and review pedagogical practices. This entails assessment as part of pedagogical process.

3.4 Assessment as a diagnostic tool for learning.

Diagnosis of learning needs is a very crucial task in the teaching learning process. Diagnosis of learning gaps provides an opportunity for teachers to create activities to bridge the gap between what students know and what they are expected to know. Assessment is one tool that supports the diagnosis of students’ learning needs. Freeman & Lewis (1998) states that objective tests are valuable because of its ability to diagnose learning difficulties. They further argue that diagnostic and formative tests seek to answer the question ‘What should the learner study next? Why is the learner finding certain concepts difficult? How might the learner study differently?’ (Freeman & Lewis, 1998). Teachers’ responses to these important questions helps identify the learning gaps and plan for the improvement of instruction. Terrance (2008), states that new forms of assessment should drive teaching and learning; and provide useful diagnostic information for future instruction. Diagnosis of learning gaps informs teachers of instructional activities. According to Shavelson (2008), teachers use their knowledge of the ‘gap’ to provide timely feedback to students as to how they might close the gap. Teachers’ knowledge of the ‘gap’ can be enhanced through the use of diagnostic assessment tool – objective tests. These diagnostic tests are said to be ‘easy’ and
only tests content knowledge and comprehension; and are based on representatives' sample of errors and difficulties (Lewis & Freeman, 1998). It is imperative for teachers to be equipped with appropriate skills to analyze the outcome of the diagnostic tests and provide feedback to improve instruction and the teaching learning process.

3.5 What is ‘Talanoa’?

Talanoa has been a way of transmitting traditional knowledge in most Pacific Island Countries. Fiji, Samoa, Solomon Islands, Niue, Hawaii, the Cook Islands & Tonga recognize talanoa as the means of sharing knowledge and tradition (Prescott, 2008).

According to Halapua (2008), *talanoa is engaging in dialogue with or telling stories to each other without concealment of inner feelings and experiences that resonate in our hearts and minds*. Similarly, Nabobo-Baba (2007) refers to it as ‘to offload’, *which provides opportunities for talking straight from the heart which opens up space for greater empathic understanding*. Violeti (2006) defines it as a personal encounter where people story their issue, their realities and their aspirations without any particular framework. These definitions support that although talanoa operates without any rigid framework, participants of talanoa openly discuss their issues and experiences without any suppression. Therefore, according to Halapua (2008), talanoa research is now arguably the most prominent research methodology applied across the Pacific.

4.0 Research Methodology

This study used a qualitative approach to research in data collection, analysis and presentation. According to Leedy (2005), *qualitative research involves studying those phenomena in all their complexity and focus on phenomena that occurs in natural setting*. Cozby (2007) further states the qualitative researchers emphasize collecting in-depth information on a relatively few individuals within a very limited setting.
Merriam agrees that this approach is a predominant methodology for addressing problems for which understanding is sought to improve practice (Merriam, 1990).

4.1 Population and Sampling.

The teachers selected for this study were those in-charges of the Grade level that LANA is administered in. Other criteria used for the selection of the study participants were gender, ethnicity, class sizes, years of teaching experience and teaching qualifications. Moreover, teachers teaching in rural and urban schools in the main island of Viti Levu were selected. 92 teachers from 20 different schools were part of this study (see Table1).

Additionally, 25% of the participants were undergraduates, 37% possessed a Diploma with the remaining 36% has Certificate in Primary teaching. Teacher-student ratio was also considered as having an important impact on the diagnostic process that teachers use in the classroom.

Table 1: Research Participants

<table>
<thead>
<tr>
<th>Categories</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Class size</th>
<th>Yrs of Exp</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>Itaukei</td>
<td>FID</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Year 4 Teachers</td>
<td>14</td>
<td>21</td>
<td>20</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Year 6 Teachers</td>
<td>12</td>
<td>18</td>
<td>10</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>Year 8 Teachers</td>
<td>15</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>47</td>
<td>43</td>
<td>49</td>
<td>22</td>
</tr>
</tbody>
</table>

4.2 Instrumentation

Two distinctive ethnic groups are dominant in Fiji, commonly referred to as Fijians of Indian decent and ethnic Fijians or I-Taukei. Studies done by a number of researchers (Vaioleti, 2006; McFall-McCaffery, 2010; Farrelly & Nabobo-Baba, 2012) have indicated that to obtain reliable and valid data, it is essential to engage culturally appropriate research methodology with indigenous people such as ethnic Fijians. Therefore, Talanoa, a culturally appropriate research tool was used to gather information on how teachers
were using LANA to diagnose numeracy learning needs in their classrooms. *Talanoa* refers to informal talk or conversation or exchange of ideas. Halapua (2008) defines ‘talanoa’ as frank expression without cover-up in face to face dialogue and represents the understanding of the inner feelings and experience of members of a shared community. Since *talanoa* engages informal talk, it is best that it is conducted in the participants’ mother tongue, or a language in which the participant feels comfortable with and can express ideas clearly. Credibility of this method was boosted by the fact that the researcher is a fluent speaker of the Hindustani, I-taukei and English language.

Some aspects of quantitative method were also used as in survey. Questionnaires were given out to teachers. These questionnaires focused mainly on the teachers’ perception of the LANA process and its implication to the teaching learning process of numeracy skills. These questionnaires had statements listed on them where teachers had to check whether they agree or disagree. Data collected from the questionnaires were analyzed quantitatively.

In this study, credibility of the data was enhanced by the fact that all the research participants were teachers who took charge of the classes that administered LANA. This ensures that the information collected was valid and relevant to the issue being investigated and teachers understood the importance of their contribution. The questionnaire was given to teachers from the rural, urban, remote rural and semi-urban context. Focus group interview was also conducted with teachers from different location. This ensured there was representation of the different geographical settings of the schools.

5.0 Ethical Consideration

The researcher while undertaking this study ensured that privacy, anonymity and confidentiality were preserved. Since the participants of this study were practicing teachers, the researcher took all care not to compromise their current position or career prospects. For example, the questionnaire did not ask for their names, employment number or school name. Furthermore, during the interview, questions that would identify personal details were avoided and coding (X, Y, Z) was used for the purpose of analysis.

6.0 Analysis

The graph below shows the participants’ responses to the statements made in the questionnaire. Participants were given statements (*ref. appendix 1*), and they were asked to rate them on a scale of 1 – 5 where 5 indicated strongly agree and 1 being strongly disagree.
7.0 Findings

The study aimed at developing an understanding of Fiji Primary school teachers’ insight on the role of LANA as a diagnostic tool for numeracy learning. The driver of this study is the researchers work as a Mathematics teacher- education, and awareness of some of the vital issues in Mathematics achievement of students. In particular, these include the current education reforms and the consideration to make Mathematics a compulsory subject in schools.

While reporting on their opinions on LANA as a diagnostic tool for numeracy learning, the teachers also described a series of issues that impacted their numeracy instructional practices.
The following sections discuss the main themes that emerged from the study. The first section illustrates that LANA is viewed as an examination. The second section reports on the instructional strategies for Mathematics teaching. The third section presents the teachers perception on remedial intervention strategies.

### 7.1 Assessment as an Examination

Formative assessment serves to inform the teacher of what has been learned and skills attained. 70% of the teachers agree that LANA is a useful tool for diagnostic learning that uses child friendly testing tool. However, 80% of Year 8 teachers feel that the use of multiple choices alone to assess skills at their level does not show a true picture of numeracy skills attainment.

The findings show that LANA is perceived as a measure of teachers' performance and thus drives lesson preparation in the classroom. This was expressed by one teacher as follows:

> LANA results will reflect the teacher performance that contributes to our APA ratings.

The teachers reported preparing their lessons so that students do well in LANA. Previous LANA Numeracy papers are given to students as homework or revision worksheets. The views on this are illustrated by the following teachers' comments:

> Our school is rated underperforming or performing based on our performance in LANA. So we just teach so that our students do well in LANA.

> APA plays a huge role in what happens in the classroom. LANA is one measure of performance used by Head Teachers to rate Year 4, 6 & 8 teachers.

Additionally, the teachers provided numerous examples of activities that views LANA as an examination rather than a diagnostic tool for numeracy learning. One teacher comprehensively described it as follows:

> Since we have to communicate the LANA report to parents, they will only ask whether their child has passed or fail LANA. They will look at the bar on their child's report and make comparisons with the school average and national average. So I have to drill past years LANA paper with my class, so that they are familiar with the LANA format and at least get above the school average.

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1 Annual Performance Appraisal (APA) is the performance appraisal used to assess teachers’ performance.
In addition 70% of the teachers agree that all their lesson preparations are done to prepare students for LANA. One teacher made the following comments:

*There is not much time to teach, so I just teach to prepare students for LANA.*

Accordingly, only 55% of teacher participants agree that LANA administration allows for students to be assessed fairly. Majority of the teachers particularly the Yr.6 and Yr.8 teachers are of the view that multiple choices alone do not give an authentic result. On this they described the need to consider the overlapping concept in numeracy. This was concisely described by a teacher as follows:

*In Numeracy, using multiple choices, students can just guess their answer. They should allow students to show how they work out the answer because in Numeracy, many concepts can be assessed in one question.*

**7.2 LANA before Numeracy**

Teaching mathematics through problem solving ensures that students learn precisely the mathematical idea that the curriculum demands for them to learn (McDougal & Takahashi, 2014). The majority of the teachers regardless of their gender, ethnicity, and years of teaching experience, qualification or class size admit to using teacher centered approach due to the limited time for the syllabus coverage. Although they agree that problem solving is the best method to teach mathematics for understanding they also noted that the problem solving approach is time consuming. This was described by a teacher as follows:

*I could use problem solving, but it is more time consuming and I have to finish the coverage before LANA. So I just show examples and give activity sheets.*

Year 4 teachers reported using a more child friendly approach by using group work to solve mathematical problem. However, these problems were mostly worksheets containing a number of sums. Yr.6 and Yr.8 teachers focused their teaching mostly on the supplied textbook and thus the strategy was more teachers centered.
7.3 Authenticity

Monitoring ensures that the process is authentic and achieves its desired goal. 50% of the teachers disagree that LANA results gives the true reflection of the students' ability. Majority of the teachers reported that students can just guess their answers and circle their choices. 80% of teachers agree that marking and analysis of LANA paper gives a platform for intervention program. However, all of them agree that this needs to be monitored well by responsible supervisors. LANA reports which highlight the outcomes achieved by the students do not arrive in time for the proper intervention program. One teacher concisely described it as follows:

LANA takes place in July; we get the LANA result in the last week of the school year, so there is no way intervention can take place.

LANA result is available on FEMIS and our school doesn't have internet connection, so no intervention program.

Moreover, teachers claimed that time and class sizes were significant factors that hindered intervention activities. One teacher comprehensively described it as follows:

We do not have time to discuss LANA papers after the test; After LANA, we continue with our normal teaching because we need to finish our coverage.

Additionally, 80% of teachers agree that the report released by the Ministry of Education is very late and does not allow for timely numeracy intervention program. Most of these teachers reported that very little is done about the students' numeracy performance after LANA. On this they reportedly use LANA paper as a revision activity in preparation for the examination.

8.0 Discussion

The study reported in this paper indicates that majority of Primary school teachers in Fiji do understand that the role of LANA is to diagnose numeracy learning needs. However, the teachers are not skilled to diagnose conceptual understanding of mathematical concepts and do timely remedial intervention. Conceptual understanding is what determines ones level of numeracy. It is argued that the claims made by the teacher-participants on the many factors that hinder their timely remedial intervention are camouflaging the truth.
The result shows conflicting viewpoints of teachers on the purpose of LANA. While majority of the teachers agree that LANA is a useful diagnostic tool for numeracy learning; the same majority agree that their lesson preparations are done to prepare students for LANA. In doing so, the teachers do not allow for diagnosis to take place, rather achievement becomes paramount. For instance, when describing classroom practices, the teachers reportedly taught LANA outcomes instead of Mathematics concepts. They attributed this to the teachers own measure of performance annually. Therefore, due to the immense pressure from stakeholders to produce results, teachers are compelled to teach for examination rather than for numeracy.

Another example of the teachers' claims regarding hindrance to diagnosis of numeracy skills is reflected on the teacher-participants view of the release of LANA reports. The LANA reports released by the Ministry of Education clearly highlight the outcomes students have mastered and those yet to be mastered; the school average and the national average. However, since teachers depend on the release of these reports, and the reports are usually late, teachers do not make an effort to make their diagnosis. Some teachers made an effort of photocopying LANA answer sheets of students, but for the purpose of comparing results with the official report from the Ministry.

Teachers are working under an education system that is making too many demands of them. The number of reforms that the system has undergone in the recent years has caught teachers ‘flat footed’. Recent changes in the assessment policy and the role of LANA as a diagnostic tool challenges them to be creative, innovative, problem solving and critical thinking. The teachers appear confused on the use of LANA as a diagnostic tool for numeracy learning.

Accordingly, the teachers have treated LANA as another summative examination instead of a diagnostic test. The teachers blamed the late release of result by the Ministry of Education for not being able to do the appropriate intervention program. However, it is the position of this paper, that this situation is more likely to be a reflection of how teachers view LANA. According to Ajzen, what teachers think assessment is and what it is for become important questions since attitude, beliefs and values are known to be strong predictors of intentions and actions (Ajzen, 2005).

The findings of this study reveal that Primary school numeracy teachers are teaching for LANA rather than for numeracy. However, it is argued that the main reason for this perception is that they do not have the skills to use assessment as a pedagogical process (Brown, 2006). Furthermore, the existing monitoring and
support system in place are ineffective in achieving the goal of diagnosing numeracy needs in the classroom.

Teachers do have the content knowledge; however, they need competencies in diagnosing numeracy learning needs through their pedagogical process. The teachers blame the very late release of LANA reports by the Ministry of Education for not being able to gauge the students' numeracy mastery level. However, it is disputed that this situation is more likely to be a reflection of the teachers ‘failing' to apply the necessary skills.

Teacher Annual Performance Appraisal (APA) was strongly referenced in the teachers claim that LANA drives classroom instruction. On this, the main argument was that the immediate supervisors rate their teachers’ according to students’ achievement in LANA.

Although the Ministry of Education had conducted rigorous awareness training on LANA as a diagnostic tool for learning, teachers still failed to utilize it as per its purpose. Teachers need skills to use assessment for learning as a pedagogical process.

This study is particularly timely given significant and ongoing deliberations on the mathematics achievement of students in secondary school external examination. It is believed that if students’ numeracy skills are grounded well in the early years of schooling they are highly likely to improve mathematics achievement at High School (Duncan, 2013) In addition, the announcement by the Minister of Education to make mathematics compulsory in schools (Fiji Times, 2015) has gotten teachers to the need to re-look and re-vamp numeracy teaching and learning in the classrooms. The shift should be from teaching for LANA to now teaching for numeracy.

9.0 Conclusion

There have been numerous reforms in the Fiji Education sector recently. Assessment has also undergone reforms. Re-introducing national examinations after 6 years and amending the class based assessment policy are few of the most current assessment reforms. While assessment continues to be an integral part of the teaching learning process, its purpose continues to determine what happens in the classroom.

There have been a lot of deliberations on the numeracy level of students in Fiji schools. Curriculum reforms have presented new numeracy resources. Awareness on these reforms has been carried out consistently.
Teachers have made an effort to utilize these resources in the development of numeracy skills. However, it is claimed that assessments continue to drive the teachers’ classroom practices.

10.0 Recommendations & Implications

The finding of this study has important implications for policy and practice, and opens up the issues of LANA for further research. While the government is investing substantially in the promotion of quality education, policy-makers must also recognize the importance of investing in the capacity building of its existing teacher workforce.

Additionally, this study suggests that the current expectation of diagnosis of numeracy learning gaps through LANA is not achieving its desired purpose. It is recommended that training of teachers and monitoring by their supervisors be made more vigilant to ensure that quality teaching learning process is happening in classrooms. To ensure students’ numeracy learning skills are diagnosed accurately, the following initiatives are recommended for consideration:

- Develop a center for excellence in numeracy learning & teaching. This center is to be staffed by numeracy experts who are continually undertaking research in numeracy best practices.
- Establishment of a Numeracy Professional development database that identifies teachers on a 5 yearly basis that needs professional up skilling in numeracy teaching.
- Continued professional development for the Primary teacher workforce on current best practices in mathematics. This will ensure that diagnosis of numeracy skills is part of the pedagogical process.
- Creating a Professional Learning community that would implement lesson study to refine mathematics learning teaching process.
- Re-looking at the assessment policy to include Pre-test and Posttest to ensure that remedial intervention takes place after the need has been diagnosed.

Many of these proposed initiatives can be made cost effective through utilizing of the expertise at the local and regional Universities who are consistently undertaking research to inform curriculum development & design, content & pedagogy and assessment. Encouraging teachers to be research active facilitators of learning would empower them to develop their own Community of Practice and thus refine and redevelop their own numeracy pedagogies.
2. Akihiko Takahashi, “Implementing Lesson Study in North American Schools and School Districts” (no date); online at http://hrd.apec.org/images/a/ae/51.2.pdf
Appendix 1

Table of Statements

The following are the statements that teachers had to strongly agree to, agree, disagree or strongly agree to.

<table>
<thead>
<tr>
<th>NO</th>
<th>Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LANA is a useful diagnostic tool for numeracy learning</td>
</tr>
<tr>
<td>2</td>
<td>LANA reflects the curriculum of my class</td>
</tr>
<tr>
<td>3</td>
<td>The learning outcomes tested in LANA are appropriate.</td>
</tr>
<tr>
<td>4</td>
<td>LANA uses student friendly assessment tool</td>
</tr>
<tr>
<td>5</td>
<td>My lesson preparations are done to prepare students for LANA</td>
</tr>
<tr>
<td>6</td>
<td>LANA allows for students to be assessed fairly</td>
</tr>
<tr>
<td>7</td>
<td>LANA results gives the true reflection of the students ability (can do and cannot do)</td>
</tr>
<tr>
<td>8</td>
<td>Marking and analysis of the LANA paper gives a platform for intervention program</td>
</tr>
<tr>
<td>9</td>
<td>LANA reports by the Ministry of Education are released on time.</td>
</tr>
<tr>
<td>10</td>
<td>LANA drives my classroom instruction.</td>
</tr>
</tbody>
</table>
Strategically Educational Utilization of Students Information DB in Business Persons' Re-learning

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Abstract
There is a need for teachers to train the students in the state in which they understand more information about the students in professional graduate schools than in normal universities and graduate schools. Some of the students of the professional graduate schools just graduated from colleges, and some adult students have work experiences for several decades. Thus, their already mastered knowledge and skills are different. Otherwise, their goals as highly professional human resources after completion of the professional graduate schools are also wide range from project managers to entrepreneurs. We can build the information of their course subjects, attendance rate, and career goals, as students information DB. And, it is also possible for teachers to carry out fine guidance for students effectively by their sharing it properly. Further, can we expect strategically educational effects by leveraging it?

In Kamei, S., Koyama, H., Tozawa, Y., and Sakamori, K. (2016), we analyzed the project based learning case in our professional graduate school. And, we proposed a contribution due to learning diversity human resources portfolio. As a result, PBL feedback loop had been accelerated because learners with different backgrounds play complementary roles. That case study shows the possibility that task type diversity of learning human resources accelerate the PBL feedback loop and improve its quality through the expansion of their competency and subsidiarity. In other words, it increases enhancement of strategic integration power of the whole team by repeating to analyze their strengths and weaknesses, and fulfill their complementary roles. We clarified that students gain various experiences that they can not gain in alone learning or homogeneous type team by teachers' creating task type diversity team, and they would have wide career prospects after the completion. And, that study suggests the possibility that learning obtained in the professional graduate school can be recognized as one of task type diversity components.

In our previous study, we got the implications that we could improve the educational quality through forming portfolio of learning diversity human resources by using task type diversity attribute database of professional graduate school students, such as their course subjects, abilities, and work experiences. In this study, we propose strategically educational utilization of students information DB for the purpose of the portfolio formation in business persons' re-learning.

Reference
Hosting International Visiting Scholars:
Creating Productive Academic and Cultural Exchanges

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15th Annual Hawaii International Conference on Education
January 3 – 6, 2017
Honolulu, Hawaii (USA)

**Topic areas:** higher education; cross-disciplinary areas of education.

**Presentation format:** Paper session.

**Summary:** This presentation describes the development of a visiting scholar mentor and support program at a mid-sized public U.S. university. Areas covered include the institutional and scholar goals, challenges, needs, and outcomes of hosting international scholars in various academic fields. We offer recommendations for maximizing scholarly productivity and cultural exchanges for university administrators and faculty members who are considering hosting international academic colleagues.
Abstract

Indiana State University (ISU) has hosted international scholars for several years and is a designated sponsor organization for visiting professors, research scholars, and short-term scholars. Academicians come to collaborate on specific research projects with known faculty, to learn new research methodologies, and to develop partner programs (2x2) between ISU and their university. Many scholars currently come from China, some with dependents, and have the additional goal of gaining English language exposure and proficiency for themselves and their children. ISU benefits from these exchanges by supporting faculty in scholarly productivity, expanding cultural knowledge for students and ISU faculty, creating collaborative research opportunities, and attracting future international students for enrollment. Scholars and host departments also experience challenges, such as cultural misunderstandings, language difficulties, housing problems, and isolation. Communication and preparation with the host before the scholar arrives can improve outcomes, as can ongoing support and active outreach during their stay. Interdepartmental cooperation is vital for creating opportunities for social and academic exchanges. The ISU program endeavors to reduce misunderstandings and promote rewarding exchanges between visiting scholars, the university, and the community. Models for successful visitor and host interactions are discussed.

Keywords: International faculty, visiting scholars, cultural exchange, international collaboration, higher education.
Educator and Administrator English Development

Needs in ASEAN Countries

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15th Annual Hawaii International Conference on Education
January 3 – 6, 2017
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Topic areas: ESL/TESL; higher education; language education.

Presentation format: Paper session.

Summary: This paper will present preliminary research findings to develop a conceptual model of a regional language center for educators and administrators affiliated with universities in ASEAN countries. English language proficiency is becoming a requirement for completing a PhD, and the common language for conference presentations and research publication. The center will support English skill development to enhance career mobility, scholarly productivity, and international collaboration.
“380 million speak it as their primary language, 260 million as their second language, a billion are learning it, and about a third of the world’s population is exposed to it” (Spicer-Escalante and deJonge-Kannan, 2014). Around the world, English is no longer viewed as an extra credential. Even in developing countries, some level of English competence is now a requirement for admission to higher education and a necessity for doing business with multinational corporations and organizations.

In December 2015, the nine members of the Association of Southeast Asian Nations (ASEAN) began economic integration into a single market where citizens have cross-border opportunities for education and employment (Stroupe & Kimura, 2015). English has been adopted as an international language to connect institutes of higher education throughout the region, with governments investing billions of dollars to boost English instruction and international scholarship for internationally competitive universities (Chang, 2015). Education programs in Vietnam, for example, are currently adjusting their curricula and developing in-service teacher programs in response to the government’s “2020 Initiative,” which mandates (among other things) that all teachers of English, from primary to tertiary grades, achieve a specified level of English communicative competence on standardized tests (Ministry of Education and Training, 2014). In many Thai universities, English language proficiency is becoming a requirement for completing a PhD, and is now the common language for conference presentations and research publication (Stroupe & Kimura, 2015). While English proficiency is regarded as the key to global competitiveness -- the preferred language of communication and teaching in more than 70 percent of higher education institutions and industries globally (Maringe, 2010) -- there is still disagreement among teachers, administrators, and students about
the goals, necessity, and effectiveness of teaching higher education content courses only in English (Foskett & Maringe, 2010).

English has traditionally been taught as a language subject. Classes in a country with English as the official language are referred to as English as a Second Language (ESL), English for Speakers of Other Languages (ESOL), or English as an Additional Language (EAL). Classes in a country where English is not the official language are referred to as English as a Foreign Language (EFL). In addition, classes preparing learners to use English in a specific context or profession, such as journalism or medicine, are English for Special Purposes (ESP), and for preparing learners for academic study are English for Academic Purposes (EAP). Most recently, English is being used to deliver entire programs of study in international universities, referred to as English as the Medium of Instruction (EMI).

Secondary and even primary schools in many countries offer EFL classes, and some universities require a few semesters of EFL (similar to many US undergraduate requirement of two years of foreign language study). In the past decade, some countries have begun to require English proficiency for admission. For example, recent changes to National Higher Education Exams in China (the GaoKao) place increased emphasis on communicative English proficiency, a challenge when most EFL classes are taught with traditional instructional strategies focusing on grammar and memorized dialogue rather than speaking and interaction (Tang, 2015). In addition, more university programs are being provided as EMI, such that communicative English competence in the academic field is imperative for students as well as teachers. In South Korea, for example, 30% of universities in Seoul use EMI, with 92% of all undergrad Engineering classes in 2010 (Kim, 2016).
Whereas EFL teachers have always faced pressure to help students learn English better and earlier, now non-EFL teachers are under pressure to demonstrate English proficiency in their own field, and teach their discipline in English. Research into effective instructional strategies has not caught up with the rapid expansion of EAP and EMI classes. There is even disagreement about whether learning the content in a foreign language can enable deep knowledge, or if this form of instruction is actually causing more harm than benefit to students and teachers. Nevertheless, despite these challenges and the need for a clearer picture of best practices and uses of English in higher education for more than EFL, mandates for increased English proficiency and programs are likely to continue and grow in the coming decade. Universities and ministries of education are faced with a question of not whether English should be required in education, but how best to implement and support it.

Thailand is a typical example of how the rapid changes in English programming and requirements are affecting institutions, educators, and students. While EFL classes have been offered from middle school onward, recent government mandates require that students pass English exams to enter and graduate from university, and all incoming faculty in every discipline must pass English competency exams (TOEFL or IELTS). For current faculty there is increasing pressure to attend international conferences, publish in Western journals, or pursue post-doctoral studies abroad, all of which require advanced English skills. In major cities, such as Bangkok or Chiang Mai, there are numerous language programs geared for adult learners, as well as many English-speaking workers and tourists to interact with. Outside of the cities, however, instructional and practice opportunities for working professionals.

In May 2016, I delivered a series of workshops on language development and acquisition at Pibulsongkram Rajabhat University (PSRU) in Phitsanulok, Thailand. During this visit, I also
met with administrators and instructors in several departments to learn about their English language instructional programs, goals, and needs. These discussions revealed that there is an urgent and growing need for instructors and professors from all fields to gain documented English skills, and for university administrators to support English development programs for their faculty members.

The visit to PSRU included a series of interviews and focus-group discussions with a selection of administrators (vice presidents and deans) and instructors from several faculties. Each faculty has some teachers with English experience, but less than 20% have international experience. Several faculty members have presented research in international conferences, and five administrators earned PhD in Western universities, including the U.S., the U.K., and Australia. In addition there are several foreigners (currently 14) on campus working in different departments. The president wants to internationalize the university and have more English-speaking foreigners on campus, ideally to develop a regional language center at PSRU which could be emulated by other Rajabhat universities for academic collaboration with ASEAN nations, including Cambodia, Vietnam and Laos.

One professor explained that faculty members at PSRU can be categorized under one or more of the following six areas of English skill and interest: 1) needing English improvement to pass their PhD program requirement; 2) wanting English improvement to pass TOEFL/IELTS for future PhD abroad; 3) wanting academic professional English skill building to attend international conferences; 4) wanting real-life English communication skill and confidence to speak with a variety of people in social settings; 5) needing to support and interact with English-speaking teachers who are/will come to PSRU; and 6) having no interest in improvement. To
address these varied purposes, faculty members need academic instruction and/or structured opportunities to use English.

As for their current use of English, instructors and faculty members described sometimes writing letters or reports, giving a lecture or teaching a class, attending a presentation, and reading. Some speak English to students, other faculty/staff, and other non-English speakers frequently, but many felt that they were understood only about half the time. Academic writing and listening to (native) English speakers were the most difficult situations for using English. Most want to improve their reading, writing, and speaking in English to pursue, continue, or complete doctoral studies, study abroad, and advance their career, but felt they were challenged by time limitations and opportunity for authentic communication in their current environment. Facilitators to improving English skill include personal factors (practicing, reading, goals) and external factors (native speakers, English textual environment). Some examples of what can help build English were “more native speakers in my university,” “practice more often,” or “keep my apps translator out.” Motivational factors were also evident, for example, “if I have a goal, I will try to improve my English skill,” and “just speaking out, even sometime I have a wrong grammar.”

The challenges for faculty who want to improve is lack of opportunity: limited time and few to no English-speakers to interact with. The foreigners available on campus are from varied language backgrounds and have accent variations which are not viewed as a good model for imitation. Also, foreigners teaching/working at PSRU usually have other jobs so don’t spend additional time on campus, and often interact with each other much more than Thai colleagues/faculty. Some faculty have low skills and confidence so don’t try to practice; even in English classes there may be few English speaking opportunities as instruction focuses on
grammar skills. Currently there are no established resources specific to faculty wanting to improve their English skill, particularly with academic writing and research. Faculty pursuing advanced degrees must pass some form of English exam to finish their degree, but many take the exam multiple times without achieving a passing score. They prepare individually, but have little/no feedback on what areas are preventing their development.

During the visit, we discussed ways to address these challenges using available resources. Most faculty who are trying to improve their English skills are working independently with readily available online resources, so could compile a list of software programs or online courses that people can use on their own time for specific goals (exam prep, personal practice). The university could create a resource center in the English Department for faculty to access these and receive basic instruction on how to maximize their effectiveness. The university could also offer more intensive small-group workshops for specific skills by inviting visiting English instructors or trainers from the network of faculty connections (in the same way that I came to PSRU). Informally, Thai faculty could create their own simulated-immersion settings where they only communicate in English, such as themed coffee hours or brownbag lunch sessions, interdisciplinary lectures, or discussion groups to expand general knowledge of other fields.

One faculty member suggested that the university could help create a positive English culture by recognizing English development achievements publicly as a form of positive reinforcement and motivation for other faculty (and students). For example, providing awards for “most frequent user” of language software programs (with login to trace users time), or extra money (a bonus) for passing English exams or gaining course completion certificates. Also, departments with foreign instructors could create more opportunities for other faculty and students to interact with them, even in short, informal situations (e.g. coffee hours, being present
in faculty offices where all faculty must see them), and “share” or introduce foreign instructors to other departments with no foreigners.

Given these findings, the new requirements for faculty English proficiency across all disciplines, and growing academic exchanges within the region, there is a clear need for new strategies for faculty English learning and practice, and more research on what methods are most effective, replicable, and sustainable. The information gained from this visit can lead to advances in both these areas.

**Abstract**

A language needs assessment was conducted at Pibulsongkram Rajabhat University (PSRU) in Thailand to gather preliminary data regarding the need for a regional English language development center for university educators and administrators in ASEAN countries, as a potential collaborative venture with Indiana State University (ISU). The assessment, conducted in May 2016, involved interviews, a questionnaire (hard copy and online), and focus-group discussions with a selection of administrators (vice presidents and deans) and instructors from several faculties. Most noted that they speak English to students, other instructors/staff, and other non-English speakers more frequently. Findings suggest that many respondents want to improve their reading and writing skills more than listening or speaking, and indicate an academic more than a personal communicative need. English language proficiency has clear career implications for respondents, many of whom wish to pursue, continue, or complete doctoral studies, study abroad, or gain promotion from their current position. Commonly reported challenges to improving English skill include time limitations for studying, and limited opportunity for authentic communication in their current environment. Given these findings, new requirements for faculty English proficiency across all disciplines, and growing academic exchanges within the region, there is a need to conduct additional research from other regional academic institutions and develop a model for an effective ASEAN English Language Development Center.

**Keywords:** English, EFL, higher education, academic English
This paper examines the lived experiences, perceptions, and attitudes of nontraditional, adult university students enrolled in an online Emergency Services baccalaureate degree program, who were given an opportunity to participate in an engaged, study abroad course. The purpose of the analysis was to identify and describe the various experiences and perceptions, then group these experiences and perceptions into a logically organized description of the lived experience of adult emergency services students.

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Epistemology and Ontology: The Lived Experience of Non-traditional Adult Students in Online and Study-Abroad Learning Environments

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2016
Abstract

The goal of this study was to better understand the lived experiences, perceptions, and attitudes of nontraditional, adult university students enrolled in an online Emergency Services baccalaureate degree program, who were given an opportunity to participate in an engaged, study-abroad program. This understanding was achieved through rigorous analysis of student learning journals required as part of the study abroad course. Students were asked to journal their feelings, perceptions, experiences and learning. The purpose of the analysis was to identify and describe the various experiences and perceptions, then group these experiences and perceptions into a logically organized description of the lived experience of adult emergency services students.
Max Van Manen (1990) posited that the preferred method for human science (as opposed to natural science) was based in description, interpretations, and self-reflective or critical analysis. In other words, we explain nature but we must come to understand human life. Since the inception of online learning, researchers have studied and investigated the differences between online (distance) education and traditional face-to-face learning. Most of the work has been done in quantitative methodologies, focusing on the similarities and differences in the cognitive achievement of students. The extant literature is replete with studies and positions claiming little or no difference between the two delivery methods. However, Chisholm, Harris, Northwood & Johrendt (2009) offer the following:

Over the past decade, the analysis of what occurs when learners are involved in ‘work’-based learning (WBL) has, at best, been superficial and simplistic, i.e. it has been accepted that individuals learn by being in a knowledge-based work-based environment. It does not follow, however, that they will acquire the knowledge they are seeking simply by being in a ‘real world’ workplace environment. What needs to be considered is how the learning processes take place in ‘work’-related environments and how, by understanding the mechanisms of learning, the work-based environment can be formalised as an authentic learning environment and thus accepted as comparable but nevertheless different from the traditional on-campus one (p. 319).

The goal of this study was to better understand the lived experiences, perceptions, and attitudes of nontraditional, adult university students enrolled in an online Emergency Services baccalaureate degree program, who were then given the opportunity to participate in an engaged, study abroad program. This understanding was achieved through rigorous analysis of student
learning journals required as part of the study abroad course. Students were asked to journal their feelings, perceptions, experiences and learning. The purpose of the analysis was to identify and describe the various experiences and perceptions, then group these experiences and perceptions into a logically organized description of the lived experience of adult emergency services students.

With the creation of the Internet and increased societal emphasis on education, the adult learner has become the focus of many institutions of higher education, but it has also created a need for re-evaluating how education is best delivered.

Over the last two decades, higher education in America has witnessed an enormous shift in the demographics of students, while at the same time technology has enabled access to formal higher education. By the late 1990s, national attendance figures showed that 42 percent of the undergraduate and 59 percent of the graduate students attended part-time (UCEA, 1998). Of those part-time students, the largest segment was women thirty-five years and older. Clearly, there has been an important shift in the past twenty-five years in the profile of the average college student, which is changing the American University. In addition to putting pressure on the University for an increasingly vocational and professionally oriented curriculum, this shift is also leading to pressure for the general accommodation of the working adult student through more convenient scheduling and location of courses (Berg, 2005, p. 3).

This is reinforced by research commissioned by the United States Department of Education in the Report of the Web-Based Education Commission to the President and the Congress of the United States (Kerry et al., 2000, p. 4), which stated:

Large numbers of older persons, working adults, and part-time students attended college
in 1999. The adult age cohort is the fastest growing segment of students in postsecondary courses. Despite rising enrollment noted above, just 16% of college students fit the traditional 18- to 22-year-old profile, attend full-time, and live on campus.

Andragogical assumptions posited by Knowles and others may yet prove to be of great value in higher education, particularly in light of the changing demographics of many, if not most universities and colleges. Adult students appear to have a different learning style requiring a targeted approach when using modern technology (Pelletier, 2005). This seems particularly true for the emergency management/services and homeland security workers. Due to the nature of their jobs, previous training, and education experiences (like most adult students) they have an expectation for immediate applicability.

Adults need to know why they should learn something. Under the standard pedagogical model, it is assumed that the student will simply learn what they are told. Adults, however, are accustomed to understanding what they do in life. They want to know the reason they will need to learn something or how it will benefit them (Fidishun, n.d., p. 2).

**Statement of the Problem**

The extant literature is replete with quantitative data comparing and contrasting cognition between traditional face-to-face teaching methods and Internet-based, online delivery of curriculum. However, very little qualitative data are available with respect to the experiences and perceptions of online or students in hybrid learning environments, especially the nontraditional adult population. Understanding these experiences and perceptions may allow researchers and educators to design, develop, and teach courses that facilitate higher cognitive and affective knowledge acquisition in the fast growing demographic of non-traditional adult students.

However, traditional pedagogies may not be effective with the non-traditional adult
student population. Finding a good method of allowing these students to immediately apply knowledge, while still being able to take responsibility for their own learning, could help create an appealing and effective delivery model. Adult students need to be moved “away from their old habits and into new patterns of learning where they become self-directed, take responsibility for their own learning, and the direction it takes” (Fidishun, n.d., p. 3).

There also seems to be little data respective to the affective domain of nontraditional adult students and online and/or blended (hybrid) education. Krathwhol, Bloom, and Masia (1964), in their seminal work on educational taxonomies, asserted the need to explore the human reaction or response to educational content. This included a range of human responses, including knowing about something, problem solving, evincing an interest in human experiences, having an attitude toward some object or concept, and/or expressing one’s feelings and opinions on a variety of subjects. These principles of learning, especially for adults need to be explored further as the technological advances are or appear to be altering the educational schemas and deliveries at many universities. Therefore, the following question guided our research: How do adult students experience and or perceive the nexus between what is known and what is experienced in an asynchronous online environment and a face-to-face study abroad learning opportunity?

**Literature Review**

**Ontology and Epistemology**

Adult learners want and need to use their lived experience and incorporate reflection into their learning schemas. Maxfield (2008) in his research on non-traditional adult students and asynchronous online learning shared the following:

Barab, Thomas, and Merrill (2001) noted a concern for the human or social dimension of online learning environments. They addressed the fact that much is often discussed about
the technical components of distance education, but less often discussed is the human or social dimension of these environments. They found that online instruction might foster a reflective and social environment (Merrill, DiSilvestro, & Young, 2003). A need exists to find a way to transform experience(s) into learning.

Adults usually bring a plethora of real-life experiences with them to the classroom, experiences that need to be recognized and integrated into the learning process (Knowles, 1984). Key points of andragogy or adult learning include consideration of the learner’s experiences, the importance of the learning environment, the learner’s readiness to learn, and the teacher as a facilitator (Brown, 2001). Kolb (1984) proposed a four-stage cycle: (a) concrete experience, (b) reflective observation, (c) abstract conceptualization (theory building) and, (d) active experimentation or application (p. 8).

Krathwohl and colleagues (1964 identified divisions within the objectives of education. They presented them as:

1. **Cognitive**: Objectives that emphasize remembering, recalling or reproducing something that has been believed to be learned.

2. **Affective**: Objectives that emphasize a feeling, an emotion, or acceptance or rejection of material. They further identified these objectives as interests, attitudes, appreciations, values, and emotional sets or biases.

3. **Psychomotor**: Objectives that emphasize motor skills (muscular), manipulation of materials and objects, or some act that requires a neuromuscular coordination.

When contrasting the cognitive domain with the affective domain, some important distinctions are apparent. The cognitive domain posits the assumption that the student should be able to do a task when requested. The affective domain is more concerned that the student does a
task when it is appropriate, after understanding or recognizing that he/she can do it (Krathwohl et al., 1964). Put into simpler terms, the cognitive domain is “can do” while the affective domain is “does do.” However, compartmentalizing these behaviors into cognition and affect is not as easy as it may appear. Rarely is curricula developed with the intention that one is independent of the other. There is research that shows that cognition cannot be completely separated from affect. A more interesting idea is the possibility that one is the effect of the other. There may even be a deeper relationship or effect between cognitive and affective domains (Maxfield, 2008).

The theoretical construct used for this work is social constructivism. Constructivism posits that learning is a process of “constructing” meaning from one’s experience (Merriam & Caffarella, 1999). Well-known constructivists like Piaget and Vygotsky had different perspectives, yet based their works on the premise that experience had a major role in learning. Piaget theorized two types of constructivism: personal (cognitive) and social. Personal constructivism draws heavily upon an individual’s adaptation to his/her environment. The social constructivist view posits that knowledge is constructed through conversations, activities or in socially sharing (Merriam & Caffarella).

Epistemology (what is known) has been the educational foundation for centuries. Basically, cognition portion of the taxonomy identified by Krathwohl, Bloom and Masia (1964) is centered on the ability to remember, recall, or reproduce something learned, or in other words, recall what is known.

Ontology (what is lived) is based on what is experienced or experimented with through social or emotional reflection and/or activity. This has not been as extensively studied, yet based on the constructivist foundations this appears to be where learning is completed. In other words, when one has knowledge through cognition and/or muscular manipulation (psychomotor), and it
is combined with reflection and experimentation, then a person can be said to have learned
(known) and been educated (lived) in a particular area of learning. Greeno (1997) stated it this
way:

   In these practices, students develop patterns of participation that contribute to their
   identities as learners, which include the ways in which they take initiative and
   responsibility for their learning and function actively in the formulation of goals and
   criteria for their success. (p. 9)

Social Interactions

   Social interaction with the instructor, other students, and other communities of learning is
   particularly important when delivering courses via the Internet (Ryan, Carlton, & Ali, 2004).
   One problem that may have surfaced with the introduction of online learning is that curriculum
   developers have concentrated more on the technology and less upon the content and
   methodology of their instruction. The danger in the rapid introduction of electronic delivery is
   that the focus may be on the mechanism of delivery, rather than on the quality of the learning
   experience (O’Keefe & McGrath, 2000). Research has generally focused on technological
   aspects, with relatively few academic studies or articles written on the human and social aspects
   of teaching and online learning. Recent research indicates that quality of learning depends on the
   design of instruction and that learning transfer and retention are most strongly impacted by the
   frequency and quality of learner-centered practice activities, socialization and instructor
   feedback. Therefore, the instructional design process has the biggest effect on final
   course/program quality—not the use of technology itself (Barclay, 2001).

   Therefore, creating opportunities for ontological learning have become of increasing
   importance for the non-traditional adult learner.
Metacognition

One method of enhancing learning with the adult learner is to incorporate metacognitive practices into pedagogies. Metacognition has been simply defined as “thinking about thinking.” It is not that simple, but this gives a simpler view into the process of metacognition.

Cognition as presented above is the gaining of knowledge. For example, if a student is taught that $2 + 2 = 4$, then he or she has learned the answer to the problem and will be able to get it correct the next time. Metacognition, however, is the thought process (usually reflective) on how the learning took place. If the student were to think about how he/she became cognizant of the answer, he/she may realize that a mental picture of two objects being added to two other objects was used, thereby learning that visualization is a metacognitive activity (Maxfield, 2008). By providing activities that allow the adult to think about, plan, implement and succeed, metacognitive awareness assists the student in learning. In other words, knowing how one thinks about and processes information can assist in the learning process for other problems or issues that arise. One way of incorporating metacognition into a learning experience is by having the student keep a journal of how he/she went about solving problems. Journaling promotes growth in learners and is a way to develop thinking and reflection skills (Mizerow, 1990).

Another method for which journaling can be a great assistance is self-questioning. Livingston (1997) gave the following insight:

Metacognitive experiences involve the use of metacognitive strategies or metacognitive regulation (Brown, 1987). Metacognitive strategies are sequential processes that one uses to control cognitive activities, and to ensure that a cognitive goal (e.g., understanding a text) has been met. These processes help to regulate and oversee learning, and consist of planning and monitoring cognitive activities, as well as checking the outcomes of those
activities. For example, after reading a paragraph in a text a learner may question herself about the concepts discussed in the paragraph. Her cognitive goal is to understand the text. Self-questioning is a common metacognitive comprehension monitoring strategy. If she finds that she cannot answer her own questions, or that she does not understand the material discussed, she must then determine what needs to be done to ensure that she meets the cognitive goal of understanding the text. She may decide to go back and re-read the paragraph with the goal of being able to answer the questions she had generated. If, after re-reading through the text she can now answer the questions, she may determine that she understands the material. Thus, the metacognitive strategy of self-questioning is used to ensure that the cognitive goal of comprehension is met. (pp. 1-2)

Metacognition is important to the adult learner. After reflecting on his/her vast reservoir of experience, the adult student if given the right instructions and tools, can understand his/her unique learning processes. Metacognition enhances learning and further gives the adult learner a tool(s) to use in further life-long learning (epistemology) and being (ontology).

Reflective Practice

Reflection and the learning process has been studies extensively and found to have particular importance to the adult learner. Maxfield (2008) also shared the following:

Researchers and educators have been exploring reflective practice for a long time. Thinking about one’s cognition can be traced back to the times of Plato and Aristotle. In more recent times there has been extensive work in reflective practice by some noted researchers.

British researcher and educator, Peter Jarvis, developed a theory about the process of learning through social experience and reflectivity. The premise of Jarvis’ learning
process model is based on the assumption that all adults have experiences; some are
good, some bad. Many experiences, however, may be so rote or routine that a person
gains nothing from them. The learning process then calls for an experience out of the
“norm,” which elicits a response at a different level than would be typically done. In
other words, the experience requires some reflective action. Reflection is the heart of
Jarvis’ model.

Merriam and Cafferella (1999) present that Jarvis posited from an experience, there are
nine different routes or responses a person can make.

1. Presumption–mechanical response or a presumption that what has previously
   worked will work again.
2. Nonconsideration–too preoccupied with something else to even consider the
   experience.
3. Rejection–a conscious choice to reject the opportunity to learn.
4. Preconscious–a person unconsciously internalizes something.
5. Practice–practice a new skill until it is learned.
6. Memorization–acquire information with which they have been presented and
   learn it so it can be reproduced at a later time.
7. Contemplation–thinking about what is being learned.
8. Reflective practice–similar to problem solving.
9. Experimental learning–actually experimenting on one’s environment. (p. 284)

The first three responses (presumption, nonconsideration, and rejection) are choices in
which no learning takes place. In the second group of three, preconscious, practice, and
memorization (which Jarvis considers nonreflective) a small amount of learning will
occur. The final group of three, contemplation, reflective practice, and experimental learning are considered choices of reflective learning. Jarvis later shared how he developed an interest in reflective practice and credits the work of Donald Schön.

Reflective practice found its way into the educational vocabulary with the publication of Schön’s *Reflective Practitioner* (1983), a book that has changed the way many people think about their practice and has led to many innovations in teaching and research. At the same time, my own very early experience with long evaluative reports written by the students about their own practice was the time in my own academic career when I began to question the traditional relationship between practice and theory. This eventually led to my writing *The Practitioner Researcher* (Jarvis, 1999), in which I tried to work out something more about this relationship—but this happened only after I had begun to get students to use learning journals in their own doctoral research. (Jarvis, 2001, p. 80)

As Jarvis pointed out, Donald Schön added to, or as some would assert, created this field of study with his book, *The Reflective Practitioner* (1983). His notions of reflection-in-action and reflection-on-action are central to this effort. In fact, he related directly to teacher reflection in a presentation at the meeting of the American Educational Research Association (1997),

These explanations give the teacher the knowledge of the greatest possible number of methods, the ability of inventing new methods and, above all, not a blind adherence to ONE method but the conviction that all methods are one-sided, and that the best method would be the one that would answer best to all the possible difficulties incurred by a pupil. That is, not a method, but an art and a
talent. And this is teaching in the form of reflection-in-action. It involves a surprise, a response to surprise by thought turning back on itself, thinking what we’re doing as we do it, setting the problem of the situation anew, conducting an action experiment on the spot by which we seek to solve the new problems we’ve set, an experiment in which we test both our new way of seeing the situation, and also try to change that situation for the better. (Schön, 1997)

Schön (1983) also asserted that there is a sense of artistry in the function of a reflective practitioner,

The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behavior. He carries out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation. (p. 68)

**Experiential Education/Learning**

Experiential learning foundations can be traced to the philosophies of social constructivists like Vygotsky and Piaget. Experiential education places importance on constructing individual meaning, prior experience and social values. In a general sense, experiential education frequently uses reflection as a tool to develop and understand further meaning, especially through social interaction (Furman & Sibthorp, 2013).

Common strategies exist for utilizing the effects of experiential learning. Furman & Sibthorp (2013) have identified these strategies as: 1) Problem-based learning; 2) Project-based learning; 3) Cooperative learning; 4) Service learning; and 5) Reflective learning. These strategies represent the types of methodologies of instruction that teachers may develop their
One of the benefits of these strategies is the ability to connect the abstract with the concrete. The traditional model of pedagogy where the teacher leads the learning model does not allow for the self-directedness and individual experimentation that is characteristic to the adult learner and a natural extension of the lived experience (Challis, 1996). This is also supported by Kolb’s learning cycle. Kolb (1984) proposed a four-stage cycle: (a) concrete experience, (b) reflective observation, (c) abstract conceptualization (theory building) and, (d) active experimentation or application.

Cantor (1997) presents five objectives for the demands society and academia. They are: 1) Increase understanding of learning theories and cognitive development; 2) Use of varied learning modalities for the nontraditional learner; 3) Create team players; 4) Interface more with business and/or the community; and 5) Critique extant methods of cognitive evaluation. This is relevant in that it is no longer enough for students to master epistemologies and logic in the academic sense; they must be able apply knowledge and experience outside of the academy.

**Methodology**

The review of the literature led to the research question: How do adult students experience and or perceive the nexus between what is known and what is experienced in an asynchronous online environment and a study abroad learning experience? A qualitative study is most appropriate to explore this question. Qualitative research is an inquiry process that explores a human or social problem.

Phenomenology is a qualitative research methodology used to explore and interpret deep human experiences. “[A] phenomenological study describes the meaning of lived experiences for several individuals about a concept or the phenomenon” (Creswell, 1998, p. 51). Since this study
explored the lived experiences of nontraditional, adult emergency services students and how the experiences fit into adult learning, a phenomenological design seemed most appropriate.

Data were gathered from student-submitted learning journals. As part of the requirements of a study abroad experience, students were required to keep a learning journal of their feelings, perceptions and knowledge acquisition throughout the course. They were required to submit journal entries to the instructor on a weekly basis throughout the semester.

Data analysis began as soon as the first journal entries were submitted and was ongoing throughout the duration of the study. A constant comparative analysis was used to analyze the data. Because qualitative research is an emerging process, the data were dynamic and based upon the responses and feedback of the participants. Revisions occurred throughout data collection and/or analysis of this study (Creswell, 2002).

The next step in the analysis was to look at the actual data gathered from the students and begin the process of grouping. We found statements in the students’ journals about how the participants were experiencing the study abroad class and its comparisons to the asynchronous, online work. We then grouped these statements into meaning units. Care was taken to ensure that the original intent of each statement had not been compromised by the meaning(s) derived. The aggregate meanings were then coded (grouped or clustered by theme). Several codes or themes were identified or differentiated. This process led to the need of further clarification or more detailed information, and then more grouping or coding until saturation had been achieved. To validate the themes, they were compared to the original statements to ensure that something significant in the original statements had not been left out in the groupings or that the coding created something not in the original statements.

Using a structural description, we sought to identify all possible meanings and
perspectives to construct a description of how the phenomenon was experienced by the participants. After the data were coded and analyzed, a rich descriptive narrative was written, detailing the participants’ lived experiences (Creswell, 1998).

**Results**

This study strives to give a fuller, richer understanding of what it means to be a nontraditional adult student in the world of asynchronous, online instruction and then placed in a multi-cultural engaged learning environment. We have attempted to discover and present the ways in which the adult student can experience this unique environment.

This research provides a vivid look at the experiences of an asynchronous, online undergraduate course which was highlighted by a study-abroad, engaged learning environment. We believed it essential to understand how this segment of a population of students experienced online and engaged learning because of the growing number of nontraditional students enrolling in degree programs and because of the newness of the online delivery systems. This understanding will enlighten administrators, faculty, course designers and curriculum specialists. Understanding the perceptions, attitudes and experiences of the online students who have an opportunity to apply learning in a real-life, engaged manner may open the door to thousands, if not millions of potential students, who may not be able to pursue education in the traditional manner. Furthermore, since our world has become more global in perspective, understanding how students experience the asynchronous, online learning and culturally diverse laboratory environment may have large impacts in teaching and developing tomorrow’s world leaders.

Two major themes emerged from the data analysis. The first was the emotional impact of witnessing and participating in an actual post-disaster environment. The second theme was the awareness of the cognitive (epistemological) and affective experience of becoming or being an
emergency management specialist (ontological) gained through reflection.

The emotional impact of witnessing and processing the cognitive learning was rich and pervasive in the student learning journals. One student reported the following:

Today my emotions were all over the place!

At 9am we boarded a charter bus and when to downtown Christchurch to see a couple of memorials and what the locals call the Cardboard Cathedral. If you go and look at the disaster photos you will see one with a picture of 185 chairs. Those chairs represent the 185 people who lost their lives in the Feb 2011 quake. I felt the same feeling of loss and reverence when I saw this display as I did when I saw the display of flags Sandy City does on 9/11. Fortunately, that is all there was (fatalities) with so much damage and destruction around (parenthetical comment added).

Another student shared:

The first week in New Zealand has been a rollercoaster of emotions…. As we got into town we headed over to the Christchurch Cathedral and witnessed the sheer destruction that happened to that building. It makes me sad to see how much of the city’s identity was lost or altered. The skyline of the city will never be the same. I can only hope that they make it better. The people of this great city deserve it.

One emotion that was shared throughout the journals was the amazement at how open the people of Christchurch were in sharing their experiences, feelings and lessons learned. The students had many opportunities to speak with the people of Christchurch. This included first-responders, emergency managers, attorneys, university professors, and citizens at large. This seemed to have an emotional impact on the students. For example, a student wrote the following in one of the journal entries:
This morning the Canterbury emergency manager came and spoke with us. I really liked that he was open with us in where they feel they did well and where they lacked. He spoke of several areas where I think we can bring home additional information that could be helpful.

This afternoon's first lecturer was one of the founders of the Student Volunteer Army. That is an organization that began after the Feb 2011 quake that was a grassroots organization of Canterbury University students. The university wasn't nearly as affected as the city just a few kilometers to the east and the school administrators shut all classes down for three weeks. With so much free time one student thought to use social media to organize students to go help out in the community. The amazing thing was is they had no training, no tools, and really not much organization, just a willingness to help. On the first day there was about 100 people that showed up but as the really got some traction they had hundreds of students out in the community. They used social media as a way for people who needed help to let them know and then they just asked students who wanted to go. At one point they had thousands of requests for help with students all over the city.

Attitudes, perspectives, and perceptions were definitely changed by the experience. With all discipline-specific courses taken in an asynchronous, online environment the theoretical or epistemological aspect of learning was not only utilized, but enhanced by the clinical or lab experience. This feeling was pervasive among the students and represented well in the following journal entry.

I have been here for two days already. On the first day I walked into town and I was kind of taken back by how messy the town seemed to be. On the way into town, if someone
did not realize that there had been an earthquake, one would think that it is a poorly maintained area. There are derelict buildings and graffiti all over the place. Yet, knowing that such a disaster had struck, you kind of view it from a different angle. You look at it as a bigger picture. You still see the devastation but you also look to see the restoration that has been accomplished. I can't even imagine where to start with such devastation.

When I finally got to the center and stood at the cathedral, my heart broke a little bit. So much history destroyed. I think that because I have traveled before and have had the opportunity to be in cathedrals and seen their beauty, this made seeing the destruction that much worse. Today, when we went there again, it hit me even harder because I had seen a post card of the way it used to be. Such beauty just gone.

The second grouping or theme that emerged in the data analysis was the awareness of the cognitive (epistemological) and affective experience of becoming or being an emergency management specialist (ontological) gained through reflection. Students began to reflect and apply things learned in the online courses to the situations they were experiencing. Examples of this were frequently interspersed throughout the journal entries and provided a dynamic learning opportunity. One student shared this through her reflection after spending the day touring the destruction and reconstruction of the city.

This week has been quite the learning experience for me in so many ways. As a class, we have learned about the disaster that Christchurch suffered when they were hit with the earthquake of 2011. We have learned about about the preparations they had made and where they failed in those preparations. We learned about the response efforts from the local authorities as well as the efforts by the community. I especially was intrigued by the students of UC and how they band together to form the Student Volunteer Army. It truly
is amazing what individuals will do in the event that they, as a whole, are threatened by disaster.

We also learned about the ways and plans the city is taking to recover from these earthquakes. I think the thing that intrigues me the most is how long it is going to take to complete the recovery phase. It is not as easy as you would think it to be. If I remember correctly, the gentlemen that visited us from CERA stated that it will take roughly 20-25 years before they have completely rebuilt the city of Christchurch. The thing that would scare me the most about that is, “what if another devastating earthquake happens again within that time frame?” It would definitely disrupt their plans for rebuilding and intensify the magnitude of their current situation.

The other aspect of the recovery phase is seeing the intense efforts of those involved in re-establishing this city and how dedicated they are to being absolutely prepared for the next disaster. It is amazing to see so many individuals put so much of their life into ensuring the development and advancement of their Emergency Management so that they are prepared for anything in the future that displaces them in anyway.

I was truly engaged and touched by the experiences of all the people that shared their thoughts with us. We hear and read about disasters all the time around the world. I am sure everyone is the same as me when they think how terrible a situation is for those involved but the reality of being a part of a disaster is unreal. When you physically engage with someone who was part of such a hazard, your feelings are just different. You can actually feel their same feelings that they felt on that day; and that is something that I will always remember and take with me. Being able to actually feel pain and frustration
with these individuals and what they went through was very touching and unforgettable to me. I was also quite touched on their new found love and appreciation for each other and their entire community. It makes me think that I barely know the individuals that live within close proximity to me, and if we would be as resilient as the people in Christchurch when a disaster comes to our area.

As the students reflected on their experience, they began to explore how this information could be utilized in their own lives and/or situations. One area where a lot of discussion took place was the experience and perspectives of the first response communities (fire, police, and emergency medical services). One student response that seems to present this well is the following:

This last week has been a real eye-opener for me. What struck me the most was Steve’s presentation and the relationship he had as a police officer with the public. I have always lamented that communities today don’t view law enforcement officers with the same attitude as they did in *The Andy Griffith Show* and the realization that there is a growing trend of mistrust on both the side of the public and law enforcement agencies. Though I have always felt that law enforcement agencies could contribute so much to the well-being and growth of a community outside of upholding the law, I also always felt it would be impossible to change the attitudes of the public to would view police more favorably. Steve’s presentation, the interaction he demonstrated with the community, and the ideas he put forth proved that such a change in attitudes was possible.

But how is this accomplished? Something that was mentioned is that the community has to feel the police are not around just to monitor their actions and act as big brother. There has to be a feeling of genuine trust and a sense that the police really care. When this
happens I believe the community is more willing to open up and share their concerns. There is a form of collaboration that allows the public to look beyond the blue uniform and view the person. Along with collaborating with the public, law enforcement agencies should collaborate with other departments to ensure the safety of communities. Today Mike and Ian spoke a little more about the responsibilities that police and fire personnel can have in working together to ensure the overall safety of a community. When it comes to community safety and understanding vulnerability and risks, there are several pieces of the puzzle and every agency may be holding key pieces. It is important to stress collaboration among agencies to bring these pieces together to have a clear idea of the whole picture. Only when a whole picture is formed can informed decision be made.

Overall, the experience of being or becoming an emergency manager through a clinical/lab experience is summed up best by the following student’s reflection.

So for me, this was extremely useful to see how it plays out in theory and with real world examples from another agency/person’s perspective. As you see these common theories and concepts repeated in different ways, it helps to understand fully the subject matter’s importance and relevance.

Discussion

This study provided rich and poignant data regarding the non-traditional, adult student and the use of online education enhanced by a cultural and clinical experience. It seemed to reinforce some of the extant literature and educational theories.

One area that seemed to be reinforced by this study is the learning impact of the affective domain of Bloom’s taxonomy.
David Krathwohl, a peer and coresearcher of Benjamin Bloom, has made some notable contributions regarding affective learning to the field of educational psychology. Krathwohl is a co-author of *Taxonomy of Educational Objectives: The Classification of Educational Goal: Handbook I* (Krathwohl et al., 1964), which introduced the widely recognized “Bloom’s Taxonomy.”

Krathwohl’s affective domain taxonomy is a highly recognized and cited source of the affective taxonomies. The affective domain deals in the realm of behaviors and attitudes or personal acceptance of something to the point of making it a part of the person. “The taxonomy is ordered according to the principle of internalization. Internalization refers to the process whereby a person’s affect toward an object passes from a general awareness level to a point where the affect is ‘internalized’ and consistently guides or controls the person’s behavior” (Seels & Glasgow, 1990, p. 28). Affective learning is demonstrated by the behaviors or behavior modification of learners (Krathwohl et al., 1964). This is shown by demonstration of attitudes of awareness, interest, concern, attention, responsibility, the ability to listen and respond appropriately, and the ability to demonstrate characteristics of appropriate values. Hence, Krathwohl and colleagues asserted an ordered taxonomy for the affective domain,

1. Receiving—being aware of or sensitive to the existence of ideas, material, or phenomena and being willing to tolerate them.

2. Responding—committed in some small measure to the ideas, materials, or phenomena by actively responding to them.

3. Valuing—willing to be perceived by others as valuing certain ideas, materials, or phenomena.
4. Organization—relating the value to those already held and bringing it into a harmonious and internally consistent philosophy.

5. Characterization by value or value set—acting consistently in accordance with the values he or she has internalized (p. 37) (Maxfield, 2008).

Another area mentioned earlier in the review of literature is reflective learning. As mentioned previously in this article, the Jarvis model of reflection was an area that was verified by this study. When applied to this model the results indicate that some deep learning took place with these students. Throughout the study, the students reported their use of reflective practice. Through reflections they claimed to have had a deeper, and potentially better learning experience. While it is difficult to determine if they reached the experimentation stage of the Jarvis model or not (it was reported by the students, however, that they were applying some of the learned principles to their work situations) it is apparent that they were reflective and contemplative in their approach to this clinical experience. Based on their experiences and perceptions, the students claimed they had internalized significant amounts of knowledge and/or skills from this study abroad and post-disaster interaction. We believe, and the study results seem to demonstrate this occurred through reflective practice, which is the basis of Jarvis’ theory.

Jarvis believed that there are three possible ways that a person is affected or changed through the learning process: (a) the person is changed through the acquisition of knowledge mentally and emotionally, (b) the person places new meaning on the world and events by incidental or purposeful learning, and (c) the person is changed and able to cope or deal with similar situation which may occur due to the learning that has taken place (Merriam et al., 2007). When comparing the results experienced by the students in this study to Jarvis’ model, we these students changed and will now be able to cope or to handle similar situations better because of
their experience with this course and supports Jarvis’ theory.

A third area mentioned that seem to be reinforced was social constructivism. One could argue that these experiences supported both Piaget’s developmental learning theory and Vygotsky’s social development theory at the same time. Piaget’s theory suggests that the key to growth and maturity of the student is through a twofold process of accommodation of existing cognitive structures and assimilation or interpretation of environmental events based on existing cognitive structures. The students of this study were basically allowed to construct their own learning through some semi-guided instructional activities and through dialog with other students and/or the instructor(s) or community members of Christchurch, New Zealand. They were not given specific structures to follow and were allowed to assimilate and use what they constructed in their written, reflective journals.

Vygotsky’s social development theory suggests that all learning takes place in a social environment and that the learner is gaining knowledge through the social structure or interaction with the social environment. Social constructivist theory has promulgated the idea with some, that distance education is inferior because effective learning needs to be situated in activity, context, and culture or a community of practice.

In some of his later works, Vygotsky developed the theory of the Zone of Proximal Development (ZPD), which is defined as the distance between the actual developmental level and the level of potential development, through problem solving, under guidance of an instructor or more capable peer (Marsh, 2005). Basically, Vygotsky asserts that learning is a social function and can be enhanced when a mentor, whether a teacher or a more knowledgeable and/or skillful peer provides some explanatory instruction. The students of this study experienced social learning through peer discussions, interaction and communication with survivors of the major
earthquakes of Christchurch, and instructor(s) guided feedback. There was much evidence in the journal entries that social learning was facilitated through the student-to-student interactions, interactions with instructors, interactions with responders and interactions with the citizens of the community. Therefore, learning was enhanced through social interaction.

Conclusions

Based on the results of this study, we believe that asynchronous, online learning environments (epistemological) combined with experiential learning (ontological) have the potential to be an important and effective method of educating students, particularly with respect to the increasing use of the Internet and online programs. We believe this to be especially true for the nontraditional adult student, a growing demographic in higher education. However, the experiences of these students were somewhat narrow (within the confines of one class in an entire program). There is no way of knowing if the students had experienced different teachers, different peers, different course design or a different locale that the results would be the same. This is one of the limitations of this (or for that matter, much other) research. That being said, the experiences of these nontraditional adult students in an online learning environment gave a view in time, a particular slice of the human experience, to enrich our understanding. For this reason, the study had relevance.

We believe that more care and concern for the design and use of pedagogies and/or adult learning models can enhance the experiences and learning of the adult online student. This may require the instructors and designers of curricula to be more aware of the experiences and perceptions of the students. We believe this based on our research and the results of this study regarding affective learning. As Krathwohl and colleagues (1964) asserted, the affective domain can be very effective in helping achieve the desired outcomes of the cognitive domain. If
students are having an untoward time in their learning experience, they may do what is necessary to pass the course, but has learning in its truest sense been accomplished? We will leave this to the opinions and conclusions of the reader. However, the definition of learning we feel relevant is best described by, “a persisting change in human performance or performance potential. This means that learners are capable of actions they could not perform before learning occurred and this is true whether or not they actually have an opportunity to exhibit the newly acquired performance” (Driscoll, 2005, p. 9).

This study provided a deeper look at the experiences and perceptions of an important demographic of higher education, the non-traditional adult student. Understanding the lived experiences of non-traditional adult students provides us with a unique and important look at humanity. By using this experience as a means of understanding and learning, current and future students may be able to develop individual and useful learning schemas. Curriculum designers and instructors may also be able to use these experiences to develop methodologies to better facilitate learning, which enlightens and adds to the unique experience of being human.

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How does the Theory of Knowledge course in the International Baccalaureate Diploma Programme sit in a rapidly changing world?

Manuel Condoleon¹

Abstract

Globalisation and the various social, political and environmental challenges it exerts has placed schools at the forefront in responding to these challenges, given their role in fostering the competencies in students to not only understand these global challenges, but to potentially act upon them as well. The pivotal role of schools is especially heightened by the increasing presence of transnational institutions as key stakeholders in education. This in turn has naturally given rise to the questions of what should be taught in schools and how it should be taught in this global age? How these question are answered will ultimately determine whether globalisation will transform the role of the educator in an incremental or radical way. Given the growth of the International Baccalaureate in primary and secondary schools around the world, it is this context that will provide a useful backdrop in examining how education is transformed by globalisation. More specifically, focus will be on the Theory of Knowledge (TOK) course in the International Baccalaureate Diploma Programme and where it sits in a rapidly changing world. This is a core component of the programme and the only compulsory subject studied by students which shares the aim of fostering international-mindedness and the ultimate goal of developing responsible global citizens. Drawing from the scholarly work of global theorists, it will be argued that the most profound impact on education as a result of globalisation is in the very purpose of schooling, namely in the stronger moral purpose given to schools. This in turn has triggered a major rethink regarding the roles of both teachers and students; from roles that were predominantly egocentric to ones that foster collective action.

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Despite the ongoing polarized debates in how the phenomenon of globalisation should be conceptualised, only but a few scholars would deny the very existence of this phenomenon and the social, political and environmental pressures and challenges it exerts in this global age. At the very forefront in responding to these challenges are schools given their role in fostering the competencies in students necessary to not only understand these global challenges, but to potentially act upon them as well. The pivotal role of schools is especially heightened by the increasing presence of transnational institutions as key stakeholders in education. This in turn has naturally given rise to the questions of what should be taught in schools and how it should be taught in this global age? How these questions are answered will ultimately determine whether globalisation will transform the role of the educator in an incremental or radical way. Given the growth of the International Baccalaureate in primary and secondary schools around the world, it is this context that will provide a useful backdrop in examining how education is transformed by globalisation. More specifically, focus will be on the Theory of Knowledge (TOK) course in the International Baccalaureate Diploma Programme and where it sits in a rapidly changing world. This is a core component of the programme and the only compulsory subject studied by students which shares the aim of fostering international-mindedness and developing responsible global citizens.

Drawing from the scholarly work of global theorists, it will be argued that the most profound impact on education as a result of globalisation is in the very purpose of schooling, namely in the stronger moral purpose given to schools. This in turn has triggered a major shift in the roles of both teachers and students; from roles that were predominantly egocentric to ones that foster collective action.

Although many scholars refer to the lack of consensus in how globalization is conceptualized (Bulut et al., 2010, p.149; Pieterse, 2015, p.5; Sklair, 1999, p. 143), there does appear to be a common focus in examining the roles played by transnational institutions and nation-states in this global age. Global theorists such as Sklair (1999) and Rizvi (2004), for example, may disagree as to whether primacy should be given to transnational institutions or nation-states in addressing contemporary economic, political and social problems, however what remains quintessential in both camps is that both transnational institutions and nation-states are key stakeholders in education. The former is evident with the increasing involvement of the World Bank (Reimers, 2006, p.291) and the OECD (Carnoy, 2014, p.25) within the educational sphere as both see education as a key sector contributing to economic growth. The latter evident from the increasing pressure on nation states to improve the quality of education (Carnoy, 2014, p.21) as applied by these transnational institutions. In fact, it can be argued that what is being witnessed is a dialectic tension between the economic and political dimensions of globalization. Although nation-states may have lost some of their authority to economic forces such as transnational institutions in accordance with Sklair’s study on globalisation (1999, p.145-6), nation-states have re-emerged as a key force by promoting quality education to sustain economic growth (Rizvi, 2004, p.162). Ozga & Lingard (2014, p.66) add further light to this dialectic tension by stating that nation-states remain an important political force in education, but now work “in different ways”.

Irrespective, therefore, of how globalisation is conceptualised in terms of main actors, schools appear to be placed at the forefront in responding to the various economic, political, social and environmental challenges of this global age. Reimers (2006, p.276)
explains the reason for this by claiming that schools “have greater potential to be aligned with transnational efforts” as they are “globally public spaces” where both transnational and national institutions can mobilize resources to actively intervene as opposed to the “private spaces” that characterise other institutions such as workplaces, media, religious and political institutions. Schools are considered key arenas in which the competencies of future citizens can be developed to potentially bring forth peaceful resolutions to political and cultural conflicts; to address economic challenges such as the competition for natural resources; and to consider alternatives that will reduce the damage caused to the ecosystem by human-environmental interactions (Reimers, 2006, p.277).

Accepting the pivotal role that schools can play, attention turns to the competencies that need to be fostered in schools to not only understand the new global challenges, but to act upon them as well. Apple (2011, p.226) makes a compelling argument for the dismissal of neo-liberal economic doctrines of efficiency and performance advanced by transnational institutions such as the World Bank for not only have they failed to address adequately the various challenges of this global age, they appear to have actually exacerbated them as exemplified by the growing number of urbanites now living in slums around the world. Instead, Apple (2011, p.229) argues that future or current teachers need to think as “rigorously and critically as possible about the relations between the policies and practices that are taken for granted in education and the larger sets of dominant national and international economic, political, and cultural relations” and then connect this to action. This idea of the “critical” and “activist” teacher is also strongly supported by Reimers (2006, p. 276) who advocates for the “development of skills to promote rationality in deliberation and action.” This call for greater critical thinking and action in education systems provides an interesting backdrop to examine the emergence of the International Baccalaureate (IB) as a global phenomenon in education.

The IB is a not-for-profit educational foundation that offers primary and secondary school programmes for a worldwide community of schools. It was founded in 1968 and by 2015 its programmes were adopted by 3968 schools in 147 countries and taught to over 1,228,000 students (IBO, 2015). The phenomenal growth of the IB is evident when one makes a simple comparison six years ago where the IB was taught in 2822 schools in 138 countries with over 757,000 students (Bagnall, 2010, p.5). Carnoy’s definition of globalisation (2014, p.22) as not only the “unregulated movement of finance capital” but also “the increased movement of innovative ideas”, provides a useful economic lens in which to explain the growth of the IB. The IB as an “innovative idea” is evident in its mission statement where it aspires to “develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect” (IBO, 2013). It is also evident in the structure of its Diploma Programme2 which demands the compulsory study of second languages, humanities, literature, mathematics and sciences. This is in contrast to most pre-university courses around the world where such compulsory elements are not evident. Although it can be argued that this tailors to the neo-liberal economic doctrines of efficiency and performance by catering to what Carnoy (2014, p.22) describes as the worldwide economic “demand for certain kinds of skills – namely language,

2 The IB offers four programs: Primary Years Programme (PYP); Middle Years Programme (MYP); Diploma Programme (DP) and Career-related programme (CP). The DP is a two year pre-university course for students in the 16 to 19 age range and TOK is a compulsory course of the DP.
mathematics reasoning, scientific logic, and programming”, this argument would be too simplistic, especially when one examines another compulsory component of the IB Diploma, the critical thinking course named ‘Theory of Knowledge’.

Essentially, the ‘Theory of Knowledge’ course (TOK) is concerned with discussing what is commonly termed as ‘knowledge questions’. Knowledge questions tend to focus on how knowledge is constructed and evaluated; are open and contestable; and usually have a number of plausible answers to them (IBO, 2013, p. 20). The most central of these questions is “how do we know that?”(IBO, 2013, p.10). More specifically, the course attempts to contrast what we mean when we say we ‘know’ something in the Sciences for example, with ‘knowing’ in History or Ethics or the Arts or Mathematics, as well as other areas of knowledge (Weatherell, 2003, p.7). Students are often required to make links across different ways of knowing (such as reason, emotion, language, sense perception) and areas of knowledge (such as mathematics, sciences, humanities, literature, arts), hence promoting interdisciplinary learning (Cole, Gannon, Ullman, Rooney, 2014, p.5). Examples of knowledge questions drawn from various recent IB documents (IBO, 2013, pp.35-49; 2013b; 2014, p.8; 2014b) include:

- How do human scientist decide between competing knowledge claims, or between the views of experts, when they disagree?
- To what extent might lack of knowledge be an excuse for unethical conduct?
- Given the problems associated with the inductive process (going from the particular to the general), how is it that science can be reliable?
- Is it possible for historical writing to be free from perspective?
- Ethical judgements limit the methods available in the production of knowledge in both the arts and the natural sciences. Discuss.
- What elements of universal significance may we discern in indigenous knowledge systems?
- Are religious beliefs reasonable?
- “There is no reason why we cannot link facts and theories across disciplines and create a common groundwork of explanation.” To what extent do you agree with this statement?

The importance of developing students’ critical thinking skills is seen as an imperative by many scholars of globalisation if current and future generations are to have the competencies in effectively responding to the economic, political, social and environmental challenges of this global age (Apple, 2011, p. 229; Bulut et al, 2010, 150; Osler, 2011, p.15; Reimers,2006, p.276). This idea resonates strongly with ‘global society’ theorists who attribute great significance to ideas like global awareness and planetary consciousness in their general conception of globalisation (Sklair, 1999, p. 154). The Theory of Knowledge course takes centre stage in the IB for developing such an awareness and consciousness in
students as espoused by these globalisation theorists, namely through the critical examination of cross-disciplinary knowledge questions as exemplified above. The most recent guide provided by the IB to TOK teachers explicitly makes this connection between the nature of the course to the prevailing global environment:

“The TOK classroom invites a unique partnership of learning, for global controversies often rest on significant knowledge questions that can provide useful starting points for TOK explorations and TOK, in turn, can contribute significantly to the understanding of these large questions. The IB vision of internationally minded individuals implies a global engagement, embodying a commitment to address these 21st century challenges. TOK exists at the very core of the quest, as we strive toward an enlightened and fulfilled humanity.” (IBO, 2013, p.15)

This idea of teachers and students developing a “unique partnership of learning” for “global engagement” provides a useful insight as to how education is being transformed by globalisation. Globalisation is transforming education by putting to question and potentially changing the very purpose of schooling. Reimers (2006, p.288) sheds light on this by forwarding the argument that schools are “relatively recent institutions in human history” and “have been guided at different times by different purposes”, such as building national identity, improving economic competitiveness and educating for local relevance. With the increased pace of globalisation and the new challenges it presents, a new competing purpose has emerged, namely the moral purpose of schools.

“Education purposes must include clear moral purposes and those should be aligned with universally accepted values and standards, informed by different philosophical and cultural traditions, but which provide clear guidance with regards to standards of fairness, the rights of individuals and with regard to accepting and addressing differences among individuals and cultural groups.” (Reimers, 2006, p.280)

This change in purpose has the potential to transform the role of educators in a profound way. Referring back to TOK’s aim of creating a “unique partnership of learning” for “global engagement” (IBO, 2013, p.15), it can be argued that how this is interpreted by educators will ultimately lead to either an incremental or radical transformation of their role. Smith and Morgan (2010, p.299) through their discourse analysis of the 2006 TOK guide, identified two competing constructions of TOK. To inform their research, they applied the theory of Miller and Seller which essentially categorises the varying roles of educators through a tripartite model of curriculum orientations: a transmission orientation; a transaction orientation and a transformation orientation (Smith & Morgan, 2010, p.301). The ‘transmission orientation’ refers to the more didactic pedagogical style where school subjects are broken down and students are expected to learn facts and concepts to achieve proficiency or mastery. This is in contrast to the ‘transaction orientation’ where the emphasis is not content but skills such as critical thinking and problem-solving through inquiry-based learning. Finally, ‘transformation orientation’ assumes an interdependence among disciplines where learning focuses on “integrating physical, cognitive, affective and spiritual dimensions” with the aims of self-actualisation, self-transcendence and active social involvement.

Based on this tripartite model, Smith and Morgan dismiss the teacher-centred transmission
orientation for TOK focuses on knowledge questions and is not a content prescriptive course. The remaining two orientations, however, dominate and serve different purposes, thus positioning teachers and students in different ways. The transaction orientation is labelled ‘TOK-as-developmental-facilitator’. Here teachers facilitate the development of inquiry skills. The “unique partnership of learning” for “global engagement” is more of an ‘intellectual’ interpretation and construction of the TOK course, where teachers and students work together predominantly through dialogue and jointly develop critical thinking skills. On the other hand, the transformational orientation is labelled ‘TOK-as-hero’ where the construction of TOK is ‘political’ and is seen as an agent of transformational change with the political goals of producing global citizens to create a “better and more peaceful world” (IBO, 2013). This, Smith and Morgan argue, requires teachers to “get in touch with their ‘inner life’ and ... help students with the process of ‘being and becoming’” (Smith & Morgan, 2010, p.308).

Although the transaction orientation does not appear to change the role of the educator as profoundly as the transformation orientation, it nevertheless does involve some incremental change, especially if it is to lead to successful “global engagement” as stated in the aims of the TOK course. Apple (2011, p.229), for example, argues that educators need to ask different questions such as: “Whose knowledge is this? How did it become official?”. Reimers (2006, p.284) takes Apple’s argument further by proposing that the role of the educator should not only be limited to asking different questions and making sense of them, but to make sense in a way that leads to “productive and peaceful cross-cultural dialogue”.

Posing different questions and promoting a more cross-cultural dialogue to enhance the global engagement of students will mean a more overt change in the role of educators - from the egocentric pedagogy of developing an individual student’s critical thinking skills to a pedagogy that promotes a more collective and shared experience. An even more radical change in the role of educators, however, would be to go beyond tackling “different questions” through collective dialogue to tackling “different questions” through collective action. This aligns strongly with the transformation orientation where self-transcendence and active social involvement are the key competencies that educators need to develop in students and is compatible with the viewpoints of many scholars regardless whether their research focused narrowly on TOK or had the broader focus of globalization in education (Apple, 2011; Camicia & Franklin, 2011; Darwish, 2009; Osler, 2011; Reimers, 2006; Robertson, 2006; Smith & Morgan, 2010).

In conclusion, although the aforementioned pivotal role that educators find themselves in is largely due to impersonal forces, ironically it is their personal choices that are likely to have major implications in how global economic, political, social and environmental challenges are addressed. For many research scholars of TOK specifically and global education in general, the importance of educators adopting a more transformative orientation in their roles is a straightforward choice. For the adoption is not only important in promoting global engagement and providing schools with a stronger moral purpose, but also as many global society theorists (Sklair, 1999, p.156) emphatically claim, essential for “survival”.
References


Decay Rate and Spacing Effect Algorithm for the Learning of Foreign Languages

Topic Area: Language Education

Presentation Format: Paper Session

Description: Retention of information is very important in learning any subject. This cannot be more important than in learning foreign languages because of the large vocabulary required to be proficient in the language. This research developed an algorithm that incorporates research in learning retention. The learning Decay Rate and Spacing Effect are incorporated into this algorithm to maximize retention of information.

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Decay Rate and Spacing Effect Algorithm for the Learning of Foreign Languages

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Abstract. Retention of information is very important in learning any subject. This cannot be more important than in learning foreign languages because of the large vocabulary required to be proficient in the language. This research developed an algorithm that incorporates research in learning retention. The learning Decay Rate and Spacing Effect are incorporated into this algorithm to maximize retention of information.

I. Introduction

The learning of foreign languages can be very difficult, which requires a great amount of memorization. This justifies investigations into new learning models and algorithms to assist in the learning of foreign languages. This research creates a learning algorithm to assist with the memorization of foreign words using the combination of two well-documented empirical observations about learning. These observations model decay-rate of learning and how the spacing of learning episodes improves memorization.

There exists a research opportunity in making an effort to objectify these effects in greater detail and exploit them for maximum learning gain through the use of optimized learning algorithms in conjunction with artificial intelligence. Simply put, students might be able to learn faster during training, retain more knowledge, and perform these training tasks with less effort and more predictability of outcome. In addition, the schools may be put in position to better quantify individual maximum learning rates for candidate selection and promotion through better understanding and measurement of these learning effects and retention results for individuals.
II. Literature Review

Despite over 100 years of research into learning and retention processes, surprisingly little is known. The material that is known and available does not easily lend itself to quantitative models. However, two well-known quantitative effects have been repeatedly empirically observed and reported on in great detail over the many decades: 1) the “decay-rate” effect of learning memory retention, and 2) the “spacing effect” of repeated exposures to the same information that was attempted to be learned. The decay rate effect has been observed to show that the probability that a previously learned to memory item can be correctly recalled decays at an exponential rate over time, similarly to the curve exhibited for radioactive decay. The spacing effect has been observed to show that repeated exposures to the same information boosts future retention probability substantially, and reduces the retention decay rate. Further, the spacing effect also indicates that given two or more learning sessions of the same item, individuals will remember more when the sessions are spaced at larger intervals, regardless of whether the interval is seconds, minutes, hours, weeks, or years. The longer the time gap, or spacing, between sessions, the better the effect for memory retention. For experimentally measured results and worthwhile discussions of these effects see Bahrick (1987 and 1993), Cepeda (2008 and 2009), Goverover (2009), Pavlik (2003 and 2008), and Rohrer (2010).

2.1 Decay Rate

Much research has been done in developing equations for the rate at which people forget information. This empirical research shows that how people forget is a power function (Anderson & Schooler, 1991; Wickelgren, 1974; Wixted & Ebbesen, 1991). There is some variation based upon the information being words, faces and nonsensical syllables. But the power function best describes this rate.

Wickelgren in 1974 developed equation 1 to show the decay-rate of information within people.

\[ m = \lambda (1 + \beta t)^{-\psi} \]  

(1)
In this equation $m$ is the memory strength and $t$ is time, which is the retention interval. There are three parameters to the equation. The parameter $\lambda$ is the state of long-term memory. The parameter $\Psi$ is the rate of forgetting and $\beta$ is the scaling parameter.

Future research by Wixted (2004) confirmed Wicklegren's equation and generalized it to equation 2.

$$m = \theta t^{-\Psi}$$ (2)

Figure 1 shows equation 2 with $\Psi = 1.286$.

2.2 Spacing Effect

The Spacing Effect addresses the amount of time between learning episodes that will maximize information retention. Research indicates that individuals will remember information proportion to the time between learning episodes. A number of researchers have confirmed this (Bahrick, 1987; Bahrick, 1993; Cepeda, 2008; Cepeda, 2009; Pavlik, 2003; Pavlik, 2008; Rohrer, 2010).

For example, if an individual has two learning sessions to learn some information, ideally we would want the time between sessions to be as large as possible. Of course, there are some time
constraints; at some time the individual will be evaluated on the information. But the long the time between sessions will produce better learning results and allow the individual to retain the information better.

III. Methodology

This methodology will create an algorithm to manage training episodes that incorporate research pertaining to the decay rate effect and spacing effect. For each individual the algorithm will determine the learning parameters (rates) that are the best for that individual. Once these rates have been reduced to empirically fitted equations able to predict future performance with a reasonable degree of accuracy, payoff algorithms can be designed and implemented to maximize learning and retention rates by presenting new information and reinforcing older information in the most advantageous programmatic sequences possible. The overall goal is to maximize the retention rate of the entire body of knowledge at a nominally or explicitly defined future date in time.

Foreign language vocabulary pairs have provided an excellent testbed for research on learning and retention. For each foreign word presented, the subject must correctly identify the correct English word translation in a multiple choice test format. Once a new word is “learned” it can be subsequently presented both as a spacing reinforcement and as a test of retention. Over thousands of new and repeated word learnings and testings, using various time spacings, both curve-fitted equations and their coefficients can be derived using standard mathematical methods. These curve-fitted equations would characterize both the decay rate and spacing effect linearities. The variance of the coefficients between individuals, and how these coefficients vary over time, could possibly be measured and characterized. Default equation coefficient values might also be able to be estimated for the general training population.

At this stage learning payoff optimization would be considered. To increase learning payoff, it is helpful if a value can be assigned to individual learning items that is a measure of how desirable it is to have an excellent retention probability of that specific item. For example, in the English language, only 1,000 vocabulary words constitute approximately 84% of the spoken language. The first 100 of these words comprise 40-50% of this. It is of far greater utility to learn the article “the” than the noun
“porcupine”. For vocabulary, learning utility values can be assigned based on the commonly available word frequency lists. Instructors would assign payoffs as needed on specific learning items in learning and testing software databases.

As a result of the above consideration, learning payoffs for the introduction of new, or the repetitions of previously learned items, could be calculated as the value of the boost in retention relative to the required additional learning and testing time. The designed algorithm would, at each new question step, present the learning item likely to produce the highest learning versus training time payoff. Considering current computer processing power, any derived algorithm could most likely consider every training list item and calculate the likely payoff associated with it at every question step.

Finally, the benefits of the final conceived algorithmic method of learning could be compared to the results from a control group of subjects learning the same body of knowledge in the same amount of time using standard methods. This would allow a comparison estimate to quantify the measurable benefits of using the technique.

IV. Current Prototype Learning Reinforcement Software

A fully-functional prototype software program has been created that implements the concepts and methods previously discussed. Shown below in Figure 1 is a screen shot of this program that contains translations of the 10,000 most common English words into 58 other languages. The database of words also contains the frequency of each word in English. Learning specific words has a specific "payoff" associated with the retention of each word. The subject is presented with the English word and is offered 4 multiple-choice answers in their native language. They learn new words and are tested/reinforced on each word using the software through the process.
Figure 2. Prototype Learning Reinforcement Software: ESL Vocabulary Trainer.

The software attempts to present each subsequent word based on a tentative payoff equation. Tentative equations and coefficients for the decay and spacing effect are implemented that can be changed over time owing to the individual learning quality and rate, in order to present the most optimal word question choice. Learning coefficients are anticipated to be different for each individual, therefore being able to have the software automatically update coefficients for individual's training at periodic intervals is seen to be desirable. Levenberg-Marquardt nonlinear regression is built into this software for equation parameter coefficient determination. Timestamped records of all words presented, as well subject answers and the time required to answer each question, are stored to a database for later retrieval and analysis.

Upon completion of the proposed research, the final uncopyrighted version of this software would be made available to the Army Research Laboratory for further analysis and research. The software will be capable of customized instructional design. Staff will be able to input their own questions and answers, including visual recognition and sound information, in any subject matter area. Further improvements and customization under ARL direction would be possible.
V. References


Addressing ADHD with UDL Interventions

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Abstract

In the United States, approximately 11% of children 4-17 years of age (6.4 million) had a diagnosis of Attention-Deficit/Hyperactivity Disorder (ADHD) in 2012 and current research suggests that rates are on the increase. Due to this prevalence, teachers will come into contact with students with ADHD. Therefore, it is imperative that teachers know about effective class-wide interventions for students with ADHD.

The characteristics of ADHD include persistent inattention or hyperactivity-impulsivity that negatively impacts academic functioning (American Psychiatric Association, 2013). There are three subtypes of ADHD: predominately inattentive, predominately hyperactive-impulsive, and combined. Students identified as predominately inattentive type may experience difficulties in paying attention, listening when someone speaks, finishing tasks, avoiding distractions, and following instructions. Students who experience difficulties in keeping hands and feet still, staying seated, and frequently interrupt others are identified as predominately hyperactive-impulsive type. Students who have features of both inattention and hyperactive-impulsivity are identified as a combined type.

Recent studies have revealed that many students occasionally display symptoms of ADHD. Additionally, the symptoms of ADHD occur on a continuum of risk, and therefore teachers may have students with undiagnosed, but moderate, signs of ADHD. For this reason, class-wide interventions can be more efficient than individualized interventions because they benefit the performance of all the students. Additionally, a class-wide application allows the individual student to remain anonymous, since only the teacher knows which student’s behavior prompted the intervention. Unfortunately, new teachers may not be familiar with effective class-wide interventions for ADHD.

Key words: Universal Design for Learning (UDL), Attention-Deficit/ Hyperactivity Disorder (ADHD)
Getting Close, Letting Go: Service-Learning for Preservice Teachers at a Homeless Shelter

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Abstract

Each night in the United States, approximately 1.5 million children do not have a home to call their own. In the past few years, the number of children and families experiencing homelessness and extreme poverty has increased significantly across the nation. For homeless children, residence instability, frequent school changes, excessive absenteeism, and transportation issues present major educational challenges beyond those experienced by housed peers. Approximately 75% of U.S. homeless children performed below grade level in reading and teachers may not have the necessary experience, attitudes, and beliefs to teach these students, thereby further delaying their academic achievement.

Subsequently, teachers can have a profound and positive effect on both the daily lives and the futures of homeless children. Teachers’ perceptions—positive or negative—influence their interactions with children and their families and can have dramatic and long-lasting effects on the lives of the homeless children. Frequently, teachers’ perceptions about homelessness—student abilities and the importance parents place on education—are based on experience. In most cases, negative perceptions—influenced by stereotypical images (e.g. homeless children being low functioning and having behavior problems and parents being lazy and irresponsible)—are the direct result of lack of experience working with homeless families. However, when pre-service teachers have the opportunity to work with homeless children and their families during a university-supervised and mentored internship, they develop the necessary skills, attitudes, and beliefs to teach homeless children.

Thus, teacher education programs should provide preservice teachers with coursework in specialized academic interventions, an authentic field experience, and a supportive university mentorship so they can develop specialized skills and optimistic perceptions of children and families who face homelessness and extreme hardship. This presentation showcases how the perceptions of elementary education preservice teachers were transformed after enrolling in literacy tutoring internships for kindergarten through fifth grade students at a homeless shelter.

Keywords: service-learning, homeless children, pre-service teachers, field experiences
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1. Title of the submission:
   Using Technology to Assist with Reading Learning Differences

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6. Abstract of presentation

   ABSTRACT

   Using Technology to Assist with Reading Learning Differences

   Teachers need to integrate new technologies into their repertoire of teaching strategies for
   struggling readers, English learners, and dyslexic learners within the regular classroom.
   Technology in reading instruction presented will include digital tools for word recognition,
   digital tools for fluency, and digital tools for comprehension. Specifically, e-books sites with
   text-to-speech (TTS), resources for teaching vocabulary strategies, internet dictionaries,
   electronic children’s magazines, and web-based tools that help students better understand will
   be shared. Additional resources for the dyslexic students will be presented such as the voice
   activated software which allows the student to speak and then the computer types what is
   spoken. Participants will be encouraged to bring their computers to experience some of these
   sites. The author will end by sharing the importance of educators to keep learning in
   preparation for future technological changes.
Title of the submission:

Reappraising the Black Panther Party, 1966-1971: Its Contributions to the Black Studies Movement at Merritt College and San Francisco State University

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Reappraising the Black Panther Party, 1966-1971: Its Contributions to the Black Studies Movement at Merritt College and San Francisco State University

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Abstract

This paper reappraises the role of the Black Panther Party in the development of the Black Studies Movement at Merritt College and San Francisco State University from 1966 to 1971. It examines the emergence of the Black Studies Movement at Merritt College and San Francisco State University. This paper also identifies Black Panthers who helped to develop the original Afro-American Studies Department at Merritt College and the original Black Studies Department at San Francisco State University. In addition, it examines the role of The Black Panther in fomenting the Black Studies Movement from the 1967 to 1971 period as well as some implications of the research.

Introduction

Standing on the shoulders of previous generations, many young Black college students in the United States of America (USA) during the 1960s proceeded to demand an education that they considered to be relevant to their heritage. The demands surfaced at predominately White colleges as well as predominately Black colleges. As a reaction to those demands, colleges began to approve courses, programs, and departments with an emphasis on Black studies. Instead of coming from above, the push for this new curricula came from below (Crouchett, 1973; Haro, 1979; Cromartie, 1993).

Between 1960 and 1971, Black social movements were developed or retooled to meet the needs of Black college students and the larger Black community. In turn, those Black social movements played a dynamic role in the fight for social justice as defined by leaders like Stokely Carmichael, H. Rap Brown, Max Stanford, Huey P. Newton, Bobby Seale, George Mason Murray, Jimmy Garrett, and Maulana Karenga. Their organizations included SNCC (Students Nonviolent Coordinating Committee), RAM (Revolutionary Action Movement), CORE (Congress for Racial Equality), Afro-American Association, Us Organization, House of Umoja, and the Black Panther Party for Self-Defense (Seale, 1970; Newton, 1973; Karenga, 1993;
In the case of the Black Panther Party led by Newton and Seale, its members were directly involved in the fight for courses, programs, and departments with an emphasis on Black studies at Merritt College and San Francisco State. It was at those two campuses wherein Black college students first succeeded with their demands to get full-fledged departments. To gain those victories, members of the Black Panther Party used Black nationalism and sometimes formed coalitions with non-Black groups to put pressure on administrators at Merritt College and San Francisco State. The Black Panther Party also played a major role in the development of Black Student Union organizations in colleges throughout California and elsewhere (Seale, 1970; Newton, 1973; Akinsanya Kambon, personal communication, April 10, 2016).

This paper will reappraise the role of the Black Panther Party in the development of the Black Studies Movement at Merritt College and San Francisco State University from 1966 to 1971. It will examine the emergence of the Black Studies Movement at Merritt College and San Francisco State University. This paper will also identify Black Panthers who helped to develop the original Afro-American Studies Department at Merritt College and the original Black Studies Department at San Francisco State University. In addition, it will examine the role of *The Black Panther* in fomenting the Black Studies Movement from the 1967 to 1971 period as well as some implications of the research. This paper, in terms of research methodology, makes use of a mixed methods approach consisting of a qualitative survey and a case study.

**The Black Studies Movement, Black Panthers, and *The Black Panther***

From 1959 to 1966, Huey P. Newton and Bobby Seale were students of Merritt College. While attending that institution, Newton and Seale became deeply engrossed in matters related to curriculum and instruction. On the one hand, Newton and Seale wanted the curriculum to have courses that covered the Black experience. On the other hand, they wanted the institution to hire more Black faculty members and administrators. To address those two concerns, Newton and Seale became members of the Soul Students Advisory Committee at Merritt College. That student organization was the forerunner of what later became the Black Student Union. During their stints at Merritt College, Newton and Seale were members of the Soul Students Advisory Committee which led the fight for a Black history course and a Black Studies Department. Hence, they were both involved with the Black Studies Movement when it first emerged (Seale, 1970; Newton, 1973).

After Newton and Seale became disenchanted with some of the practices of the Soul Students Advisory Committee, they left it and formed the Black Panther Party. As a new organization which emerged in October 1966, the Black Panther Party sought members from Merritt College as well as the “streets.” To remain close to the college scene, Newton and Seale opened the first office of the Black Panther Party in Oakland at 5622 Street (as Martin Luther King Boulevard was then known), which was only one block from the original campus of Merritt College. They also used their new organization to continue to participate in the Black Studies Movement (Seale, 1970; Newton, 1973).

For the Black Panther Party, the Black Studies Movement was an important development in educational institutions. Both before and after the founding of the Black Panther Party, members of the organization were deeply involved in the efforts to establish Black studies courses,
programs, and departments. The two founders of the organization encouraged members of the Black Panther Party to advocate for the Black Studies Movement and other areas of education. When the Black Panther Party created its Ten-Point Platform and Program, education was the subject of one. Point number five stated that, “We want education for our people that exposes the true nature of this decadent American society. We want education that teaches us our true history and our role in the present-day society.” The organization made it clear that education was valued by its leadership from the outset. The organization also made it clear that education should shed light on the truth and teach people to use a critical analysis approach to look at social conditions in a given society (Newton, 1972, 1973; Seale, 1970).

From 1967 to 1971 and beyond, the Black Panther Party used the official organ, The Black Panther, to support the Black Studies Movement. It also took the position the Black Studies Movement could be a major factor in exposing the true nature of the USA. Likewise, the organization used The Black Panther to promote the notion that the Black Studies Movement could be a major factor in teaching students their true history and their roles in society. Thus, the Black Panther Party took the position that its members should participate in the Black Studies Movement. It also took the position that its newspaper should promote the agenda of the Black Studies Movement (“Black Curriculum,” 1967).5

As The Black Panther progressed, between 1967 and 1971, it continued to carry reports on the effort to establish a Black Studies Department and other activities at Merritt College as well as San Francisco State (Black Liberation Publishers, 1968a, 1968b; Fleming, 1969; Hilliard, 1969a; Crumby, 1969; “Third World Colleges,” 1969; San Francisco State Black Students Union, 1969; Merritt College Strikes, 1971).5 When San Francisco State staged a strike over conditions at that institution, members of the Black Panther were front and center in the conflict. Whereas Huey P. Newton, Bobby Seale, Elbert “Big Man” Howard, Virtual Murrell, Melvin Newton, and Sidney F. Walton made a mark at Merritt College, George Mason Murray, Landon Williams, Carlotta Simon, Joann Mitchell, and Clarence Thomas were making theirs at San Francisco State. The names of those 11 Black Panthers appear in many important documents related to the Black Studies Movement at Merritt College and San Francisco State.


Within the Black Panther Party, W. E. B. Du Bois was held in great esteem. Three of his books appeared on the list. One was Black Reconstruction in America, which was the book Li’l Bobby Hutton was reading at the time of his death. The second book was The Souls of Black
Folk. The third book was *The World and Africa* (Du Bois, 1903, 1935, 1947). The Black Panthers were well aware that Du Bois was a major sociologist and political activist. The January 4, 1969 issue of *The Black Panther* featured a photograph of Du Bois which filled an 11 by 17 page.7

**Afro-American Studies at Merritt College**

The Afro-American Studies Department at Merritt College was founded in November 1968 and implemented in January 1969 during the Winter Quarter. The first chairperson of the department was William Haralson. He remained in that position until the beginning of the Fall Quarter in September 1969. At that time, Haralson was replaced by Melvin Newton as the chairperson. Melvin Newton was the brother of Huey P. Newton and he taught Black studies and sociology at Merritt College. When the Afro-American Studies Department emerged at Merritt College, Norvel Smith was the president of Merritt College. He was the president of that institution from 1968 to 1973 (Wilmot, 2014; Self, 2014; Murch, 2010a; Cromartie, 2011a, 2011b).8

At Merritt College, the first Black Studies course was taught by Rodney Carlisle, a White man, in 1963. The title of the course was “History of the Negro in America.” According to a contemporary report in a March 5, 1964 issue the *Peralta Bulletin*, Bobby Seale and Herman Porter were two students who played a leading role in advocating for a Black history course at Merritt College. The report also stated that:

The course was offered for the first time last September after more than a year planning and preparation. Interested students met after school hours with Coordinator Duffy and instructors Rodney Carlisle and Dr. William Doyle to plan expansion of the course to include study of contemporary problems. Merritt College students Robert Seale and Herman Porter were particularly active in the conferences and conducted surveys to determine student demand for new sections of the course” (“Negro History Course,” 1964, p. 1).

The report continued:

The first semester of the course provides a survey of African origins, the slave trade, and slavery from colonial times to the Civil War. The Civil War, a more detailed account of the role of the Negro in American life, and an analysis of the current status of the Negro in American society are the areas covered by the second semester” (p. 1).

Eventually, Bobby Seale and other students developed a key Merritt College student organization known as the Soul Students Advisory Council. Members of the Soul Students Advisory Council expressed dissatisfaction with Carlisle’s course and pressured the institution to develop a Black Studies Department. They had also put pressure on college’s administration to develop the course which was taught by Carlisle. The pressure from the Soul Students Advisory Council for a department lasted from at least 1965 to 1968. During that period, members of the Soul Students Advisory Council held meetings with the college’s administration and issued demands related to curricula and hiring practices (Newton, 1973; Seale, 1970; Murch, 2010a).9
Under the leadership of Norvel Smith, Merritt College responded in an affirmative manner to the push from below by the Soul Students Advisory Council for a full-fledged department. With that response, Merritt College became the first college at the two-year level, four-year level, or university level to actually implement a full-fledged department. The Soul Students Advisory Council played a role in the selection for the chair and faculty for the department. Instead of resisting the push from below for a department, Norvel Smith chose to listen to the voices he heard in the ranks of the Soul Students Advisory Council (Seale, 1970; Wilmot, 2014; Self, 2014; Murch, 2010a).

The Soul Students Advisory Council, at one time or another, was composed of Black people like Douglas Allen, Kenny Freeman, Elbert “Big Man” Howard, Virtual Murrell, Isaac Moore, Huey P. Newton, Alex Papillon, Leo Bazille, and Bobby Seale. Eventually, some of those Merritt College students from the Soul Students Advisory Council joined the Black Panther Party for Self-Defense and/or its rival organization the Black Panther Party of Northern California. Thus, the Afro-American Studies Department at Merritt College came from below through the efforts of people who became Black Panthers as well as others. On the one hand, Black Panthers who helped develop the department were Huey P. Newton, Bobby Seale, Melvin Newton, Virtual Murrell, Elbert “Big Man” Howard, and Sidney F. Walton. On the other hand, non-Black Panthers included Doug Allen, Isaac Moore, Alex Papillon, Leo Bazille, William Haralson, and Norvel Smith (Seale, 1970; Newton, 1973; Howard, 2002; Austin, 2006; Murch, 2010a).

Huey P. Newton attended Merritt College between 1959 and 1966. Bobby Seale was a student at that institution from 1960 to at least 1972 on an off and on basis. As members of the Soul Students Advisory Council, the two co-founders of the Black Panther Party became very involved in the campaign to get Black studies curricula at Merritt College. They also used Merritt College as a fertile recruiting ground for the Black Panther Party (Newton, 1973; Seale, 1970; Monsa Nitoto, personal communication, June 16, 2007).

As mentioned above, Melvin Newton was the second chairperson of the Afro-American Studies Department. By the time he got that position in 1969, Melvin Newton had served as the minister of finance for the Black Panther Party. Melvin Newton stayed in the Peralta Community College District on a fulltime basis working as a professor or administrator from 1969 to 2003. Melvin Newton was a former Merritt College student who transferred to the University of California, Berkeley and earned undergraduate and graduate degrees. Elbert “Big Man” Howard began to attend Merritt College in 1960. Eventually, he became an administrator inside of the Peralta Community College District and remained there until around 1972 (“Brother of Newton,” 1969; Merritt College, 2013; Howard, 2002).

Sidney F. Walton was a Merritt College counselor and instructor from 1965 to 1969. He also served as the faculty adviser to the Soul Students Advisory Council (Walton, 1969a). There were at least two Black Panthers whose membership in the organization was not disclosed. One person was Richard Aoki (Fujino, 2012). The other person was Walton (Emory Douglas, personal communication, June 19, 2016).

During the first year of its existence, the Black Panther Party addressed the activities of Walton at Merritt College in several issues of The Black Panther. The fourth issue of The Black Panther was the first to feature a report on the plight of Walton at Merritt College. In the first report, the Black Panther Party related that Walton made a presentation to a screening committee regarding his application for a dean position at Merritt College. Walton told the screening
committee that he had the necessary credentials required to be qualified for the job under California Education Code. He also pointed out that his employment at Merritt College as a counselor dated back to April 1965. In addition, Walton noted that he had experience teaching courses at Merritt College as a part of his load (“Merritt College Refuses Opportunity,” 1967).

The Black Panther Party made it clear in the first report that it supported Walton’s quest to be hired as a dean at Merritt College. For example, the first report argued that Walton was making valuable contributions at Merritt College. It stated:

This past year Brother Walton assisted Black students in their efforts to get Merritt College to provide them with an adequate reading program, helped Sould [sic] Students Advisory Council in its many programs, got the University of California to accept Merritt College’s Negro history course as transfer credit, got Merritt College to change the name of “Negro” history to Afro-American history, assisted with the Black Experience held at Merritt College, got the Merritt College Faculty Senate to approve and support the schools’ recognition of February 21 as Malcolm X Memorial Day, developed a Black Curriculum framework and proposed an Associate of Arts degree with a major in Afro-American studies. (“Merritt College Refuses Opportunity,” 1967, p. 12)

The first report also said that Walton was going to prepare materials for a later issue of the publication and address matters that “deal primarily with education of Black People, for Black People, and by Black People--Included in this issue will be the BLACK CURRICULUM” (p. 12).

In the first report on Walton, the fourth issue of The Black Panther published a list of recommendations made by Merritt College’s Black Personnel Committee regarding openings at that institution. The recommendations were presented by Sylvester Hodges and addressed to “Merritt Council Members and Concerned Individuals” (“Merritt College Refuses Opportunity,” 1967, p. 2). The recommendations called for the Merritt College administration to hire some Black administrators, Black counselors, and Black faculty for open positions. The recommendations also noted that the Black Personnel Committee had been formed through the persistence of the Soul Students Advisory Council. In addition, it noted that the Black Personnel Committee recommended that a Black person be hired for the open dean position. According to the report in The Black Panther, the Merritt Council unanimously approved the proposal (“Merritt College Refuses Opportunity,” 1967).

Nevertheless, the administration at Merritt College did not hire him as a dean despite the efforts of Walton, Soul Students Advisory Committee, and the Black Personal Committee. Instead, the administration at Merritt College “eliminated Dean Castellino’s position and appointed him to fill the vacancy created by Dean Olsen’s reassignment” (p. 12). As a response, The Black Panther stated that, “We suspect foul play and that the racist dogs would rather eliminate a valid position than to fill it with a Black person” (p. 12). The Black Panther also noted that Walton expressed anger at the decision wherein he was not offered a dean position.

The fifth issue of The Black Panther carried the second report on the plight of Sidney F. Walton at Merritt College (“Black Curriculum,” 1967). The newspaper once again said that Sidney F. Walton did not get the dean position at that institution. It also stated once again that the dean position went to a White man, namely Kenneth V. Castellino. Both Sidney F. Walton and the Black Panther Party expressed dismay at that outcome. As promised, the fifth issue
covered the effort of Walton to develop a Black curriculum for the proposed Black Studies Department. In his capacity as a counselor and instructor at Merritt College, Walton was a strong advocate of Merritt College establishing a full-fledged Black Studies Department and eventually published a book detailing his efforts.

The second report on Walton mentioned that Walton held a press conference in front of Merritt College in July 1967. At that press conference, Walton issued a demand for Merritt College to implement a “Black Curriculum” which he had developed. He also issued a demand for Merritt College to hire a Black person who would “develop, coordinate and articulate” that curriculum. Walton complained that, “Two or three courses in the history department listed in the new catalog do not, by any stretch of the imagination make a curriculum and certainly not a Black Curriculum” (“Black Curriculum,” 1967, p. 24).

Before the press conference, Walton found out that he had been passed over for the Dean of Student Personnel position at Merritt College. He expressed some anger at the Merritt College administration for taking that action. In its report on the press conference, The Black Panther stated that Walton was “the most qualified person on campus to hold down the job of dean.” That report also stated that: “The reason Walton was passed over is because he is Black. And the curriculum he [proposes] is Black. The Black Panther believes that this type of curriculum will become the standard thing in all Black colleges in racist dog America (“Black Curriculum,” 1967, p. 24). Thus, in its newspaper, the Black Panther Party let it be known that Walton and his proposal were fully supported by the organization.

As part of its report on Walton’s press conference and his Black curriculum proposal, The Black Panther published the actual list of courses he presented. In the case of Walton’s proposal, it showed that he identified over 20 courses which could be taught as part of a Black curriculum. Those courses represented a variety of disciplines and fields, including sociology, psychology, political science, anthropology, economics, drama, etc. The list prepared by Walton is important because it provided the Black Studies Movement at Merritt College with a dynamic curriculum which could be implemented. Instead of just standing back and spouting rhetoric about what Merritt College should do, Walton took it upon himself to show what Merritt College could do in terms of a developing a dynamic curriculum (“Black Curriculum,” 1967).

The sixth issue of The Black Panther covered the Bay Area Black Educators Conference. It was held at the University of California, Berkeley on October 6, 1967 and October 7, 1967. A key goal of the conference was to discuss the status of Black education in the Bay Area and elsewhere. Keynote speakers for the conference were Nathan Hare and George Ware. During the final session, the conferees passed a number of resolutions, including the endorsement of Merritt College’s Black curriculum designed by Sidney F. Walton and the formation of a nine-person steering committee. Steering Committee members included Sidney F. Walton, Edward O. Lee, Louis Barbe, Harriet Smith, Margaret Amoureux, Sarah Fabio, Welvin Stroud, Howard Jeter, and Henry Casanave. Like Walton, Harriett Smith and Sarah Fabio were representatives from the Peralta Community College District, which was formerly known as the Peralta Junior College District (“B.A.B.E.C.,” 1967).

In 1969, Walton published a book titled The Black Curriculum. He expanded upon the aforementioned proposal and laid out an argument for the implementation of Black Studies curricula at Merritt College. Walton, in his book, included a plethora of letters, memoranda, course outlines, and other documents that trace the battle from below for Black studies curricula at Merritt College. Walton also included some documents that show he was heavily involved

In sum, when the original Afro-American Studies Department was established with William Haralson as the chair, it was standing on the shoulders of the Soul Students Advisory Council and Sidney F. Walton. The initiative to establish that department was the culmination of a protracted struggle from below led by the Soul Students Advisory Council under the advice of Walton much of the time. Although some histories of the Black Studies Movement tend to overlook or ignore Merritt College, it was ground zero for the emergence of the dynamic new curricula from below. The Afro-American Studies Department deserves to be recognized for the innovation and legacy it represents. Likewise, the Black Panther Party, under the leadership of Huey P. Newton and Bobby Seale, deserves to be recognized as one of the key community-based organizations which supported the Soul Students Advisory Council and Walton in their protracted struggle for the establishment of the Afro-American Studies Department at Merritt College. Instead of it being an overnight success, the struggle for a Black Studies Department lasted for more than four years. As that protracted struggle evolved, the following six Black Panthers made valuable contributions: Huey P. Newton, Bobby Seale, Elbert “Big Man” Howard, Virtual Murrell, Melvin Newton, and Sidney F. Walton (Newton, 1973; Seale, 1970; Karenga, 1993; Cromartie, 1993). 17

Black Studies at San Francisco State

The Black Studies Department at San Francisco State was founded in September 1968 and implemented in September 1969. When the Black Studies Department was founded in September 1968, the initial chairperson of the Black Studies Department was Nathan Hare, a Black sociologist. Hare held a Ph.D. in sociology from the University of Chicago and had previously taught at Howard University. Robert Smith held the presidency of San Francisco State at the time the Black Studies Department was initially founded and he hired Hare. By the time the Black Studies Department was implemented in September 1969, S. I. Hayakawa had replaced Robert Smith. It was S. I. Hayakawa who terminated Hare and replaced him with Robert Chrisman as the chairperson (Nathan Hare, personal communication, February 7, 2014). 18

The first Black Studies course was taught by Aubrey LaBrie, a Black man, in 1966. The title of the course was “Black Nationalism” and it was offered during the Spring semester as part of the Experimental College. When LaBrie taught that course, San Francisco State University was then known as San Francisco State College. That same Spring semester, in the month of March, San Francisco State administrators were given a proposal for a Black Studies institute by Jimmy Garrett. His proposal called for a board of directors composed of 10 people. He wanted seven of those directors to be chosen by the students. The proposal called for an increase in Black faculty, students, Black Studies courses, and funding for the Black Students Union. It met with a measure of success in that there was an increase in the number of Black faculty, students, Black Studies courses, and funding for the Black Students Union (LaBrie, 2016; San Francisco State Black Students Union, 1968; Biondi, 2012).
During the Fall 1966 semester, the Black Students Union, under the leadership of Jimmy Garrett, implemented a Black Arts and Culture series under the aegis of the Experimental College. Subsequently, Amiri Baraka (aka LeRoi Jones), Sonia Sanchez, Askia Muhammad Toure (aka Rolland Snellings), and others were brought to San Francisco State by the Black Students Union to teach in the Black Arts and Culture series. Some of those people even managed to teach a few Black Studies courses in mainstream departments such as English. For example, Sonia Sanchez offered a course in that department dealing with Black literature (San Francisco State Black Students Union, 1968; Baraka, 1984; Biondi, 2012; T'Shaka, 2012).

By the Spring 1968 semester, the San Francisco State Black Students Union (1968) had developed a full-fledged curriculum. It was composed of some 11 courses in the disciplines and fields of anthropology, dramatic arts, education, English, history, humanities, psychology, social science, and sociology. The classes were taught by Mary Lewis, John Shoka, Melvin Stuart, Abdul Karim, Harold Head, Sonia Sanchez, George Murray, Rolland Snellings, Christine Williams, Jimmy Garrett, D. Harrison, Lawrence Harrison, Daisy Dumas, Maruyama, Juan Martinez, and Jim Aliniece. Students were able to pick up pre-registration cards for the classes by going to the office of the Black Students Union.

However, during the late 1960s, COINTELPRO (Counterintelligence Program) of the Federal Bureau of Investigation (FBI) was in full operational mode against Black militants in the USA. The works of former censored targets of the FBI, such as W. E. B. Du Bois, and Marcus Garvey, were deemed as unworthy subjects of academic discourse by some of its agents. According to Biondi (2013), Sanchez was visited in her San Francisco home by an FBI agent who interrogated her because she taught the works of W. E. B. Du Bois. Sanchez concluded that she was put on a list because of her teaching the works of W. E. B. Du Bois. Looking back on those times, Sanchez has remarked: “At that time, it was a revolutionary idea to insert into the English Department the study of African-American literature” (Quoted in Biondi, 2012, p. 47).

After Hare arrived at San Francisco State in February 1968, he actually found that some 15 Black Studies courses were being offered in the Black Students Union’s Black Culture and Arts series under the aegis of the Experimental College and in a few departments other than English. Among those courses were “History of the Third World;” “Sociology of Black Oppression;” and “Avant-Garde Jazz.” In addition, Hare found a campus in embroiled in conflict. On the one hand, the Black Students Union and the Black Panther Party were pushing hard for a viable Black Studies Department. On the other hand, White conservative administrators, faculty, and students pushed back with blocking mechanisms (Biondi, 2012).

On April 29, 1968, Hare (1969a) submitted his “A Conceptual Proposal for Black Studies” to college administration and Black Students Union. In his proposal, he outlined some core principles and key objectives for the Black Studies Department. One key principle and objective was that the department would always strive to meet the needs of the Black community. Hare stated:

Aside from the matter of intensified motivation (and increased commitment) to the struggle to build the black community) students who have mustered even a smattering of black studies courses would be advantaged in their postcollege work in the black community. They would be armed with early involvement and experience in the community superior to that of students not so trained. Like their Chinese, Greek, Jewish, and other pluralistic counterparts, those employed outside the black community would
possess a keener sense of security as individuals and would be better equipped to present the black perspective. This would benefit the black community indirectly and perhaps assist those members of the white community who, like the black studies program, seek, in a roundabout way, a better society for all of its members. (p. 166)

Hare seemed to be drawing on the insight of W. E. B. Du Bois (1903) when he emphasized the need for Black students to recognize their responsibility and obligation to improve social conditions in the Black community.

In his proposal, Hare (1969a) detailed two pathways for a bachelor’s degree in Black studies. One pathway was a “Black arts concentration” which consisted of 36 units in the form of the following nine courses offering four units each: (1) The Literature of Blackness; (2) Black Writers Workshop; (3) Black Intellectuals; (4) Black Fiction; (5) Black Poetry; (6) Black Drama; (7) The Painting of Blackness; (8) The Music of Blackness; and (9) Sculpture of Blackness. The other pathway was a “Behavioral and social sciences concentration” which was composed of 32 units to be selected from the following nine courses offering four units each: (1) Black Politics; (2) Sociology; (3) Economics of the Black Community; (4) The Geography of Blackness; (5) Social Organization of Blackness; (6) Development of Black Leadership; (7) Demography of Blackness; (8) Black Counseling; and (9) Black Consciousness and the International Community. Students in both concentrations were required to complete the following four core courses which totaled 16 units: (1) Black History; (2) Black Psychology; (3) Survey of Sciences: Method and History; and (4) Black Arts and Humanities.

Generally speaking, the proposal of Hare (1969a) was embraced by many Black people, including the Black Students Union on campus and the Black Panther Party in the community. However, it caused an alarm among many White administrators, faculty, and students. For example, Bunzel (1968), a White political science professor, felt the need to write an article wherein he discussed the manner in which Hare was hired at San Francisco State and the proposal. Bunzel reported that the president of the college “appointed a man--chosen by the Black Students’ Union--to develop and coordinate a Black Studies curriculum” (p. 23). He noted that the president made the appointment of Hare “without the knowledge of, or consultation with, the Vice President for Academic Affairs, the Council of Academic Deans, or the faculty” (p. 23). As for the proposal, Bunzel said that it raised a number of issues and questions related to (1) college admissions; (2) racial identity and instruction; (3) collective stimulation; and (4) curriculum content. With regard to the issues and questions he raised, Bunzel said that “dispassionate answers are difficult to come by” (p. 34).

On the one hand, the major on-campus organization behind the development of the Black Studies Movement was the Black Students Union. On the other hand, the major off-campus organization behind the development was the Black Panther Party. Both organizations provided man power to push and advocate for the matter from below. In response to the pressure, San Francisco State became the first four-year college or university to implement a full-fledged Black Studies Department (Orrick, 1969).19

From the Black Students Union, people like Jimmy Garrett (aka James P. Garrett), Benny Stewart, Jerry Varnardo, Terry Collins, Landon Williams, and George Mason Murray stepped forward to lead the charge forward in demanding the Black Studies Department. As they used various tactics to pressure the system, those people were singled out for persecution. They found themselves facing institutional charges and/or criminal charges after a brawl broke out between
members of the Black Student Union and White members of the campus newspaper and football team. However, they did manage to gain important concessions from the San Francisco State administrators before they were forced into exile from the campus. Other people who played a crucial role in helping to found the Black Studies Department at San Francisco State were Aubrey LaBrie, Abdul Karim Sabry (aka Gerald LaBrie), Doug Allen, Maruyama Waddy (aka Maryom Ana Alwadi), Ramona Tascoe, Nathan Hare, Robert Chrisman, Carlotta Simon, Randy Simms (Coltrane Chimarenga), Lucille Jones, Woody Jones, Patricia Thornton, Bernard Stringer, Joann Mitchell, Ellendar Barnes, Leroy Goodwin, Clarence Thomas, Nesbit Crutchfield, Bridges Randall, Jack Alexis, George Colbert, Willie Phillips, Thomas Williams, Danny Glover, and Wade L. Woods (Benny Stewart, personal communication, June 7, 2016; LaBrie, 2016; Orrick, 1969; Marvin X, 1998, 1996; Biondi, 2012; Rizga, 2016).

In the case of Murray, he was the Minister of Education of the Black Panther Party. Murray served in the Black Panther Party from 1967 to 1969. Prior to joining the Black Panther Party, Murray had graduated from Castlemont High School and earned a bachelor’s degree from San Francisco State. By the time the Black Panther Party started, Murray was a graduate student at San Francisco State. Murray was also a preacher like his father. He excelled in his graduate studies and was awarded a teaching post as an adjunct lecturer. Internal evaluations at San Francisco State indicated that Murray was very effective in his teaching post. Thus, he held the unique status of being a graduate student and a member of the faculty (George Mason Murray, personal communication, March 13, 2016; Orrick, 1969; Jones & Jeffries, 1998).

During 1967, the year before the strike at San Francisco State, Murray had two life changing events. One of those events was his involvement with the Black Arts Movement play by Ben Caldwell titled the First Militant Minister. Murray performed the leading role in the play which was directed by Amiri Baraka. The performance took place at the Black House, an innovative cultural center established in San Francisco by Eldridge Cleaver, Marvin X, and others. The second event was Murray joining the Black Panther Party. Murray joined the group because he thought it was making an organized effort to address key social problems in Black communities, including police brutality. He wrote an important article in The Black Panther on social problems among Black people in San Francisco. His educational attainment and educational achievement led Newton, Seale, and Cleaver to select him for membership in the Central Committee as the Minister of Education (Murray, 1967; Marvin X, 1995; Baraka, 1984; Biondi, 2012).

After Bobby Hutton (aka Li’l Bobby Hutton) was killed by police officers in Oakland, Murray served as one of the eight pallbearers at the funeral. According to funeral program, the pallbearers were Murray, George Stafford, Emory Douglas, Dexter Woods, Steve Adams, David Hilliard, and Bobby Scales. In the May 4, 1968 issue of The Black Panther, an article about the funeral listed Murray as the minister of education for the Black Panther Party and said that he was one of the speakers. On page 16 of that same issue of The Black Panther, there is a photograph of Murray serving as a pallbearer at Hutton’s funeral. As an officer with high rank, Murray also made important trips to Cuba and the United Nations to represent the Black Panther Party. In addition, Murray spoke at college campuses in the USA on behalf of the Black Panther Party. His speeches often contained the fiery language which was characteristic of many militants during the late 1960s (“Funeral Program,” 1968; “Over 2500, ” 1968; “Reprinted,” 1968; Murray, 1968e).
As the San Francisco State Strike unfolded in 1968, Murray played a key role as a cause celebre. He quickly became one of the key spokespersons for the strike. His high profile attracted a lot of attention. However, Murray became the center of attention for several firestorms that erupted before the start of the strike (Orrick, 1969; Major, 1971; Alkebulan, 2007).22

Orrick (1969) has noted that one firestorm broke out when the Board of Trustees made an eight to five vote on September 26, 1968 to ask San Francisco State president to remove Murray from the classroom. The Board of Trustees appeared to be alarmed by media reports regarding a speech Murray made in Cuba. However, the president, Robert Smith, did not take that action because he felt Murray had a right to academic freedom. Smith said that, “The public statements and political philosophies of faculty members are not grounds for punitive action” (p. 32).

During a speech he gave in Cuba, Murray declared that “the only correct form of struggle for black people in the USA and for the oppressed people throughout the world is guerrilla warfare” (“Reprinted,” 1968, p. 14). Murray also stated that:

The Black Panther Party recognizes the critical position of black people in the United States. We recognize that we are a colony within the imperialist domains of North America and that it is the historic duty of black people in the United States to bring about the complete, absolute and unconditional end of racism and neocolonialism by smashing, shattering and destroying the imperialist domains of North America. (p. 14)

After initially appearing in Cuba’s Gramma News, Murray’s speech was published in part in The Black Panther on October 12, 1969. Murray had gone to Cuba to attend the Day of Solidarity with the Struggle of the Afro-American People, an event sponsored by Cuba’s Organization of Solidarity of the Peoples of Africa, Asia and Latin America (OSPAAAL). He was accompanied by Joudon Ford, a Black Panther leader based in New York (“Late News Briefs,” 1968; “George Murray,” 1968).

A second firestorm emerged on October 24, 1968 when Murray (1968e) delivered a speech at Fresno State. In the speech, Murray remarked that:

We maintain that political power comes through the barrel of a gun. And if you want campus autonomy, if the students want to run the college, if the cracker administrators don’t go for it, then you control it with the gun. Like the racists on the Board of Trustees for the California State Colleges, the same cracker jacks who are meeting here today, they voted that I should not be allowed to teach at San Francisco State, because of some so-called anti-American remarks that I was suppose to have made in Cuba. (p. 24)

Murray added:

Every time an American mercenary is shot, that’s one less cat that’s going to be killing us in the United States. That’s the truth. That’s a fact. Dig this: In Detroit and in Newark (we can not deny it) the 101st airborne division and the 82nd airborne division of the infantry, soldiers from Viet Nam, were sent into the black community. Their ranks had been partially depleted by the victorious fighters in the National Liberation Front. So that when they came into the black community, (it’s sad to say because a lot of those
soldiers were brothers) their ranks had been depleted because they were criminals fighting against another people of color. And the people defended themselves. The Vietnamese defended themselves . . .” So we said that. That is not a lie; that is the truth. But liars do not dig the truth. They would rather salute and pledge allegiance to toilet tissue and homosexuality than pledge allegiance to the equal distribution of the wealth among all the people of the world.

So what we’re saying can be reduced to one simple sentence . . . very simple, very common, one that can be understood by everybody . . . WE ARE SLAVES, AND THE ONLY WAY TO BECOME FREE IS TO KILL ALL THE SLAVE MASTERS!!!

(p. 24)

When he made that speech, Murray was still teaching at San Francisco State. Thus, Murray took the position that he was exercising his right to freedom of speech about social issues.

A third firestorm broke out when the San Francisco Chronicle made a report and asserted that he had given an October 28, 1968 speech at San Francisco State wherein Black students were encouraged to carry guns for their protection against racist administrators. The report led to a negative reaction by the Mayor Joseph Alioto of San Francisco and President Robert Smith of San Francisco State. Both sought grounds to file a criminal complaint, but could not locate a tape of the speech. Moreover, the reporter who broke the story was not present during the speech and relied on a hearsay account (Orrick, 1969).

Nevertheless, the Board of Trustees of the California State Colleges and Chancellor Glen Dumke put tremendous pressure on President Robert Smith of San Francisco State to remove Murray from his teaching post. Smith, on October 31, 1968, was ordered by Dumke to issue a suspension of Murray as an instructor and as a student. Calling the order unprecedented, Smith refused to carry it out and requested a meeting with Dumke. Initially, Smith took the position that the situation with Murray was a matter of intellectual freedom. However, on November 1, 1968, Smith carried out the order to suspend Murray (Orrick, 1969).

Not surprisingly, The Black Panther weighed in on the matter. In its November 16, 1968 issue, The Black Panther reported that Smith had submitted to the pressure and suspended Murray. As a result, the suspension became one of the key issues of the strike. Instead of distancing themselves from Murray, the Black Panther Party and the San Francisco State Black Students Union threw their support behind him. In addition to the activity with its newspaper, as a strategy and tactic, the Black Panther Party sent leading members to speak at the protest demonstration rallies sponsored by the San Francisco State Black Students Union. Bobby Seale, David Hilliard, and other organizational leaders spoke on or near San Francisco State to help inspire the students to maintain the strike and support for Murray. Before, during, and after the strike, the Black Panther Party also held rallies in San Francisco as a strategy and tactic in the Free Huey Movement and the statewide Black Student Union Movement. As an act of cooperation, members of the San Francisco State Black Students Union were active participants at the rallies sponsored by the Black Panther Party (“Panthers--B.S.U. Close S.F. State College,” 1968; “Panthers--S.U. Get It Together,” 1968; “George Murray,” 1968; “San Francisco State Strike,” 1969; Collins, 1969).

On October 26, 1968, which was two days before he made the controversial San Francisco State speech, Murray and other members of the Black Panther Party convened a “Black Students Union State Wide Convention” at the Fillmore Auditorium in San Francisco. In its October 12,
1968 issue and October 19, 1968, *The Black Panther* published a notice about the event. The notice listed Virtual Murrell as the contact person and stated that the speakers at the convention would include Bobby Seale, Eldridge Cleaver, George Mason Murray, and David Hilliard. It also stated that the purpose of the convention was “to discuss national organization of Black students” (“Black Students Union State Wide,” 1968a, p. 9, 1968b, p. 12).

At the time of the convention, Wyse was a student editor of *The Black Panther*. Wyse was also a leading member of the Black Students Union at Berkeley High School. By the time of the convention, Wyse had published a number of her writings in *The Black Panther*. Those writings included essays and poems in separate issues of *The Black Panther.*

In her report on the conference, Wyse (1968m) detailed the proceedings of the one-day convention. She said that the convention started at 10:30 a.m. and lasted until 7:30 p.m. and included George Mason Murray, David Hilliard, and Bobby Seale. Regarding George Mason Murray, Wyse stated:

> Brother George Murray gave a beautiful speech, on how we are born in jail when we are born in America. And that we are still twentieth century slaves. We can not be proud of you would just take a look around you, you would see that there was nothing to be proud of. The reason that black young men aren’t getting into college is because they tell him to take football. And they have all these courses that mean nothing to black people. So he flunks all his courses (except in sports). They ship him off to Vietnam, and if he’s still alive they will make him a sports nut. He went to say that the Black Panthers support any of our demands that deal with Black America. He answered questions that students asked. (p. 16)

Wyse made it clear that she admired the leadership of George Murray and the words he expressed at the convention.

According to Wyse (1968m), Murray and the other Black Panthers helped the convention participants to discuss the implementation of the 10 Point Program and Platform of the statewide Black Students Union which was based on that of the Black Panther Party. Wyse related that Gregory Harrison, a student at Oakland Technical High School, and Ronnie Stevenson, a student at Berkeley High School, held the two leadership positions in the statewide Black Students Union. All three played a major role in the dialogue at the convention. During the convention, students from each high school presented a report on conditions at their institutions. Harrison also had students from each high school nominate a representative for the statewide Black Students Union. Wyse stated that the following people became representatives for schools to the statewide Black Students Union: (1) Edmond Harris, Menlo-Atherton; (2) Roger Johnson, McClymonds; (3) Brenda Loyd, Fremont; (4) Bailey Grant, Fremont; (5) Darnella Gipson, McClather (co-Sharon Dottes); (6) Sheila Wilson, Mission; (7) Jessie Shelton, Poly Tech; (8) Jan Gates, Lowell; (9) Chase Adams, Jr., Berkeley; (10) Leroy Larry, Sequoia; (11) Richard Harris, Washington; and (12) Darrell Logan, Richmond (South Campus).

In a news item, the December 21, 1968 issue of *The Black Panther* reported that that a statewide organization of Black Students Unions had formed. The news item also stated that the formation of a national organization was in process. The Black Students Union shared a mailing address with the national headquarters of the Black Panther Party in Berkeley. In the same issue of *The Black Panther*, Iris Wyse said that the statewide organization had a Central Committee
composed of Gregory Harrison as chairman; Larry Harrison as co-chairman; Ronald Stevenson (aka Ronnie Stevenson) as commander in chief; Edmond Harris as minister of information; and Valerie Douglas as communications secretary. She also pointed out that the leadership of the statewide organization consisted of an additional 13 representatives from at least 11 high schools. Like Wyse, many of those people joined the Black Panther Party, including Gregory Harrison; Larry Harrison; Ronnie Stevenson; and Valerie Douglas (Black Students Union, 1968; Wyse, 1968n).

Two days following the end of the October 26, 1968 conference, Murray and the Black Students Union held a rally at San Francisco State which was attended by Donald Cox and other Black Panthers. When he spoke at that rally on October 28, 1968, Murray called for a student strike to take place on November 6, 1968. He also called for Black people to use guns to defend their communities and accused President Robert Smith of lying. On October 31, 1968, Glenn Dumke, the chancellor and head of the Board of Trustees of the California State Colleges, gave an order to Robert Smith to suspend Murray. Smith carried out the order and suspended Murray on November 1, 1968. However, Smith also resigned as president on November 26, 1968 which was shortly after the San Francisco State Strike began. To his credit, Smith was the president who, on September 18, 1968, approved the creation of a Black Studies Department and named Nathan Hare as the acting chair. Smith was under tremendous pressure from the Black Student Union to take those two actions (Orrick, 1969; Whitson, 1977).

The San Francisco State Strike started in part on November 6, 1968. The Black Students Union, working closely with Murray and the Black Panther Party, as well as groups of other sympathetic students and faculty, were able to keep the strike alive for some five months. The Black Students Union issued a long list of demands. The list included the reinstatement of Murray and a fully tenured position for Nathan Hare (Orrick, 1969; “San Francisco State Black Students Union Central Committee,” 1969; Whitson, 1977).

Eventually, S. I. Hayakawa, the president who replaced Robert Smith on November 26, 1968, made a concession to some of the demands, but refused others. Both before and during the San Francisco State Strike, many Black students in the Black Students Union were targeted by the authorities and found themselves facing various criminal charges. The same was true with Murray and Hare. Both men found themselves facing weapon charges. At the height of the San Francisco State Strike on January 25, 1969, the Central Committee of the San Francisco State Black Students Union consisted of the following positions and persons: Chairman, Benny Stewart; Director of On-Campus Activities, Jerry Varnado; Director of Off-Campus Activities, Leroy Goodwin; Minister of Education, BPP, George Murray; Black Studies Coordinator, Clarence Thomas; Financial Coordinator, Nesbit Crutchfield; Center of Educational Innovation, Jack Alexis; Off-Campus Programs, George Colbert; Chairman of Strike Committee, Willie Phillips; Director of Tutorial Program, Thomas Williams; Chairman of Rally Committee, Danny Glover; Coordinator of Black Draft Council, Terry Collins; Information Officer, Wade L. Woods; and Chairman of Black Studies Department, Dr. Nathan Hare (Orrick, 1969; “San Francisco State Black Student Union Central Committee,” 1969; Biondi, 2012).

On March 20, 1969, Hayakawa made an announcement wherein he stated that San Francisco State was going to have a School of Ethnic Studies which would consist of a Department of Black Studies, Department of Asian American Studies, and a Department of La Raza Studies. Hayakawa also said that San Francisco State made a commitment to have a significant increase in the enrollment of racial and ethnic minorities. However, he refused to allow student
participation in the hiring and firing of faculty and the development of curricula in the departments of the School of Ethnic Studies. Hayakawa also refused to rehire George Mason Murray or Nathan Hare after the strike for the 1969-1970 academic year (Orrick, 1969; Garlington, 1969; “Hare, Murray Lose Their Jobs,” 1969). 28

In the aftermath of the strike, Murray found himself in jail for a weapons charge. Hare found himself in exile from the academy. Murray dealt with his dilemma by resigning from the Black Panther Party and going into the Black church as a member of the clergy. He also went graduate school at Stanford University and became a principal of an alternative high school in East Palo Alto, California. 29 Hare dealt with his dilemma by acquiring a second Ph.D. in psychology and went into private practice. 30 Thus, both men demonstrated that they were resilient (Nathan Hare, personal communication, February 7, 2014; George Mason Murray, personal communication, March 13, 2016).

In sum, when the original Black Studies Department was established with Nathan Hare as the chair, it was standing on the shoulders of the Black Students Union. As has been the case with Merritt College, some histories of the Black Studies Movement tend to overlook or ignore San Francisco State. That institution followed Merritt College as a ground zero for the emergence of the dynamic new curricula from below. Like the original Afro-American Studies Department at Merritt College, the original Black Studies Department at San Francisco State deserves to be recognized for the innovation and legacy it represents. The Black Panther Party, under the leadership of Huey P. Newton and Bobby Seale, deserves to be recognized as the key community-based organization which supported the Black Students Union and Nathan Hare in their protracted struggle for the establishment of the Black Studies Department at San Francisco State. The struggle for the Black Studies Department lasted for more than four years. During that protracted struggle, the following five Black Panthers made valuable contributions: George Mason Murray, Landon Williams, Carlotta Simon, Joann Mitchell, and Clarence Thomas (Newton, 1973; Seale, 1970; Karenga, 1993; Cromartie, 1993). 31

Conclusion

This paper has reappraised the contributions of the Black Panther Party to the Black Studies Movement at Merritt College and San Francisco State. It has examined the role that Black Panthers played in the emergence of the original Afro-American Studies Department at Merritt College and the original Black Studies Department at San Francisco State. This paper has also examined the role of The Black Panther in fomenting the Black Studies Movement. It primarily analyzed the period from 1966 to 1971.

This research has two important implications in terms of significant consequences. One significant consequence is that it sheds light on the contributions of the Black Panther Party to the Black Studies Movement at Merritt College and San Francisco State. The Black Panther Party used The Black Panther as its official organ to support the Black Studies Movement at each institution. During its first four years of existence, between 1966 and 1971, The Black Panther played a leading role in fomenting the Black Studies Movement by disseminating crucial information to its wide readership. For example, the organization published reports wherein it expressed support of the Black Studies Movement at Merritt College, San Francisco State, and elsewhere to promote awareness of particular people and events. The organization
also encouraged its members to take an active role in the struggle to implement Black Studies Departments at Merritt College, San Francisco State, and elsewhere.

In the case of Merritt College and San Francisco State, members of the Black Panthers joined other people to help develop the Afro-American Studies Department at Merritt College and the Black Studies Department at San Francisco State University. Both before and after the official emergence of the Black Panther Party, its members played a vital role in the push for a Black Studies Department at Merritt College and San Francisco State. With regard to the Merritt College mobilization, six very important Black Panthers were Huey P. Newton, Bobby Seale, Elbert “Big Man” Howard, Virtual Murrell, Melvin Newton, and Sidney F. Walton. Of those six people, five took an active role in the Soul Students Advisory Council, which won the fight for an Afro-American Studies Department at Merritt College. Similarly, five very important Black Panthers involved with the San Francisco State mobilization were George Mason Murray, Landon Williams, Carlotta Simon, Joann Mitchell, and Clarence Thomas. Those five people took an active role in the Black Students Union, which won the fight for a Department of Black Studies at San Francisco State.\(^{32}\)

A second significant consequence is that it sheds light on the emergence of the Afro-American Studies Department at Merritt College and the Department of Black Studies at San Francisco State. On the one hand, the Afro-American Studies Department at Merritt College was implemented in January 1969. On the other hand, the Black Studies Department at San Francisco State was implemented in September 1969. Both were landmark developments in higher education.

Further, as the 1960s unfolded, the Black Studies Movement blossomed across the country. By 1972, there were many departments and programs at various institutions. As the years go by, increasing information has come to the light about the development of those programs and departments. Nevertheless, the Afro-American Studies Department at Merritt College and the San Francisco State Department of Black Studies were the first two to reach departmental status. Biondi (2012) has pointed out that, “San Francisco State has developed the reputation of launching the first Black studies department in the United States, but because of the delay caused by the strike, a Black studies department apparently got under way at Merritt College first” (p. 73).

Whereas the Merritt College Afro-American Studies Department was approved on November 22, 1968 by the Merritt College administration and implemented on January 8, 1969, the Black Studies Department at San Francisco State was approved on September 18, 1968 by the San Francisco State administration and implemented on September 22, 1969.\(^{33}\) Both departments came from below as a result of the efforts of Black students and Black faculty to pressure higher education institutions to add curricula related to Black people in the USA. There were many sacrifices made by those Black students and Black faculty as the powers that be at those institutions struck back with vengeance. At Merritt College, Sidney F. Walton became a target of a reactionary initiative against the Black Studies Movement. Similarly, at San Francisco State, George Mason Murray and Nathan Hare became a target of a reactionary initiative against the Black Studies Movement.

Despite the loss of job opportunities by Sidney F. Walton, George Mason Murray, and Nathan Hare, history was made. It occurred under the leadership of Black Panthers and others in the Soul Students Advisory Committee at Merritt College and under the leadership of Black Panthers and others in the Black Students Union at San Francisco State. For the first time in the
USA, Black students could go into higher education institutions and engage in the systematic study of Black people in this country within a department wholly focused on that subject. The crucial role of members of the Black Panther Party in making this happen deserves to be remembered.

Notes

1. Ernest Allen, Jr. (personal communication, November 5, 2009), in an email, stated to me that the Black Panther Party of Northern California, which was founded in August 1966, changed its name to the House of Umoja. Also, in another email, Ernest Allen, Jr. (personal communication, June 22, 2015) said to me that “the BPP of NC model was based on a vision of world black revolution championed by the Revolutionary Action Movement. By late 1967 the activities of the San Francisco BPP had been eclipsed by the BPP for Self-Defense. The SF group decided that leading with the theme of armed struggle and revolutionary political change had turned counter-productive, and turned instead to the organizational model championed by the US organization, which focused on issues of promoting a unified black identity through propagandistic methods and ritual” (p. 1). According to Newton (1973), the name change took place because of the pressure placed on the Black Panther Party of Northern California under the pressure of the Black Panther Party for Self-Defense. Newton has recalled that members of his organization had a custom of referring to the Black Panther Party of Northern California as the “Paper Panthers” (p. 129). He also recalled that “we went to San Francisco, where the Paper Panthers were having a fish fry, and issued an ultimatum: they could merge with us or change their name or be annihilated. When they said they would do none of these things, we waded in. I took on one of them and hooked him in the jaw. It was a short battle, ending a few moments later when somebody fired a shot in the air and people scattered. After that, the Paper Panthers changed their name” (p. 132). Nevertheless, after the name change and Bobby Hutton was killed on April 6, 1968, the House of Umoja (1968) sent a statement to the Black Panther for Self-Defense expressing “its condolences to the family and friends of Brother Bobby James Hutton and to the members of the Black Party who were wounded in battle with our oppressors” (p. 17). The Black Panther Party acknowledged the expression of solidarity and published the statement in The Black Panther.

2. During my April 10, 2016 interview with Akinsanya Kambon, he emphasized the role of the Black Panther Party in the development of Black Student Unions in high schools as well as higher education. Akinsanya Kambon also said that his stint in the Black Panther Party lasted from 1968 to 1971. As a member of the Black Panther Party, Akinsanya Kambon was known as Mark Teemer and created a controversial coloring book. He was a prominent member of the Sacramento Chapter of the Black Panther Party. Before joining the Black Panther Party, he served in the Marines from 1966 to 1968 (Akinsanya Kambon, personal communication, April 10, 2016). Further, the Federal Bureau of Information (FBI) Special Agent in Charge of the Los Angeles office and local Counterintelligence Program (COINTELPRO) expressed concern about the development of Black Student Unions in higher education. In a letter to the director of the agency, he declared that, “The black nationalist organizations that present the greatest potential danger for violence in and about Los Angeles are the Black Panther Party (BPP), the various Black Student Union (BSU) chapters at several local institutions of higher learning, the Student Non-violent Coordinating Committee (SNCC), and ‘US.’ Accordingly, these organizations are the focus of the Black Nationalist Counterintelligence Program at Los Angeles” (Special Agent
in Charge, Los Angeles, 1978, p. 1). The Special Agent in Charge of the San Francisco office of the FBI probably took a similar attitude to that of his fellow agent in Los Angeles. For some evidence that the San Francisco State Black Students Union and George Mason Murray were under surveillance by COINTELPRO, see Special Agent in Charge, San Francisco (1978a, 1978b, 1978c, 1978d).

3. For a discussion of the “historical circumstances” which led to the Black Panther Party, see Murch (2007, 2010b). Murch, in her analysis, focuses on the contributions of Donald Warden and the Afro-American Association to the Black Panther Party through Huey P. Newton and Bobby Seale. The focus of the present paper is on the contributions of the Black Panther Party to the Black Studies Movement at Merritt College and San Francisco State.

4. Newton (1973) and Seale (1970) have acknowledged their participation in the Soul Students Advisory Council. They have also expressed certain disenchantment with Soul Students Advisory Council practices. On the one hand, Newton has recalled that the Soul Students Advisory Council was involved with “a hot issue—the establishment of a program of Afro-American history and culture in the college’s regular program, the authorities were resisting it tooth and nail. Every time we proposed a new course, they countered with reasons why it could not be; at the same time, ironically, they encouraged us to be ‘concerned.’ This was a simple trickery; they were dragging their feet. Bobby and I saw this as an opportunity to move Soul Students a step further by adopting a program of armed self-defense” (p. 108). After members of the Soul Students Advisory Council’s Central Committee rejected Newton armed self-defense proposal, he and Seale left the organization in 1966. Seale (1970) has remembered that a conflict surfaced in the Soul Students Advisory Council when Newton proposed that the Soul Students Advisory Council sponsor an armed protest demonstration at the college. Seale has stated: “. . . Huey suggested to the central group that we bring these brothers off the block, openly armed, on to the campus and bring the press down. We could reach the community (because the press would be hungry for it) and show them, on Malcolm X’s birthday, May 19, that Malcolm X had advocated armed self-defense against the racist power structure and show the racist white power structure that we intend to use the guns to defend our people” (p. 31). According to Seale, the members of the Central Committee of the Soul Students Advisory Council “were scared and rejected it” (pp. 31-32). Seale has also noted that, “Before the Black Panther Party came the Soul Students Advisory Council. . . . the so-called central group of the Soul Students Advisory Council consisted of Virtual Murrell, Alex Papillion, Bobby Seale, Huey P. Newton, Isaac Moore, and a couple of jive cultural nationalists around there” (pp. 26-27). Howard (2002) has reported that, “It was 1966 when I first met Huey Newton and Bobby Seale. We were all attending Grove Street Community College. We all were interested in Black history, as a matter of fact, we were one of the first Black student organizations on any campus that we knew of at that time. It was called the Soul Students Advisory Council. Sid Walton was our campus advisor” (p. 28).

5. The Black Panther Party also used *The Black Panther* to explain its position on violent direct action at a college campus. For example, Eldridge Cleaver, writing as the Minister of Information, condoned a physical attack on James Vasko and some other White members of the *Gator* newspaper at San Francisco State. See MOI (1967) for an article he wrote about the incident which he titled “Black Students Take Care of Business!” For some other reports about that event, see “Violence at College Paper” (1967); Grieg (1967); “Two Suspended In College Raid” (1967); “Suspects in S. F. State Beatings” (1967); “Six Surrender in S. F. State Beating”
(1967); Chapin (1967), and Orrick (1969). According to those reports, George Murray and Landon Williams were involved in the physical attack. At the time, both were Black Panthers. Approximately five years later, there was a similar situation when several Black Panthers physically attacked a Black professor named Fritz Pointer in his classroom on November 15, 1972 at North Peralta Community College. Shortly before the start of a class session, a small group of Black Panthers assaulted Fritz Pointer for remarks he made about the Black Panther Party. At a previous class session, he referred to the Black Panther Party as “integrationists with flak jackets” (Fritz Pointer, personal communication, February 20, 2007). During my interview with him, Pointer told me that he had a meeting with Huey P. Newton shortly after the incident. At the meeting, Newton stated that he had to have him disciplined because of his derogatory remarks made about the Black Panther Party. Newton also informed Pointer that if he had let him get away with the remarks then other people may have made similar attacks. For some information about the incident, see Cromartie (2011a, 2011b); “College Teacher Beaten in Class” (1972); Keane (1972); “3 Surrender In Attack” (1967); Howard (2002); Murch (2010); and the Dr. Huey P. Newton Foundation Inc. Collection in the Department of Special Collections at Stanford University. The latter has some photos of Newton and Pointer at a press conference shortly after the incident. See “Huey and Fritz Pointer 1972” (2008a) located in Series 5: Photographs, Box 3, Folder 21; “Huey and Fritz Pointer [1 of 2] 1972” (2008b) located in Series 5: Photographs, Box 3, Folder 22; and “Huey and Fritz Pointer [2 of 2] 1972” (2008c) located in Series 5: Photographs, Box 4, Folder 1. Also, see Armstrong, Tejada, and Potchatek (2008) for a guide to the Newton collection at Stanford University. According to the article “3 Surrender In Attack” (1967), Fritz Pointer, at one point after the physical attack, signed criminal complaints against Steve McCutcheon, Harold Holmes, and Calvert Manuel Reese for attacking him in the classroom. Although there was a denial in the article by their lawyer Charles Garry, the three people facing charges were Black Panthers. For evidence that they were Black Panthers, see Sister Marie (1969) and McCutcheon (2008). In the case of McCutcheon, he has informed us that, “As class started . . . Flores, Poison, Malik, Calvert and I waited. Five minutes into the class, Flores and Poison rose from their seats. I followed them. Fritz Pointer was down on the floor in the middle of the class while Calvert watched the door. We didn’t say anything to him, just pummeled him until we were done, then walked out of the classroom” (p. 142).

As the newspaper of the Black Panther Party, The Black Panther also carried reports on the effort to establish a Black Studies Department at other higher institutions as well as grade schools, including Solano Community College; Antioch College; University of California, Berkeley; Brandeis University; Northwestern University; Oakland Technical High School in Oakland, CA; McClymonds High School in Oakland, CA; Berkeley High School in Berkeley, CA; Lincoln High School in San Francisco, CA; Fortier High School in New Orleans, LA; and Harrison High School in Chicago, IL. See Thomas (1968); “Education” 1968; Harrison (1968a); Wyse (1968h, 1968j, 1968k, 1968m); “Chicago B.S.U. Closed Schools” (1968); “Concessions at Northwestern Univ.” (1968); Pan African Press (1968); Citizens for Excellence in Education (1968); “Students” (1968); “Black Students Fight” (1969); “Orangeburg Remembered” (1968); “Student Revolt” (1968); Sudan (1969); “Incident” (1969); Hughes (1969); Los Angeles Chapter (1969); “Kathleen Cleaver At Mills College” (1969); “Brandeis Black Students” (1969); “Uncle Roy Stoops Again” (1969); “Panthers and B.S.U” (1969); Hilliard (1969b); Crumby (1969); and Walker (1970). After the country’s very first Black Studies Department was established at Merritt College, The Black Panther continued to cover activities at that institution. For example,
it carried a report when a group of people demanded that the Peralta Community College District Board of Trustees provide a campus for the North Oakland, Berkeley, and Albany area. For that report, see People’s Committee for Defense of Merritt (1970). It also carried a report in 1971 when Black Panther Doug Miranda led protest demonstrations involving some 10 demands. For that report, see “Merritt College Strikes” (1971). See also Merritt College Black Students Union (1971). Shortly after the actions of Doug Miranda at Merritt College, Black Panther Austin Allen (personal communication, March 19, 2016) emerged as a dynamic leader at neighboring Laney College in Oakland.


9. In terms of their efforts, Bobby Seale and other members of the Soul Students Advisory Council acted as a pressure group when they demanded changes in the college’s curricula and hiring practices. Members of the Soul Students Advisory Council also sought to foster Black nationalism in the form of racial solidarity and collective behavior. Further, Bloom and Martin (2013) have asserted that Huey P. Newton and Bobby Seale “joined the Soul Students Advisory Council (SSAC), founded by Ernie Allen” (p. 31). According to Allen and Seale, that is not true. Allen (personal communication, June 18, 2016) has informed me that, “I had moved on from Merritt by the time SSAC was formed. I wish I could take all the credit, but I was NOT the founder of SSAC and NEVER took direct part in its activities.” However, there is an article in the February 28, 1968 issue of the Oakland Tribune which stated that, “Ernie Allen, member of
the executive council of the Soul Students Advisory Council, toldnewsmen yesterday that the campus furor over threats “is part of the administration’s campaign to crush black people” (“Student Leaders,” 1968, p. 12). The article continued: “Allen said no one mentioned threats ‘until black people started getting in positions of power,’ and he demanded proofs that no threats were made. (Oakland police said they have received no formal threats, but have obtained copies of the resignation letters)” (p. 12). Seale (1978) has written that, “I came up with the name ‘Soul Students Advisory Council’” (p. 145). He added: “We put the work out, got the new black-history instructor to sponsor us, and we had the Soul Students Advisory Council officially launched on the Merritt campus” (p. 145).


11. Murch (2010a) has pointed out that many of those people in the Soul Students Advisory Council once belonged to the Afro-American Association led by Donald Warden and/or the Revolutionary Action Movement (RAM) led by Max Stanford. For example, Bobby Seale, at one time or another, belonged to the Afro-American Association, RAM, and the Black Panther Party for Self-Defense. It should be noted that Harriet Smith (aka Makinya Kouate) was a key Black woman involved with the Soul Students Advisory Council, Afro-American Association, and the Black Studies Movement at Merritt College. For some activities of Harriet Smith, see documents in the Soul Students Advisory Council Folder, especially the letter of John Banks (1968), a member of Bay Area Blacks United, and the memorandum of Judy Singer (2001), a librarian and curator of the Black Panther Archive at Merritt College when her document was written. The activities of Harriet Smith have also been covered in the Alameda Times Star, Oakland Tribune, and San Francisco Chronicle. See “College’s Student Leaders” (1968); “Student Leaders” (1968); and Swanston (1968).

12. In the case of Huey P. Newton, he earned an A.A. degree from Merritt College in 1966. He later earned a B.A. degree from the University of California, Santa Cruz in 1974 and a Ph.D. degree from the University of California, Santa Cruz in 1980. For copies of his B.A. degree and Ph.D. degree and the original of his A.A. degree, see “Diplomas” (2008) and “Huey P. Newton’s Original” (2008).

13. Elbert “Big Man” Howard was a key recruit Newton and Seale met at Merritt College. He later served as the editor of The Black Panther and a member of the Central Committee of the Black Panther Party. Another key recruit from Merritt College was Virtual Murrell, who later served as the distribution manager of The Black Panther (Howard, 2002; Black Panther Party, 1969).

14. In the December 7, 1968 issue of The Black Panther, there is a report by Citizens for Excellence in Education (1968) which indicates that Walton had become employed as a Coordinator of Multicultural Activities by the Palo Alto Unified School District. Three months later, in the March 3, 1969 issue of its newspaper, the Black Panther Party stated that, “Sid Walton is currently under fire in Palo Alto for trying to develop multi-racial understanding and for defending the BLACK PANTHER PARTY program and platform. Recent threats have been made against his life by cowardly anonymous phone callers” (“Black Man Stands Off 5,” 1969, p. 7). That issue of the paper reported on a November 27, 1968 police stop of Sidney F. Walton in Mountain View, California by officers from the Mountain View Police Department and the Los Altos Police Department. During the following week, the Black Panther Party reported in
the March 9, 1969 of its newspaper that Sidney F. Walton had resigned from his position in the Palo Alto Unified School District. See Walton (1969b). Several months after that, Montgomery (1969) wrote a report for the Sunday edition of the San Francisco Examiner & Chronicle wherein he stated that Sidney F. Walton had become employed as a principal at a school in Sausalito, CA. Montgomery also said that Walton was a member of the Black Panther Party. He wrote that, “Walton was the founder of the Black Panther chapter at Merritt, and an authorized co-signer of checks drawn on the Huey Newton Defense Fund” (p. A4). Montgomery also wrote that, “He served on the steering committee of the Black Educators of Northern California, whose goal was to turn Merritt into an all-black university” (p. A4). According to Montgomery, Walton was fired from Merritt College by President Edward R. Redford because of the following three charges: (1) Set up in the college files a fictitious “registration” for Black Panther leader Bobby Seale, crediting him with nine units of straight “A” after Seale flunked out of school; (2) filed false attendance records and organized a boycott of classes; (3) presided at a meeting at which two Caucasian students were beaten by his Black Panther associates; and (4) threatened that the college would be burned down “unless we do what he wants us to do,” and on one occasion threatened Redford’s life by pulling a bullet from his pocket saying: “You are going to get it if you continue to obstruct” (p. A4). Thus, if Montgomery is correct, Walton lost his job at Merritt College in the struggle to establish a Black Studies Department at that institution. For two other important articles which sheds light on the attitude of Edward R. Redford towards Sidney F. Walton, see “Ex-Merritt Head” (1969) and Mitchell (1969). In the case of Mitchell, she states that Walton was teaching at Merritt College as a member of the adjunct faculty and that, “Dr. Smith and Walton appeared together last fall before the State Board of Education and won approval for a program allowing students holding associate of arts degrees in Afro-American studies to get provisional teaching credentials” (p. 8). For another important article on the activities of Walton at Merritt College, see “The Black Experience” (1967). For an important article about the activities of Sid Walton at institutions within the Peralta Community College District other than Merritt College, see “Laney” (1967).

15. According to “Black Curriculum” (1967), the list of courses developed by Walton was as follows: (1) Introduction to Afro-American Anthropology; (2) Development of Black Businesses and Financial Institutions; (3) Current Problems of Afro-Americans in Urban Communities; (4) Introduction to the Black Theater; (5) Current Economic Problems of Afro-Americans; (6) Education of Black Americans (Afro-Americans); (7) Contemporary Black Literature in the Ghetto Language; (8) Introduction to Black Prose and Poetry; (9) Contemporary African Languages; (10) The History of Black America; The History of Afro-Americans; United States History from a Black Perspective (This course would be used to satisfy the American Institutions requirement); (11) Introduction to the Preparation of Soul Food; (12) Human Relations in the Black Community; (13) Study of the Black Press; (14) Black Perspective of Law Enforcement; (15) Survey and History of Afro-American Music; (16) Introduction to Current Black Philosophy; (17) Introduction to African Philosophy; (18) Contemporary Afro-American Dance Techniques; (19) Political Problems of Black Americans; (20) American Government from a Black Perspective (This course would be used to satisfy the American Institutions requirement); (20) Personnel and Social Adjustment of Afro-Americans; (21) Social Origins of Black Nationalistic Behavior in America; (22) Social Problems of Black America; and (23) Elements of Supervision for Black Americans.
16. Moore (1967) wrote an important article about a rally at Merritt College the day before the Black Educators Conference began. He said that Nathan Hare spoke at the rally which was held under the sponsorship of the Soul Students Advisory Council. Moore also stated that Hare “endorsed the development of the proposed Black Curriculum which is now being instituted at Merritt College” (p. 7). For two important articles about the Black Educators Conference which appeared in *The Flatlands*, see Cole (1967) and “Black Educators” (1967).

17. On the one hand, Huey P. Newton, Bobby Seale, Elbert “Big Man” Howard, and Virtual Murrell made their mark in a protestor role as members of the Soul Students Advisory Council. On the other hand, Melvin Newton and Sidney F. Walton made theirs as part of the faculty at Merritt College. Newton (1973), in his autobiography, identified himself as a member of the Soul Students Advisory Council and said that “we succeeded in getting the Black history class on campus” (p. 72). In his autobiography, Seale (1978) identified himself as a member of the Soul Students Advisory Council and stated that “Negro History had been expanded to a six-unit, two-semester course—the credit for this falling to Huey and me” (p. 144). Seale also identified Virtual Murrell as a member of the Soul Students Advisory Council. Writing in his autobiography, Howard (2002), like Newton and Seale, identified himself as a member of the Soul Students Advisory Council and expressed that they all had an interest in Black history.


19. T’Shaka (2012) has noted that the Congress on Racial Equality (CORE) was another major off-campus organization which provided man power to push and advocate for a Black Studies Department at San Francisco State. He has informed us that CORE and the NAACP (National Association of Colored People) were a vital part of the San Francisco Civil Rights Movement and that, “The San Francisco Civil Rights Movement preceded the Black Panther Party, and provided inspiration to the Negro Student Association, and the Black Students Union, which led to the San Francisco State Strike” (p. 16). A key San Francisco State student from CORE and SNCC (Student Nonviolent Coordinating Committee) was Jimmy Garrett (aka James P. Garrett), the head of the Black Student Union before Benny Stewart (Rogers, 2009).

20. Both before and during the strike, the tactics of the Black Students Union and their supporters included protest demonstrations as well as negotiation. As the protest demonstrations unfolded, people were arrested on an array of charges related to assembly and the unauthorized use of property. In addition to George Mason Murray, there were other members of the Black Students Union who found themselves facing persecution for their actions before and during the strike. The Black Panther Party played a key role both before and during the strike by providing “manpower” and publishing articles in its newspaper about the treatment of Murray and the others. During my interview with Benny Stewart, he emphasized that there were people who paved the way for the Black Studies before the strike by teaching courses in the experimental college and various departments. Such people included Aubrey LaBrie, Abdul Karim Sabry (aka Gerald LaBrie), Nathan Hare, Mary Lewis, and Maruyama Waddy. Other people who paved the way for the Black Studies Department by participating in the Black Students Union as members of its Central Committee, rank-and-file student activists, and/or concerned faculty before and during the strike were Robert Chrisman, Carlotta Simon, Randy Simms (Coltrane Chimarenga), Lucille Jones, Woody Jones, Patricia Thornton, Bernard Stringer, Joann Mitchell, Ellendar Barnes, Leroy Goodwin, Clarence Thomas, Nesbit Crutchfield, Bridges Randle, Jack Alexis, George Colbert, Willie Phillips, Thomas Williams, Danny Glover, and Wade L. Woods. Stewart
identified Carlotta Simon and Joann Mitchell two Black Panthers who stood out. He also reported that some people went to jail because of they were persecuted for their actions during the strike. He pointed to Nesbit Crutchfield as a victim of that phenomenon. The name of Maruyama Waddy (aka Mayom Ana Alwadi) has been spelled various ways. In his book Post-Prison Writings and Speeches, Eldridge Cleaver (1969a) uses “Marianne Waddy” (p. 26). Marvin X (1998) utilizes “Maryanna Waddy (Mar’yam Wadai)” in his book Somthin’ Proper (p. 97). He also credits her with being the leading force to change the name of the Negro Students Association to the Black Students Union. In his book Eldridge Cleaver My Friend the Devil: A Memoir, Marvin X (2009) uses “Mary Anna Waddy,” “Maryanna Waddy,” and “Mar’yam Wadai.” As he did in previous autobiography, Marvin credits her with being the leading force to change the name of the Negro Students Association to the Black Students Union. Benny Stewart has described Maruyama Waddy as a female version of Malcolm X (personal communication, June 7, 2016).

21. George Mason Murray has explained to me that he attended both undergraduate and graduate school at San Francisco State following his graduation from Castlemont High School during 1963 in Oakland, California. He excelled in his studies and gained an adjunct lecturer position in the Department of English (George Mason Murray, personal communication, March 13, 2016).

22. Like Murray, Alkebulan (2007) is a former member of the Black Panther Party. Alkebulan has written that Murray “led a strike by the San Francisco State black student union to force the college administration to grant demands for a black studies department. This strike set a precedent for other black students throughout the nation. It would encourage them to pursue African American studies aggressively on their own campuses” (p. 20). Bloom and Martin (2013) have taken a similar position and asserted that, “As the San Francisco State strike developed, the student struggle spread across California and the country” (p. 283). They have also pointed out that during an October 28, 1968 speech “George Murray called for a student strike for November 6” (p. 273).

23. During the strike at San Francisco State, The Black Panther published photographs and drawings. Some of them focused on attacking S. I. Hayakawa and Ronald Reagan with satire. For example, see “Puppet Hayakawa V.S. Bootlicker Willie Brown” (1969) and “Riots Continue at San Francisco State College” (1968). Others focused on showing images of student protestors engaged in action. For instance, see “The Movement” (1969) and Black Students Union (1969). Further, after the strike was over, the Black Panther Party sponsored a massive May Day Rally in San Francisco as part its Free Huey Campaign. The event was attended by many members of the San Francisco State Black Students Union. For key speeches that were delivered by various Black leaders at the rally, see Kathleen Cleaver (1969); Seale (1969); Goodlet (1969); and Hilliard (1969a).


26. Gregory Harrison published at least two articles in The Black Panther. Among other things, Harrison discussed the role of the Black Student Union in a school and the concept of Black Power. For those articles, see Harrison (1968a, 1968b). In the January 4, 1969 issue of The Black Panther, Harrison was listed as a student editor (Black Panther Party, 1968i). For an
article about the activities of Harrison at Oakland Technical High School, see “Student Revolt,” (1968). Valerie Douglas, who was also known as Val Douglas, published at least one article in The Black Panther. She addressed the Vallejo liberation school operated by the Black Panther Party. For that article, see Douglas (1969). Upon the death of Ronnie Stevenson, who was also known as Ronald Harold Stevenson, III, his daughter Sonia Waters (2010a, 2010b) wrote an obituary for the Berkeley Daily Planet and a letter to the Black Panther Party Legacy & Alumni--It’s About Time wherein she noted his contributions to the implementation of the Black Panther Party’s free breakfast program and to the establishment of a Black Studies Department at Berkeley High School. In addition to high school students like Harrison, Douglas, Wyse, and Stevenson, the Black Panther Party recruited into its ranks people from all segments of the Black community, including college students, prison inmates, former prison inmates, street hustlers, blue-collar workers, white-collar workers, military veterans, and active duty military personnel. At the outset, its cadre included military veterans Bobby Seale (Air Force) and Elbert “Big Man” Howard (Air Force). They were soon joined by military veterans like Bobby Bowens (Army), Roosevelt “June” Hilliard (Air Force), Valentine Hobbs (Army), Geronimo Pratt (Army), John Seale (Air Force), John Sloane (aka John Sloan) (Army?), Mark Teemer (Marines), Robert Webb (Air Force), Randy Williams (Army), and Landon Williams (Army). For some important articles regarding active duty military personnel, see “Letter from a Black Soldier” (1968); “Black Soldiers Revolt” (1968); Lewis (1968); Seale (1968); “Black Marines Die” (1968); “U.S. Servicemen” (1968); Chatman (1969); “Brass” (1969); “The Black People” (1969); GI’s Civil Liberties Committee (1969); “An Interview with a Black G. I.” (1969); “Black GI’s Fight” (1969); “G.I.’s Refusing to Oink Lie” (1969); The GI Student Union (1969); Baltimore Chapter (1969); “The Second Front” (1969); A.D., 354th Combat Support Group (1969); R. P. (1969); Southern Conference Educational Fund (1969); “Vet of Nam and Danang” (1969); “Star Spangled Sweatshops” (1969); “GI’s Switch Sides in Vietnam” (1969); An Ex GI (1969); “GI Discrimination” (1969); White (1969); “ASU Supports B.P.P.” (1969); “Black Draft Resister” (1969); “From a GI” (1969); “Ft. Dix Repression” (1969); “Case of the Presidio 27” (1969); “G.I. Sentenced” (1969); Stapp (1969); Bryan (1969); The Richard Chase Defense Committee (1969); “GI’s Fed Up” (1969); “You’re Out There,” (1969); “One of 300,000 Victims” (1969); “Union Busting” (1969); Wade (1969); Scott (1969); GI Civil Liberties Def Com. (1969); “Military Pigs” (1969); Eldridge Cleaver (1969); Anderson (1969); Hightower (1969); American Servicemen Union (1969); “Wisconsin’s Anti-Draft Prisoners” (1969); “Black Marines Appeal” (1969); Seale (1969b, 1969c); “Draft Cases” (1969); “Gung-Ho Fascist” (1969); Frenchy (1969); Draznin (1970); Evans (1970); Tabor (1970); The Green Machine (1970, 1971); “In Two Years Randy Williams” (1970); Boston Chapter (1970); “Eyewitness Account” (1970); “Portsmouth” (1970); G.I. Civil Liberties Defense Committee (1970); “Appeal Filed” (1970); “Young Lords Barred” (1970); “Charges Dropped on Marine” (1970); Green (1971); “Fragging Officers” (1971); Winter Soldier (1971); Crumb (1971); Reney (1971); Wheeler (1971); Juan Farinas Defense Committee (1971); Committee to Defend the Ft. Hamilton GIs (1971). See Eldridge Cleaver (1968) for an important work by a former prison
inmate who joined the Black Panther Party and became an important leader as the Minister of Information. For an important work by a former blue-collar worker who joined the Black Panther Party and became an important leader as the Chief of Staff, see Hilliard and Cole (1993).

27. Jimmy Garrett and other students at San Francisco State created a coalition of student groups from various racial and ethnic groups known as the Third World Liberation Front. Students, who belonged to the Third World Liberation Front, helped to mount the strike at San Francisco State in a dynamic fashion. See “San Francisco State Strike” (1969) for a list of five demands issued by the Third World Liberation Front to the San Francisco State Administration in support of the 10 demands issued by the San Francisco State Black Students Union to the San Francisco State Administration. On both lists, one of the items was the demand that George Murray be retained in his teaching position at San Francisco State. For evidence that Merritt College students supported the strike by students at San Francisco State, see “Smith Promises” (1968); “Dr. Smith Deplores” (1968); Bailey (1968); Appleton (1969); and “‘Solidarity’” (1969). During 1969 and 1971, there was student unrest at Merritt College similar to San Francisco State. See “Barricade” (1969), “Militants Win Concessions” (1969); “Students Invade” (1971); “Cops Swoop In” (1971); “Merritt College Remains Shut” (1971); “Strife-torn Merritt May Open Soon” (1971); Mitchell (1971a, 1971b); Maggy (1971); “Miranda” (1971); “Merritt College Turmoil” (1971); “Merritt’s Black Faculty” (1971); and By 1969, Newsweek went so far as to declare that Merritt College was a key center of Black militancy. See “This Course” (1969) and “Merritt Center” (1969).

28. Biondi (2012) has written that, “Hayakawa had fired Nathan Hare in February after Hare and several students disrupted a speech in which Hayakawa was boasting of the recent mass arrest and claiming victory. Hare was never reinstated, never had the opportunity to build the department he had envisioned, and feels he was blacklisted from future employment in the state college system because of his strike activities” (p. 73). In addition to the report by Hare (1969), Orrick (1969) reprinted a number of contemporary reports about the strike by Phil Garlington, Jr., a writer for the San Francisco Examiner. In one of those reports, Garlington (1969b) stated that, “Hayakawa says his decision to fire Nathan Hare as chairman of the Black Studies Department still stands. Likewise for George Murray, Black Panther--ex-English teacher serving six months for parole violation” (p. 26). Garlington (1969a), in another report released two days earlier, quoted Hayakawa as saying that: “A portion of the recent dispute concerns personnel matters. My position is that the decisions announced by the administration in recent weeks will stand. None of this is altered by virtue of the recommendations in the agreement between the select committee and the student group. Dr. Hare’s contract expires in June, as already announced. George Murray’s contract has expired” (p. 4).

29. Biondi (2012) has reported that, “George Murray, the former Black Panther minister of education and San Francisco State strike leader, who had entered Stanford as a graduate student after his release from jail, was the first principal of Nairobi High School” (p. 222). Bloom and Martin (2013) have asserted that, “As part of Murray’s sentence, he was ordered to resign from the Black Panther Party and to refrain from ever appearing or enrolling in an educational institution again without explicit permission from the court. With his mother, wife, and newborn child with him in court, Murray agreed, and he dropped completely out of politics” (p. 283).
Before his resignation from the Black Panther Party and after the start of the strike, Murray (1969) wrote an important opinion piece for *Rolling Stone*. For some important articles or news items written about or by him in *The Black Panther*, see Murray (1968a, 1968b, 1968c, 1968d, 1968e, 1969b); “Minister of Education Returns from Cuba” (1968); “Panthers--B.S.U. Get It Together,” (1968); “Late News Briefs,” (1968); “George Murray Keeps Position,” (1968); “Untitled Article on George Murray,” (1968); “Pig Power Struggle,” (1968); “San Francisco Strike,” (1968); Goodwin (1969); and Collins (1969). For important articles about Murray leaving the Black Panther Party and going into the church, see “A Panther’s Religious Renewal” (1969) and Muller (1969).

30. Nathan Hare joined together with Robert Chrisman and created *The Black Scholar*, a very important journal with a focus on Black arts and letters. Later, Nathan Hare and his wife Julia Hare developed the Black Think Tank, which also served as a counseling center and publisher. One of the many important books they wrote together is titled *Bringing the Black Boy to Manhood* (Hare & Hare, 1985). The papers of Nathan Hare and Julia Hare can be found at the Bancroft Library at the University of California, Berkeley. See Hare and Hare (2014). For three important articles about the problems of Nathan Hare at San Francisco State, see “Hare Must Not Leave” (1969); Greenlee (1969); and “Hayakawa Battling Protests” (1969). For his criticism of the faculty union at San Francisco State, see Hare (1969b). He went so far as to refer to it as a “sellout” (p. 14).

31. At San Francisco State, Murray made his contribution as a leader of the protestors during the strike; Williams made his contribution as a protestor during the strike; Williams made his contribution as a protestor during the strike; Simon made her contribution as a protestor during the strike; Mitchell made her contribution as a protestor during the strike; and Clarence Thomas made his contribution as a leader during the strike.

32. Benny Stewart (personal communication, June 7, 2016), the chair of the Black Studies Department during the strike at San Francisco State, has informed me that those five Black Panthers were deeply involved in the affairs of the Black Students Union from November 1968 to March 1969. Stewart stated to me that he was never a member of the Black Panther Party. However, Benny Stewart said to me that, at one time, he was the chair of the National Advisory Committee of the Black Panther Party and he worked on the Free Breakfast Program of the Black Panther Party. He described himself to me as a supporter of the Black Panther Party. Stewart told me that he attended San Francisco State from September 1966 to June 1970.

33. For the beginning and ending dates of the Fall 1969 Semester at San Francisco State, see its *Class Schedule and Information September 22, 1969--January 23, 1970* (San Francisco State, 1969). According to that document, it began on September 22, 1969 and ended on January 23, 1970. The document is located in the San Francisco State University J. Paul Leonard Library Special Collections/Archives. Further, Streeter (1968) has informed us that, “Merritt just last Friday authorized an autonomous department. It starts operating next January” (p. 8). Streeter made that statement in an article he published on November 24, 1978. Charlotte Smith (personal communication, June 6, 2016), an official in the Peralta Community College District’s Admissions and Records Office, informed me there that the official records indicate that the beginning and ending dates of the Winter 1969 Quarter at Merritt College were January 8, 1969 and March 8, 1969. She also informed me that the official records indicate that the beginning and ending dates of the Winter 1968 Quarter at Merritt College were January 4, 1968 and March 22, 1968; the beginning and ending dates of the Spring 1968 Quarter at Merritt College were
April 3, 1968 and June 20, 1968; the beginning and ending dates of the Summer 1968 Quarter at Merritt College were July 2, 1968 and August 9, 1968; the beginning and ending dates of the Fall 1968 Quarter at Merritt College were September 19, 1968 and December 13, 1968; the beginning and ending dates of the Spring 1969 Quarter at Merritt College were April 9, 1969 and June 27, 1969; the beginning and ending dates of the Summer 1968 Quarter at Merritt College were July 8, 1968 and August 14, 1968; and the beginning and ending dates of the Fall 1969 Quarter at Merritt College were September 19, 1969 and December 12, 1969. For reports in the campus newspaper about the emergence of Afro-American Studies Department at Merritt College, see Wesson (1968); “Smith Seeks Change” (1968); Bailey (1968); Appleton (1968, 1969); Heide (1968); Heider (1968); Hoye (1969); “Merritt Center” (1969); and “Faculty for Credential” (1969).

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Abstract

This paper focuses on Black social movements past and present with special reference to the Black Arts Movement and the Hip Hop Movement. It examines the Black Arts Movement as a social movement which emerged during the mid-1960s and lasted until the mid-1970s. It also examines the Hip Hop Movement as a social movement which emerged during the early 1970s and has lasted to the present. This paper presents a comparative analysis of both social movements and identifies their goals, ideologies, organization and status systems, and tactics. The comparative analysis also includes an examination of both movements’ internal development in the form of the incipient phase, organizational phase, and stable phase. Likewise, the comparative analysis includes an examination of both movements’ external development in the form of innovation, selection, and integration. In addition, this paper addresses some implications of the Black Arts Movement and the Hip Hop Movement as social movements. In this study, a mixed methods approach has been employed, including the comparative historical method, participant observation, and a survey. The research techniques include direct observation, interviews with people involved in the two movements, and content analysis of primary and secondary source documents.

Introduction

During the 20th century in the United States of America (USA), Black people developed a host of social movements to address social problems they faced. In the first 25 years of the century, Black people developed the Pan-African Movement, Niagara Movement, National Association for the Advancement of Colored People (NAACP), Moorish Science Temple of America, New Negro Movement, Universal Negro Improvement Association (UNIA), African Blood Brotherhood for African Liberation and Redemption, and Harlem Renaissance as social movements. Between 1926 and 1950, Black people developed the Nation of Islam, Congress of Racial Equality (CORE), Council on African Affairs, and Peace Information Center as social movements. The period between 1951 and 1975 saw Black people develop social movements such as the

This paper will focus on Black social movements past and present with special reference to the Black Arts Movement and the Hip Hop Movement. It will examine the Black Arts Movement as a social movement which emerged during the mid-1960s and lasted until the mid-1970s. It will also examine the Hip Hop Movement as a social movement which emerged during the early 1970s and has lasted to the present. This paper will present a comparative analysis of both social movements and identify their goals, ideologies, organization and status systems, and tactics. The comparative analysis will include an examination of both movements’ internal development in the form of the incipient phase, organizational phase, and stable phase. Likewise, the comparative analysis will include an examination of both movements’ external development in the form of innovation, selection, and integration. In addition, this paper will address some implications of the Black Arts Movement and the Hip Hop Movement as social movements.

As used here, the term social movement refers to an organized collective effort by a group of people to address a social problem. This definition of a social movement draws on the insight of Theodorson and Theodorson (1969) and Jary and Jary (2000). Theodorson and Theodorson have said that a social movement involves an “important form of collective behavior in which large numbers of people are organized or alerted to support and bring about or to resist social change” (p. 390). Jary and Jary have stated that a social movement is “any broad social alliance of people who are associated in seeking to effect or to block an aspect of social change within a society” (p. 575).

The term social problem, as used here, refers to a social condition which (1) affects large number of people; (2) threatens the values of an influential group of people; and (3) can be solved through collective action. The definition of a social problem draws on the insight of Theodorson and Theodorson (1969), Jary and Jary (2000), Ladner (1973), Lauer (1976), Glynn, Hohm, and Stewart (1996), Loseke (2003), and Spector and Kitsuse (2000). Theodorson and Theodorson have related that a social problem is any “undesirable condition or situation that is judged by an influential number of persons within a community to be intolerable and to require group action toward constructive reform” (p. 392). Jary and Jary have noted that a social problem involves “aspects of social life seen to warrant concern and intervention” (p. 577).

All social movements have an ideology. As used here, the term ideology refers to a set of ideas and norms that can be used as the guiding philosophy of a group of people. This definition of an ideology draws on the insight of Theodorson and Theodorson (1969), Jary and Jary (2000), Pinckney (1976), and Alkalimat (1973). Theodorson and Theodorson have defined an ideology in the following manner: “A system of interdependent ideas (beliefs, traditions, principles, and myths) held by a social group or society, which reflects, rationalizes, and defends its particular social, moral, religious, political, and economic institutional interests and commitments” (p. 195). Jary and Jary have defined an ideology as “any system of ideas underlying and informing social and
political action” (p. 289). Writing in 1975, Pinckney informed us that the “ideology of black nationalism is widespread among a significant segment of America’s black community” (p. 1).

**Review of the Literature**

In the discipline of sociology, social movements have long been the subject of scholarly discussion. Since 1973, the American Sociological Association has maintained a section on social movements. Thus, social movements have been a key topic of discussion at American Sociological Association conferences. It has also been a key topic of discussion at Pacific Sociological Association conferences, California Sociological Association conferences, and those of other organizations.

During the middle of the 20th century and the turn of the 21st century, several classic books were published on the systematic study of social movements. Heberle (1951) sought to present a general theory of social movements. He informed us that, “The main criterion of a social movement . . . is that it aims to bring about fundamental changes in the social order, especially in the basic institutions of property and labor relationships” (p. 6). Heberle posed that “it may be claimed that the study of social movements was one of the origins of sociology” (p. 3). In a similar fashion, King (1956) argued that social movements “constitute a significant subject for sociology” (p. v). He proceeded to identify some elements of a social movement, including goals, ideology, organization and status systems, and tactics. King also identified social movements’ internal development in the form of the incipient phase, organizational phase, and stable phase and the external development in the form of innovation, selection, and integration. Cameron (1966) informed us that, “A social movement occurs when a fairly large number of people band together in order to alter or supplant some portion of the existing culture or social order” (p. 7). Cameron emphasized that it is important to understand the background of a given society as well as the purposes and actions of a social movement in it. As examples in his book, Cameron looked at the Nation of Islam as a social movement and the Civil Rights Movement as a social movement.

Between the year 2000 and the year 2013, the literature on social movements in the USA continued to grow. Some of the literature covered social movements among the Black population, including the Black Arts Movement and the Hip Hop Movement. Some of the important primary source books related to the Black Arts Movement were written by Karenga (2007), Ahmad (2008), Salaam (2009), Perkins (2009), and Marvin X (2009). Among the important secondary source books, which appeared between 2000 and 2013, were those written or edited by Gabbin (2004), Clarke (2005), Sell (2005), Smethhurst (2005), Collins and Crawford (2006), Douglas (2008), Reeves (2008), Robson (2008), and Phelps (2013).


Because of their in-depth studies of the Hip Hop Movement under guest editors, two special issues of the *Journal of African American Studies* and the *Journal of Hip Hop Studies* have been selected for a relatively more detailed examination. During the summer of 2005, the *Journal of African American History* released a special issue on “The History of Hip Hop.” In a thoughtful introduction to the special issue, Aldridge and Stewart (2005) unabashedly state that Hip Hop has been “commodified by what Frankfurt School theorists Max Horkheimer and Theodor Adorno called ‘the culture industry,’ which has distributed Hip Hop to the masses in ways that reinforce historical stereotypes about African Americans by highlighting sexist, misogynistic, and nihilistic lyrics and images” (p. 193). Aldridge and Stewart also assert that the five essays in the special issue “offer complex interpretations of Hip Hop that often defy and challenge the negative images promulgated by mainstream commercial media” (p. 193). Authors of the five essays include Stewart (2005), Aldridge (2005), Phillips, Reddick-Morgan, and Stephens (2005), Cheney (2005b), and Dagbovie (2005). On the upside, Aldridge and Stewart set the tone for the special issue by delineating four fundamental elements of Hip Hop, namely disc jockeying (Djing), break dancing, graffiti art, and rapping (emceeing). On the downside, they made one reference to the infamous term “Hip Hop culture.”

J. B. Stewart (2005) led off the special issue with a comparative analysis of political commentary in R & B (rhythm and blues) and Hip Hop songs. He developed a typology of political commentary types to examine R & B songs. The political commentary types included (1) Documentary; (2) Jeremiad; (3) All God’s Children Declaration; (4) Defiant Challenge; (5) Awareness Raising Self-Criticism; (6) Collective Self-Help Solution; (7) Confrontational Declaration; (8) Revolutionary Manifesto; and (9) Spiritual Transcendence Exploration. During his analysis of the political commentary of R & B songs, Stewart looked at the lyrics of Curtis Mayfield, Sam Cooke, Stevie Wonder, Roberta Flack, Donny Hathaway, Marvin Gaye, James Brown, Bobby Womack, Sly Stone, Maurice White, George Clinton, and Gil Scott-Heron.

For J. B. Stewart (2005), the social conditions in the USA during the 1980s forced R & B artists and the emerging Hip Hop artists to grapple with “worsening social problems, including high unemployment, police brutality, incarceration, inadequate public schools, political apathy, and dysfunctional behaviors that perpetuate oppression” (p. 218). Stewart credited the early Hip Hop of Grandmaster Flash and the Furious Five, especially their song “The Message,” with being a link between the past and the future. He explained, “While the lyrics are articulated in a classic Hip Hop spoken word cadence, the background music infuses both traditional R & B and Funk elements” (p. 219). Stewart added: “The song contains the type of graphic description of oppressive conditions found in the best Blues and R & B commentaries, and issues the type of subtle warnings to external audiences found in some of the more assertive R & B commentaries” (p. 219). He reminded us that Hip Hop originated as “a form of mass expression, largely unfettered by corporate attachments, fueled by the harsh realities of inner-city life” (p. 219). However, Stewart admits that Hip Hop changed with the times and has regaled in the “rebirth of dysfunctional and denigrating imagery propagated through blaxploitation in both films and music videos” (p. 220). Stewart closes on a
hopeful note by expressing that there is “the liberatory potential of Hip Hop” (p. 221). He pointed to the Stop the Violence initiative, Get Out the Vote initiative, and the development of foundations by Hip Hop artists.

Aldridge (2005) has presented the argument that Hip Hop has three types of rap artists. One type is the socially and politically conscious rap which focuses on the social, economic, and political situation of oppressed people (e.g., Black people). A second type is party rap which focuses on providing a dance groove. A third type is gangster rap (aka gangsta rap) which focuses on illegal activity including the promotion of killing people, drug dealing, prostitution, and gang banging. In the view of Aldridge, the outlook of scholars like Martin Kilson and others has been clouded by socially and politically conscious rap receiving less airplay in mainstream media outlets than party rap and gangster rap. Aldridge states that socially and politically conscious rap has been created by Public Enemy, Sister Souljah, KRS-One, MeShell Ndegecello, Goodie Mob, The Coup, Blackalicious, Jurassic 5, Kanye West, dead prez, Mr. Lif, Mos Def, Immortal Technique, Hieroglyphic, and Ms. Dynamite. He has credited those artists with offering “cogent analyses and commentary on race, poverty, and discrimination” (p. 227). For Aldridge, these artists have built on the ideas and ideology of the Civil Rights Movement and what he has termed the Black Freedom Struggle. Aldridge also informs us that socially and politically conscious rap artists, like the other two types, have delivered their messages by using imaging, sampling, and scratching.

According to Aldridge (2005), Hip Hop has taken these four main ideas from the Civil Rights Movement and that he has termed the Black Freedom Struggle: (1) self-determination; (2) liberatory education and pedagogy; (3) economic solidarity and entrepreneurship; and (4) Pan-African Connection. Aldridge associates self-determination as an idea with Mos Def and others. He connects liberatory education and pedagogy as an idea with KRS-One, Sister Souljah, and others. Aldridge associates economic solidarity and entrepreneurship as an idea with dead prez, KRS-One, The Coup, Hieroglyphic, Public Enemy, Mos Def, and others. He connects the Pan-African connection as an idea with Michael Franti, KRS-One, Ms. Dynamite, and others. On the one hand, Aldridge has surmised that “the civil rights generation must seek out and connect to the Hip Hop generation and recognize their similar and divergent views” (p. 248). On the other hand, he has written that, “The Hip Hop generation, in turn, must continue to seek knowledge and information about their social circumstances within the context of the larger BFS. Members must also critique their actions by promoting positive messages to youth and helping ameliorate the problems of their generation” (p. 248).

Following Bakari Kitwana, Aldridge (2005) states that the term Hip Hop generation refers to those people who were born between 1965 and 1984 and who identify with the movement. He believes that when the civil rights generation and the Hip Hop generation heed the aforementioned concerns they will have the collective strength to take on the discrimination, racism, and poverty faced by the Black population in the USA. A key problem Aldridge left out for the Hip Hop generation is the commodification problem and cooptation problem its members face from Wall Street and Madison Avenue. For better or worse, socially and politically conscious rappers may feel compelled to use the N-word and B-word to sell records for Wall Street and Madison Avenue. For example, very few of the rappers he listed in the socially and politically conscious have had a record listed on the Billboard Charts between 2009 and 2013. To his credit, Aldridge
refrained from referring to Hip Hop as a culture in and of itself. Instead, Aldridge (2002) is on record for calling Hip Hop a social movement as he well should have.

Phillips, Reddick-Morgan, and Stephens (2005) posed that women have had a dually oppositional stance in Hip Hop. They took the position that the dually oppositional stance has (1) enabled Black women and Latino women to critique the sexism of men in their racial and/or ethnic group; (2) permitted Black women and Latino women to have solidarity with the men in their racial and/or ethnic group when it came to critiquing and struggling against the racism, classism, and sexism flowing from the dominant group and mainstream society; and (3) permitted Black women and Latino women to critique and challenge the feminism of White females from the dominant group and mainstream society, including academic feminism. As might be expected, they eschewed what they termed misogyny in the lyrics of many rappers. A case in point is the obstentious use of the B-word. However, Phillips et al., seem to ignore the fact that the B-word has been used as a term of endearment by girls and women in the Hip Hop Movement.

Women, according to Phillips et al. (2005), have been involved with the Hip Hop from the outset. They pointed to Sharon Jackson, also known as Sha-Rock, as one of the first female rappers. She was dated as having appeared with Kool Herc as early as 1976. Jackson later joined the Funky 4 + 1 More and was present when the group became the first rap act to be featured on the television show Saturday Night Live. Phillips et al. report that the first females to release a rap record were Paulette Tee and Sweet Tee. Their single, Vicious Rap, was released in 1978. Other females involved with Hip Hop during the early days and identified by Phillips et al. were Lady B, Sylvia Robinson, Sylvia Rhone, Cheryl the Pearl, Blondie, MC Angie B (Angie Stone), Queen Lisa Lee, Teena Marie (Lady Tee), Debbie Harris, Monica Lynch, Brenda K. Starr (Real Roxanne), Sparky D, Salt, Pepper, MC Lyte, and Roxanne Shante. They were later joined by Sister Souljah, Ms. Melodie, Yo-Yo, Mary J. Blige, TLC, Da Brat, Mia X, Lady of Rage, Lil’ Kim, Foxy Brown, Trina, Eve, Queen Latifah, Lauryn Hill, Erykah Badu, and Missy Elliott. Phillips et al. have credited such women in Hip Hop with talking back to men in defense of women and demanding respect for women; advocating women’s empowerment, self-help, and solidarity; and advocating the defense of Black men against the larger society. They seemed to ignore the fact that those women, at times, have also disrespected other women and advocated nihilism and criminal behavior. In addition, Phillips et al. also made the mistake of referring to Hip Hop as a culture in and of itself instead of a social movement.

Cheney (2005b) focused on what she calls the “Golden Age of Rap Nationalism” which she dates from 1988 to 1993. She took the position that the period started in 1988 with Public Enemy’s It Takes a Nation of Millions to Hold Us Back and came to a close in 1993 with Ice Cube’s Lethal Injection. During that period, according to Cheney, rap artists used their songs to articulate Black nationalist ideas. Cheney identifies Black nationalism as a social force which involves emigration and internal statism as well as anti- and non-emigration. She posits that her position on Black nationalism follows scholarship that has the phenomenon going “beyond the nation-state configuration to be comprehensive enough to include its cultural manifestations” (p. 280). Whereas Cheney praised some aspects of the Black nationalist pronouncements among rappers, she took them to task for using what she deemed sexist language or anti-homosexual language.
Cheney closed her article by urging heterosexual Black men in the Hip Hop to “address their own gendered oppression, redefine the masculine ideal, and learn to love themselves and their communities without fear or anxiety” (p. 295).

Dagbovie (2005) addressed the relationship between what he termed the Hip Hop generation and Black history. He also self-identified as a Hip Hop generation historian. Dagbovie posed that Hip Hop generation historians need to make a mark in the history discipline, produce scholarship, and get involved in the debates that pertain to the functions of Black history. He stated that discussion of the relationship between the Hip Hop generation and Black history is guided by a premise that “Hip Hop culture is the single most widespread preoccupation among today’s African American and African diasporan youth” (p. 300). Dagbovie also posed that Hip Hop has “the potential to play an important role in rejuvenating the modern black history movement” as well as the “generation’s cultural and historical consciousness” (p. 300).

Whereas Aldridge (2005) focused on the relation between the Hip Hop generation and the Civil Rights Movement generation, Dagbovie (2005) looked at the relation between the Hip Hop generation and the Black Power Movement generation. Following Bakari Kitwana, Dagbovie wrote that he agrees with the view that “one of the greatest problems facing the Hip Hop generation is the fact that we have abandoned the positive cultural values held by our parents, elders, and ancestors” (p. 303). Dagbovie continued: “We have exchanged what Elijah Anderson has called ‘old head’ values for ideals promoted by a capitalistic, individualistic, and racist society” (p. 303). He was right on point about that matter, but wrong in calling Hip Hop a culture.

In 2014, the Journal of Hip Hop Studies was launched under the auspices of North Park University. The initial issue featured five articles by Harris (2014), Livingston (2014), Engels (2014), Long (2014), and Chaney and Mincey (2014). In their introduction for the issue, as the editors, Miller, Hodge, Coleman, and Chaney (2014) spent considerable space referring to Hip Hop as a culture. However, of the five featured articles, only two refer to Hip Hop as a culture.

Harris (2014) focused on a Christian rapper by the name of Lecrae Moore, who goes simply by his first name Lecrae. He argues that Lecrae, a rapper who publicly identifies as a Christian, has unfairly been overlooked. Harris posits that Lecrae has sought to create a bridge between the sacred sphere and the secular sphere. For his analysis of Lecrae, Harris reported that he utilized the lyrics of Lecrae, interviews of Lecrae on a number of mainstream Hip Hop websites, social media, and videos of Lecrae on YouTube. In his discussion, Harris referred to Hip Hop as a culture.

Livingston (2014) traced the African oral tradition from ancient Egypt to inner-city New York and Los Angeles. He poses that the modern sounds of Hip Hop artists like Kendrick Lamar can be traced back to the legendary muses of ancient Egypt. In his own case, Harris informs us that he was standing on the shoulders of Harriette Mullen, Elaine Richardson, Mark Gottdiener in his attempt to link Hip Hop to ancient Egypt through what he calls an “African-centered semeiotic context” (p. 39). Surprisingly, he contends that Hip Hop artists are the continuation of a cultural ethos that rose thousands of years ago. If that is the case, Lamar and his fellow rappers represent a regression not a progression. Given that rappers like Kendrick Lamar revel in calling themselves the N-word and their women the B-word, it is highly unlikely that they will ever reach the level
of ancient poets like Ahkenaton. Livingston, in his discussion, referred to the Hip Hop Movement as a culture.

Engels (2014) explored cultural and economic circumstances that gave birth to the Hip Hop Movement’s gangster rap phenomenon and Hollywood’s Blaxploitation Cinema phenomenon. He argues that there were inherent similarities between the two phenomena. In the view of Engels, the two phenomena both relied on place, setting, myth, and folklore. These aspects of the Black experience were then used to create cultural relevance for Black audiences in the USA. For Engels, the reactions of Black people to the two phenomena have played a crucial role in the establishment of a mainstream cultural identity for Black people. To a certain extent, Engels overlooks how the two phenomena have created and maintained stereotypes of Black people. He also overlooks another crucial fact. Whereas the Blaxploitation Cinema phenomenon glorified Black people killing White people, the gangster rap phenomenon of the Hip Hop Movement has glorified Black people killing Black people. In his discussion, Engels did not refer to the Hip Hop Movement as a culture.

Long (2014) presented an analysis of two urban artists, namely Tyler the Creator and BANKSY. According to Long, Tyler the Creator is a Black rapper “born and raised in Ladera Heights, a middle-class Los Angeles neighborhood” and BANKSY is a “white European graffiti artist.” Whereas Tyler the Creator hails from the USA, BANKSY comes from Bristol, England. Long asserted that the works of those two urban artists reflect disillusionment and nihilism which are spreading from the inner cities to new frontiers. He believes that the implications of the nihilistic mindset need to be understood. Long warned that the nihilistic mindset is based on the rejection of higher values (e.g., the rejection of law and religion), devaluation of life and property, and a loss of hope in one’s surroundings. He has also explained that Tyler the Creator and BANKSY have a large audience after gaining fame and recognition through websites. Long, in his discussion, did not refer to the Hip Hop Movement as a culture. However, Long did refer to it as a subculture.

Chaney and Mincey (2014) conducted a qualitative content analysis of R&B and Hip Hop songs. Using phenomenology as a theoretical foundation, Chaney and Mincey looked at lyrics of 79 R&B and Hip Hop songs. The songs were drawn from the years 1956-2013 and each appeared on the Billboard chart. Chaney and Mincey state that they used Billboard Chart Research Services to select the songs for their analysis. In their study, Chaney and Mincey sought to examine the ways some Black male artists expressed sensitivity. Their analysis of the lyrics showed that Black male sensitivity in R&B and Hip Hop fell into a typology based on the following four dimensions: Private Sensitivity; Partnered Sensitivity; Perceptive Sensitivity; and Public Sensitivity. Chaney and Mincey explained that Private Sensitivity reflects “when the Black male is alone; feels lonely; disguises or hides his tears from his romantic partner or others; and expresses a determination to not cry and/or continue crying” (p. 121). They said that Partnered Sensitivity happens “when the Black male encourages and/or connects with his romantic partner, other men, and/or members of the Black community through crying” (p. 121). Chaney and Mincey say that Perceptive Sensitivity say takes place “when Black men acknowledge the tears shed by others, and shed tears themselves while being conscious of society’s expectation that men suppress emotion and/or refrain from crying” (p. 121). They state that Public Sensitivity reflects “when the Black male cries publicly
and verbally expresses that he does not care what others think of him” (p. 121). Chaney and Mincey report that, “Private Sensitivity was demonstrated in 44 songs (56%), Partnered Sensitivity was demonstrated in 11 songs (14%), Perceptive Sensitivity was demonstrated in 12 songs (15%), Public Sensitivity was demonstrated in 11 songs (14%); and one song (1%) represented the partnered, perceptive, and Public Sensitivity theme” (p. 121). Chaney and Mincey, in their discussion, did not refer to the Hip Hop Movement as a culture.

**Black Arts Movement as a Social Movement**

**Goals**

King (1956) has informed us that the goals of social movements are the objectives toward which the activities are directed. As a whole, the Black Arts Movement developed some key four goals. One goal was to promote social change at the macro, middle, and micro levels of analysis. A second goal was to provide a forum for people to engage in the production of poetry, essays, plays, art, music, etc. A third goal was to develop institutions for the benefit of the masses. A fourth goal was to function as a revolutionary social force in the belly of the beast.

**Ideology**

As a set of ideas and norms, the ideology of the Black Arts Movement reflected two major aspects. The Black Arts Movement was a bastion and citadel of Black nationalism and changing the existing social stratification system. It was also a threat to Wall Street and Madison Avenue. Some of the leaders of the organizations providing energy to the Black Arts Movement had their ideas about Black nationalism, social change, and various arts examined in the pages of the *Life, San Francisco Chronicle, San Francisco Examiner, Sacramento Bee, Oakland Tribune, Wall Street Journal, Newsweek,* and other mainstream periodicals. This occurred early in the history of some organizations as media outlets sought to assess a perceived threat.


During the height of the Black Arts Movement, many Black writers made a conscious attempt to avoid establishing contracts with White publishing houses. Instead, they sought to develop Black controlled periodicals and publishing houses that were independent of White capitalists. This attitude was exemplified in an important essay by
Toure (1968a) titled “The Crises of Black Culture” which was published in The Journal of Black Poetry. Within that essay, Toure made the following statement:

. . . we Black writers must produce more literary journals. It’s a shame that our main journals—Soulbook, Black Dialogue, Journal of Black Poetry—are all located on the West Coast! There should be some kind of regular literary publication representing each area—East Coast, Mid-west, South, and West Coast—as well as publications geared for national and international circulation. The writers in each region should make it their responsibility to organize workshops to train young thinkers and writers in Black Consciousness and New Black writing. Presently we are organizing this for Black Dialogue. (More than likely, we’ll become more organized and develop these things as our movement matures and as we gain more confidence in deciding just what we’re really proposing to accomplish.) All magazines having to do with Rhythm and Blues, Country Blues, etc., are in white hands. (p. 5)

For Toure, it was imperative that Black people establish Black-controlled periodicals and publishing houses across the USA.⁴

A second important statement occurred as a result of the Third Annual Black Power Conference. The conference was coordinated by Amiri Baraka, then LeRoi Jones, and held in Philadelphia, Pennsylvania. After a creativity workshop at the conference, the participants issued a “report and resolution.” Among other things, the participants of the creativity workshop called for the creation of a National Publishing House to be subsidized by “existing negro publishing and Black Front foundation finances, until it is established as a National Educational Cooperative” (“The 3rd Annual Black Power Conference,” 1968, p. 7).

A third important statement appeared in Black Theatre #5 some three years later. That statement warned Black writers to be leery of White-controlled publishing firms—especially 3M. It read:

The 3M Company, a corporation of totally unscrupulous beasts is on a “Black Is Profitable (and dumb)” rampage. They have just written Black Theatre magazine along with several other artists and writers from the Black community for unconditional all-encompassing rights to our writings, paintings, etc., while offering us payment which must have come out of their petty cash box. They have recently distributed several new books which are really photo copies of old books by now dead Black authors. (We don’t know how much money these dead Black folks’ families made off the deal but if 3M holds true to form we’re sure they didn’t treat these dead Brothers any better than they are treating the lives ones.) Several years ago they tried all kinds of maneuvers to get to copy all of the material kept at the Schomberg (Library) Collection in Harlem (one of the most thorough and beautiful and totally BLACK libraries in the world). But Harlem people refused to let them in. O.K. Let’s stay together, Black people. (“Hatari,” 1971, p. 10)
Of course, there were some Black writers who did seek and out and receive contracts from White controlled publishing houses connected with White capitalists. Nevertheless, even after the demise of the Black Arts Movement, a critical mass of Black writers has retained the notion that Black people should develop Black controlled publishing houses and periodicals.

**Organization and Status System**

The organization and status system of the Black Arts Movement were driven by its members and the social conditions they faced. The two types of members involved with the Black Arts Movement included personnel and functionaries. Personnel consisted of those members with sporadic participation and who did not have specialized roles. Functionaries were composed of those members with persistent participation and who did have specialized roles. The three types of functionaries that emerged in the Black Arts Movement were (1) the leader, (2) the bureaucrat; and (3) the agitator.\(^5\)

The leader played the role of founder or successor to the founders. The people serving as leaders appeared to outsiders and personnel as being the catalysts behind the Black Arts Movement’s distinctive policies and objectives. The bureaucrat had predominately administrative activities with either high or low status. Those people serving as bureaucrats with high status were policy-makers. They had the responsibility of efficiently operating the internal machinery. In contrast, those people serving as bureaucrats with low status had the responsibility of handling routine paperwork and implementing policy and major decisions that came from above. The agitator played the role of the liaison between the Black Arts Movement and the outside world. Those people serving as agitators had the chief function of being involved with promotion or proselytizing. As promoters, they furthered the goals of the Black Arts Movement with publicity tactics, propaganda tactics, lobbying tactics, legal sanctions tactics, etc. In the role of proselytizers, they functioned as missionaries with the objective of converting outsiders into members.\(^6\)

**Tactics**

King (1956) has defined tactics as “activities and policies of a movement which are directed at the ‘outside world’” (p. 36). They pertain to “the means by which attainment of goals is directly attempted and by which new members are ultimately brought into the fold” (p. 37). The Black Arts Movement sought to bring as many members into the fold as possible. It sought to transform itself as a mass movement. However, it had a formidable enemy in the COINTELPRO (Counterintelligence Program) developed by the FBI (Federal Bureau of Intelligence). A key tactical blunder of the Black Arts Movement was its inability to control the flow of undercover FBI agents, agent provocateurs, and informants into various organizations. The undercover FBI agents, agent provocateurs, and informants were directed by COINTELPRO to spy on members and to disrupt the normal flow of operations (Cromartie, 2013c).
**Internal Development**

In terms of internal development, King (1956) has reported that social movements have careers that are developed in response to social conditions. Within that context, social conditions “stimulate personal discontent which may become manifest as social unrest” (p. 40). Some of those social conditions identified by King include heterogeneity, cultural confusion, and mass communication. In the case of Black people in the United States of America, those social conditions also include social and economic inequality based on police brutality, racial discrimination in hiring practices, racial discrimination in the criminal justice system, and health disparities. As it sought to respond to those conditions with different types of artistic modes, the Black Arts Movement passed through three major phases, namely the incipient phase, organizational phase, and stable phase.

**Incipient Phase**

King (1956) has pointed out that the incipient phase “is one which is only recognized and defined in retrospect” (p. 42). He has noted that the incipient phase “begins when the individual or individuals chiefly responsible for the inception of a movement become conscious of this possibility” (p. 42). The Black Arts Movement emerged in 1964 with beachfronts in two main areas: the New York City area and the San Francisco-Oakland Bay Area. The New York City area was the location where Amiri Baraka and others developed the Black Arts Repertory Theater/School. Neal (1968) has informed us that:

In the spring of 1964, LeRoi Jones, Charles Patterson, William Patterson, Clarence Reed, Johnny Moore, and a number of other Black artists opened the Black Arts Repertory Theatre School. They produced a number of plays including Jones’ *Experimental Death Unit # One*, *Black Mass*, *Jello*, and *Dutchman*. They also initiated a series of poetry readings and concerts. These activities represented the most advanced tendencies in the movement and were of excellent artistic quality. (p. 32)

In his statement regarding the founding of the Black Arts Repertory Theater/School, Neal may have made an error in writing 1964 instead of 1965. Both Salaam (1997) and Smethurst (2005) list the Black Arts Repertory Theater/School as being founded in 1965 and not 1964. The name of that institution has also been spelled in a variety of ways. Baraka (1984) has spelled it as the “Black Arts Repertory Theater/School.” In his spelling, Neal (1968) used “Black Arts Repertoire Theatre School.” Salaam (1997) has spelled is as the “Black Arts Repertory Theatre/School.” Smethurst (2005) has spelled it as the “Black Arts Repertory Theater/School.” Although their spellings have varied, it is very clear that they are referring to the same institution. As used here, the spelling will follow Baraka.

In 1965, there were two crucial events in the New York area. Malcolm X was assassinated on February 21, 1965 in Harlem and Amiri Baraka left his White wife and moved to Harlem in March 1965 to start the Black Arts Repertory Theater/School. In his
memoir, Baraka (1984) has shed light on some of the Black people who joined him in this important endeavor. He wrote:

A basic core was the Hackensacks (Shammy definite, Tong most of the time), Jimmy Lesser, Dave, McLucas, a friend of Tong’s who came along, Tub, a largish, sourly succinct dude; and after work, Corny and Clarence, plus Leroy McLucas and, a little later, Clarence Reed, the poet, who was hanging around on Lennox Avenue at the Progressive Labor Party offices, due in large part to his friendship with their black organizer, Bill Epton. (p. 368)

Some of the other people Baraka identified as being involved with the Black Arts Repertory Theater/School were Larry P. Neal; Askia Muhummad Toure (Roland Snellings); Max Stanford; Vashti Lownes; Sun Ra; Albert Ayler; Jim Campbell; Yusef Iman; Milford Graves; Andrew Hill; Joe Overstreet; Harold Cruse; Sam Anderson; Ed Spriggs; Sonia Sanchez; Barbara Ann Teer; Olabumi; and Vashti Lownes.8

When the Black Arts Movement first emerged many of the key people had not changed their names. For example, LeRoi Jones became Imamu Amiri Baraka after it emerged. Later he would drop the Imamu and become known simply as Amiri Baraka. Many other people involved with the Black Arts Repertory Theater/School also adopted African or Arabic names. In addition to the Black Arts Repertory Theater/School, the Revolutionary Action Movement was a key organization involved with the Black Arts Movement. Max Stanford was one of the leaders of RAM and he was also involved with the Black Arts Repertory Theater/School. Such participation quickly made Stanford an important target of COINTELPRO. After the FBI intensified that program in 1967, Stanford’s name was at the head of the list to be neutralized (Ahmad, 2008; Baraka, 1984; Cromartie, 2013c).

Basically, the Black Arts Repertory Theater/School broke up when Baraka left Harlem and moved back to Newark, his hometown in December 1965. Baraka (1984) has identified a number of interpersonal conflicts which developed and caused major problems at the Black Arts Repertory Theater/School. Without a doubt, the organization had a number of strong personalities with competing agendas at times. The organization had also been infiltrated by at least two undercover FBI agents. Baraka has recalled:

Harold Cruse was our history teacher and at one time he had two FBI agents in his classes. One, Donald Duncan, was later implicated in framing Max Stanford and Herman Ferguson for some bullshit attempt to assassinate Roy Wilkins and Whitney Young. Another one of these agents had also penetrated Malcolm’s OAAU. One guy was tall and light-skinned with red freckles. I’d see him going back and forth to Harold’s class. Later we put out flyers and circulated them to many cities with these dudes’ pictures and one of their lady friends, alerting people to these agents’ presence. (p. 380)

It very well may be the case that the two undercover FBI agents helped to foster interpersonal conflicts within the Black Arts Repertory Theatre/School.

Another important development on the East Coast was Harlem’s New Lafayette Theatre. Between 1968 and 1973, Ed Bullins served as the associate director for this
institution. While working at the New Lafayette Theatre, Bullins produced many of the plays he wrote dealing with the Black experience. Bullins also developed a Black Theatre Workshop and the periodical *Black Theatre*. The first issue of *Black Theatre*, which was released in 1968 and also known as *Black Theatre #1*, listed the following names and positions on its editorial board: Ed Bullins, editor; Roscoe Orman, associate editor; Marvin X, assistant editor--foreign; George Ford, art director; and Beverly Collins, secretary. The contents included a news item titled “A Report from San Francisco” by Adam David Miller; a news item titled “The Afro-Americans Thespians of Philadelphia” by Barry Shuck; a news item titled “The Free Southern Theatre” by Tom Dent; an essay titled “Black Theatre Notes” by Ed Bullins; a poem titled “The Actress,” which was written by Joe “Dingane” Goncalves and dedicated to Dorothy Dandridge; an essay titled “Cultural Nationalism and Black Theatre” by Larry Neal; an essay titled “The Crises in Black Culture” by Askia Muhammad Toure; an interview with Amiri Baraka titled “Everything’s Cool: An Interview with LeRoi Jones” by Marvin X; an interview with Clifford Mason titled “The Electronic Ni**er Meets the Gold Dust Twins” by Robert Macbeth and Ed Bullins; a theatre review titled “Errol John’s Moon on a Rainbow Shawl” by Marvin X; and a theatre review titled “Richard Wright’s Daddy Goodness” by Peter Bailey.

The second issue of *Black Theatre* was released in 1969. It was also known as *Black Theatre #2* and had the following names and positions on its editorial board: Ed Bullins, editor; Marvin X, associate editor; Roscoe Orman, associate editor; George Ford, art director; Sam Wright, business manager; Hattie Gossett, copy editor; Trixie Bullins, editorial assistant; and Stephen B. Taylor, distribution. The contents consisted of a news item titled “The Southside Center of theh Performing Arts, Inc.” by Bruce Milman; a news item titled “PASLA” by Vantile E. Whitfield; a news item titled “The New Lafayette Theatre” by Roscoe Orman; a news item titled “The Free Southern Theatre” by Thomas Dent; a news item titled “New Orleans” by Theodore E. Gilliam; a news item titled “Spirit House” by Larry Miller; a news item titled “Philadelphia’s Black Drama Season ’67-’68” by Barry Shuck; an anonymous “Third Annual Black Power Conference: Creativity Workshop Report;” a play titled “A Black Ritual” by Robert Macbeth; an interview with Amiri Baraka titled “God is Black! Islam and Black Art: An Interview with LeRoi Jones” by Marvin X and Faruk; an essay titled “Foreword” by Askia Muhammad Toure; a poem by Ameer Baraka titled “Study Peace;” an essay titled “Afterword” by Marvin X; a play titled “Growin’ into Blackness” by Salimu; an essay titled “The Mysterious Disappearance of Black Arts West” by Joe Goncalves; a statement “To All Black Actors and Other Interested Parties Re: ‘The Confessions of Nat Turner’ by William Styron to be Produced by David Wolper and Norman Jewison” distributed by the Association to End Defamation of Black People and signed or endorsed by many people including Ossie Davis, John Henrik Clarke, and Ron Karenga; a March 26, 1968 letter written to David Wolper and Norman Jewison by the Steering Committee of the Association to End Defamation of Black People regarding a motion picture based on the book *The Confessions of Nat Turner* by William Styron; a review of a performance of The Last Poets by Bill Simmons; and a review by Bill Simmons of James Baldwin’s play “The Amen Corner” under the direction of Ernie McClintock.

The third issue of *Black Theatre* appeared in 1969 and was also known as *Black Theatre #3*. The editorial board was composed of the following names and positions: Ed
Bullins, editor; Marvin X, associate editor; Roscoe Orman, associate editor; Lynn Capehart, art director; Hattie Gossett, copy editor; and Trixie Bullins, editorial assistant. As for the contents, they included a news item titled “Newark” which was unsigned; a news item titled “The Dashiki Project Theatre: New Orleans” which was unsigned; a news item titled “We are the Theater: The Free Southern Theater’s Community Workshop Program” by Val Ferdinand; a poem titled “Entertaining’ Troops!” by Askia Muhammad Toure; a play titled “In the Wine Time” by Ed Bullins; an essay titled “Could He have been Born From the Start to be So Near to Our Hearts?: On Langston Hughes” by Woodie King; a scenario for a short film titled “The Box Office” by Ed Bullins as related by Robert Macbeth; an interview with Robert Macbeth titled “The Black Ritual Theatre: An Interview with Robert Macbeth” by Marvin X; a poem titled “Praise Be the Resurrection of the Dead” by Duncan X; a play titled “The Resurrection of the Dead” by Marvin X; a play titled “The King of Soul or the Devil and Otis Redding” by Ben Caldwell; a review by Charles Gordon of Langston Hughes’s play “Black Nativity” under the direction of Ernie McClintock along with Andrew Cooper as the musical director; and a review by Bill Simmons of Joseph Dolan Tuotti’s play “Big Time Buck White” under the direction of Dick Williams. That issue of Black Theatre also featured an advertisement from Amiri Baraka’s Jihad Productions indicating that it had released books, plays, a film, and a record.

In 1968, an influential journal known as The Drama Review selected Bullins to serve as the guest editor for a special issue. Among the writings in that important issue are a comment on the death of Martin Luther King, Jr. by Ed Bullins; a description in the form of an outline of the San Francisco State Black Communications Project by LeRoi Jones (Amiri Baraka); a play titled “The Uncle Toms” by Herbert Stokes; a play titled “And We Own the Night” by Jimmy Garrett; an essay titled “Motion in the Ocean: Some Political Dimensions of the Free Southern Theater” by John O’Neal; a play titled “The Bronx Is Next” by Sonia Sanchez; a play titled “Take Care of Business” by Marvin X; an essay titled “A Short Statement on Street Theatre” by Ed Bullins; a play titled “The Monster: A One-Act Play” by Ron Milner; a play titled “Home on the Range” and another play titled “Police” by LeRoi Jones (Amiri Baraka); an essay titled “Black Theatre: Present Condition” by Woodie King; a play titled “Johnnas” by Bill Gunn; a play titled “Papa’s Daughter” by Dorothy Ahmad; an essay titled “It’s a Long Way to St. Louis: Notes on the Audience for Black Drama” by Adam David Miller; a play titled “Old Judge Mose Is Dead” by Joseph White; an essay titled “Building a Black Theatre” by Henrietta Harris; a play titled “Clara’s Ole Man” by Ed Bullins; and a report titled “Select Bibliography: Black Plays, Books and Articles Related to Black Theatre Published from 1/1960 to 2/1968” by Ola Jurges. The special issue also included a directory of Black theatres in the USA by Ed Bullins and the following four plays by Ben Caldwell: “Riot Sale or Dollar Psyche Fake Out,” “The Job,” “Top Secret or a Few Million after B.C.,” and “Mission Accomplished.”

With his article in the Drama Review, Neal (1968) accomplished several things. First, Neal became one of the first, if not the first to use the term “Black Arts Movement” to identify this forward motion of a critical mass of Black people around cultural matters. Second, Neal informed us that Amiri Baraka (LeRoi Jones) was one first people to use the term “Black Arts” in a positive sense. Third, Neal identified the following people as having made significant contributions to the development of the Black Arts Movement:
Don L. Lee (Haki Madubuti), Etheridge Knight, Charles Patterson, William Patterson, Clarence Reed, Johnny Moore, Maulana Karenga, Ron Milner, Ed Bullins, Ben Caldwell, Jimmy Stewart, Joe White, Charles Fuller, Aisha Hughes, Carol Freeman, and Jimmy Garrett. In his view, those were some of the people who proceeded to “express the general mood of the Black Arts ideology” (p. 37). Instead of protesting and issuing an appeal to the morality of White people as did Black people in the New Negro Movement, Neal said that the Black people in the Black Arts Movement were primarily concerned about speaking to the psyche of Black people. Neal began his essay by stating that:

The Black Arts Movement is radically opposed to any concept of the artist that alienates him from his community. This movement is the aesthetic and spiritual sister of the Black Power concept. As such, it envisions an art that speaks directly to the needs and aspirations of Black America. In order to perform this task, the Black Arts Movement proposes a radical reordering of the western cultural aesthetic. It proposes a separate symbolism, mythology, critique, and iconology. The Black Arts and the Black Power concept both relate broadly to the Afro-American’s desire for self-determination and nationhood. Both concepts are nationalistic. One is concerned with the relationship between art and politics; the other with the art of politics. (p. 29)

For Neal, it was imperative for Black people in the Black Arts Movement to develop a Black aesthetic. He also argued that, “The Black Arts Movement believes that your ethics and your aesthetics are one” (p. 31).

The second beachfront location for the Black Arts Movement in 1964 was the San Francisco-Oakland Bay Area (hereafter Bay Area). The people in the Bay Area’s Black Arts Movement doubled as avowed political activists as well as cultural workers. Some were involved with RAM as members. Others were involved with CORE or SNCC. Some of the people in RAM included Kenneth Freeman (Mamadou Lumumba), Issac Moore, Zolli Ndele, Bobby Seale (future co-founder of the Black Panther Party), Ernie Allen, and Douglas Allen. They created a base at Merritt College through a student organization known as the Soul Students Advisory Council. Looking back on the Bay Area RAM members, Ahmad (2008) has recalled:

Allen, Freeman, and others founded a journal called Soulbook that published prose and poetry that is best described as left black nationalist in orientation. Freeman, in particular, was highly respected among RAM activists and widely read. He constantly pushed his members to think about black struggle in a global context. The editors of Soulbook also developed ties with old African-American radicals; the most famous was former communist Harry Haywood whose work they published in an early issue. (p. 139)

Ahmad further explained that RAM sought to propagate anti-imperialist ideology through several periodicals.

Two of RAM’s periodicals included Soulbook and Black America. On the one hand, the Bay Area’s RAM produced Soulbook. With a post office box as its mailing address in Berkeley, California, Soulbook made its debut in 1964. On the other hand, East Coast
and Midwest RAM members produced a quarterly titled *Black America*. Ahmad (2008) has reported that his mentor Malcolm X would refer to *Black America* as “my publication” when he gave speeches during his last trip to Africa in 1964. RAM members also contributed to a monthly titled *Liberator*. Ahmad has informed us that, “RAM also popularized its writings through feature writers Roland Snellings and me in the popular nationalist monthly *Liberator* magazine edited by Daniel Watts in New York” (p. 137). According to Ahmad, “RAM was also active in helping LeRoi Jones develop the Black Arts Movement. The Black Arts Movement was originally to be the cultural wing of RAM” (p. 141).

When the first issue of *Soulbook* appeared during the winter of 1964, it was known as *Soulbook 1* as well as volume one and number one. The masthead reported that the editorial board consisted of Donald Freeman, Issac Moore, Ernest Allen, Jr. (Ernie Allen), Carroll Holmes, Kenn M. Freeman, and Bobb Hamilton. Bob Hamilton was also listed as the East Coast representative for the periodical. The subtitle of the periodical said that it was “the quarterly journal of revolutionary afroamerica.” The masthead disclosed that the focus of the periodical was jazz, economics, poetry, and anti-imperialism. The contents of the Winter 1964 issue of *Soulbook* were composed of an essay titled “Black Nationalism on the Right” by Ernie Allen; an essay titled “The Real Reasons Tanganyika and Zanzibar United and became Tanzania” by Kenn M. Freeman; a review titled “On Methods and Leadership” by Mamadou Lumumba; a study of Mark Twain’s anti-“Negro” attitudes titled “Puddn’ Head and the Negro” by Bobb Hamilton; an “Annotated Bibliography on the South African Situation” by Kenn M. Freeman; a review of “The Masters and the Slaves” by Donald Freeman; a review of *Short History of Africa* by Kenn M. Freeman; and an essay titled “Delicate Child” by Marvin E. Jackmon. It also included an untitled poem by George Murray (George Murray Murray); five untitled poems by Carol Freeman; a poem titled “Pure Soul” by W. Best; a poem titled “Message to Brothers” and a poem titled “Sam’s Moment” by Wm. Patterson.

The second issue of *Soulbook* made its appearance in Spring 1965. It was also known as *Soulbook 2* as well volume one and number two. The masthead stated that the editorial board was composed of Donald Freeman, Issac Moore, Ernest Allen, Jr., Carroll Holmes, Kenn M. Freeman, and Bobb Hamilton. It also listed Bobb Hamilton as the New York representative and Bobby Seale as the distribution manager. As was the case with the first issue, the subtitle of the periodical said that it was “the quarterly journal of revolutionary afroamerica.” Once again the masthead related that the focus of the periodical was jazz, economics, poetry, and anti-imperialism. In terms of the contents, the Spring 1965 issue of *Soulbook* included an essay titled “El Hajji Malik Shabazz: Leader, Prophet, Martyr” by Bobb Hamilton; a poem titled “For Malcolm” by Ernie Allen; an essay titled “Did the United Nations Benefit the Congo?” by Kenn M. Freeman; an essay titled “American Savagery and the Future” by Elizabeth Ann Rhodes; an essay titled “That Boy LeRoi” by Langston Hughes; an open letter to the editors of the *New York Post* regarding Langston Hughes titled “A Reply” by Bobb Hamilton; an essay titled “To All the Freedom Loving People of the World” by Charles Simmons; a poem titled “All My Yesterdays” by Sherley A. Williams; a poem titled “Malcolm Exsiccated” by T. R. Horne; a poem titled “Consolidated Edison Blues” by Bobb Hamilton; an untitled poem by Carol Freeman; a poem titled “Restitution” by Wm. Patterson; a poem titled “Soul is” by Marvin E. Jackmon; a poem titled “Tranetracks” by Ernie Allen; an untitled

The issue of *Soulbook* for Winter 1965-1966 was also known as *Soulbook 4* as well volume one and number four. For that issue, the masthead noted that the editorial board consisted of Donald Freeman, Issac Moore, Ernie Allen, Alvin Morrel, Kenn M. Freeman, Carroll Holmes, and Bobb Hamilton. Bobb Hamilton was listed as the New York representative and Bobby Seale as the distribution manager. The masthead disclosed that it was “the quarterly journal of revolutionary afroamerica.” It also stated that the focus of the periodical was on jazz, economics, poetry, and anti-imperialism. The contents of the Winter 1965-1966 of *Soulbook* were composed of an editorial on Vietnam, SNCC, Julian Bond, and Richard Gibson; essays by Alvin Morrell, Jumma Troupe, Frantz Fanon, Harry Haywood, Alfredo Pena, Roland Young, Germain Mba, Bobb Hamilton, and Kenn M. Freeman; a short story by Doug Allen; poetry by W. E. B. Du Bois, Carol Turner, Theodore Herne, Ronald Stone, John Fisher, Harold Foster, Wm. Patterson, Ernie Allen, Gaston Neal, and K. William Kgositile; and a play by Carol Freeman.

The seventh issue of *Soulbook* made its appearance in the Summer-Fall 1967. It was also known as *Soulbook 7* as well as volume two and number three. The masthead stated that the editorial board was composed of Donald Freeman, Issac Moore, Ernie Allen, Leo R. Huey, Ama Ata Aidoo, Alvin Morrell, Kenn M. Freeman, Carroll Holmes, and Bobb Hamilton. It also listed Bobb Hamilton as the New York representative, Le Graham as the Detroit representative, Donald P. Stone as the Atlanta representative, and Harold Robinson as the distribution manager. The subtitle of the periodical said that it was “the quarterly journal of revolutionary afroamerica.” The masthead also stated that the focus of the periodical was on Black music, economics, Black poetry, and anti-imperialism. In terms of the contents, the Summer-Fall 1967 issue of *Soulbook* included an editorial on Vietnam and essays by Weusi, Vo Nguyen Giap, Rolland Snellings (Askia Muhummad), Phan Nhuan, Abdelbaki Hermassi, Ama Ata Aidoo, and Carlos Moore. The contents were also composed of poetry by LeRoi Jones, Ed Bullins, Reggie Lockett, Ernie Allen, Margaret Block, John Fisher, Le Graham, William R. Lamppa, Eunice Sanders, Sonny Williams, Clarence Major, and Ho Chi Minh. That issue was dedicated to the memories of John Coltrane, Ruby Doris Robinson, Che Guevara, Albert Lithuli, Martin Luther King, Jr., and Bobby Hutton.

The issue of *Soulbook* for the Spring-Summer 1969 was also known as *Soulbook 8* as well volume two and number four. The masthead included an editorial board and an administrative board. The editorial board listed Mamadou Lumumba as editor-in-chief, Bobb Hamilton as senior editor, Baba Lumumba as co-founder, Zolili as co-editor, Carol Holmes as associate editor, and Ahmed Alhamisi as associate editor. The administrative board consisted of Malaika Lumumba as administrative superintendent, Olumola Babasuji as distribution manager, Harold Robinson as assistant distribution manager, and Donald Stone as assistant distribution manager. The periodical’s subtitle stated that it was “The Revolutionary Journal of the Black World.” As for the contents, the Spring-Summer 1969 issue of *Soulbook* consisted of an editorial on umoja (unity) and essays by Cheik Anta Diop, Bobb Hamilton, Alfredo Pena, Carlos Moore, and Ama Ata Aidoo. It
also included a folk tale by Colinwood August, a short story by Carol Holmes (Freeman), and poetry by Sonia Sanchez, H. Winfield Tavasti, David Henderson, Bobb Hamilton, Carol Holmes (Freeman), Barbara Simmons, Alicia Johnson, and Ahmed Alhamisi.

The ninth issue of Soulbook made its appearance in the Fall-Winter 1970. It was also known as Soulbook 9 as well as volume three and number one. The masthead of that issue listed the editorial board with the following names: Mamadou Lumumba as editor-in-chief, Bobb Hamilton as senior editor, Baba Lumumba as co-founder, Zolili as co-editor, Carol Holmes as associate editor, and Ahmed Alhamisi as associate editor. The administrative board consisted of Malaika Lumumba as administrative superintendent, Harold Robinson as distribution manager, and Donald Stone as assistant distribution manager. The subtitle of the periodical identified it as “The Revolutionary Journal of the Black World.” The contents of the Fall-Winter 1970 issue of Soulbook were composed of an editorial on 1970 and essays by Mamadou Lumumba, Ama Ata Aidoo, Cheik Anta Diop, Willard T. Pinn, Jr., Eusi Kwayana, Guakro O’Kumanin-Sei, and Carlos Moore. The contents were also composed of poetry by James Vaughn, Alicia L. Johnson, David Henderson, Sonia Sanchez, Arthur Pfister, Arthur Simons, Jr., and Claude Jackson.

Two important CORE members involved with the Black Arts Movement on the West Coast beachfront included Joe Goncalves (Dingane) and Jimmy Garrett (James P. Garrett). After Black Dialogue emerged in 1965, they both contributed to the development of that journal. Before he founded his landmark periodical The Journal of Black Poetry, Goncalves served as the poetry editor of Black Dialogue. Under the leadership of Arthur A. Sheridan, Black Dialogue was first released in the 1965. There is a 1965 copyright notice listed, but there is no month, season, or volume information printed in the issue. The inside cover of the issue states that, “This is the first issue of Black Dialogue; we expect to publish at least once every two months. Black Dialogue is a meeting place for voices of the Black community wherever that community may exist.”

The Special Collections section of the McHenry Library at the University of California, Santa Cruz has a copy of the first issue of Black Dialogue. The computerized card catalog log file of the Special Collections section of the McHenry Library at the University of California, Santa Cruz states that the first issue of Black Dialogue was published in Spring 1965. However, that first issue does not indicate on its cover or internal pages that it was published in Spring 1965. It does indicate that the journal was based in California. For that first issue of Black Dialogue, Arthur A. Sheridan was listed as editor-in-chief and Edward Simms Spriggs as the East Coast editor. The periodical also reported that it had an editorial board consisting of Abdul Kaliem, Joe Howard, Aubrey Labree (Aubrey LaBrie), and Sydneyn Schiffer. As for the contents of the periodical, the first issue featured an editorial titled “In Honor of the Late Malcolm X” by Arthur A. Sheridan; a poem titled “Dark Pastures” by Winston O’Hara; an essay titled “The Revolutionary Theatre” by LeRoi Jones (Amiri Baraka); a poem titled “Friday June 12 1964” by Al Young; an essay titled “Negritude Americaine” by Edward S. Spriggs; a poem titled “Lament for a March Wind” by Mary Berry; an essay titled “The Picket Line” by Arthur Sheridan; a poem titled “Harlem is and Harlem has” by Edward S. Spriggs; a short story titled “The Pipe Dreamer” by Marvin E. Jackmon (Marvin X); an untitled poem by George Murray (George Mason Murray); an essay titled “The Afro-American and International Politics: Some Implications” by Aubrey LaBrie; an essay
titled “The Future of ‘Soul’ in America” by Joe Howard; four untitled Haiku poems by Jon Lovett; a poem titled “In the Low and Wretched Land” by Duke Williams; an essay titled “The San Francisco Movement for Dignity and Freedom” by Bill Bradley; a short story titled “Elenore Goodstein” by Ed Bullins; and an essay titled “Books-in-Review” by Joe Goncalves (Joe Goncalves). The latter was actually a review of Daniel Chu and Elliott Skinner’s *A Glorious Age in Africa* and Agnes McCarthy and Lawrence Reddick’s *Worth Fighting For*.

Beginning with its second issue, *Black Dialogue* began the practice of listing the year and month(s) or season as well as the volume and number. The July-August 1965 issue of *Black Dialogue*, which was volume one and number two, listed an Editorial Board with the following people and positions: Arthur A. Sheridan, editor; Abdul Karim, managing editor; Edward S. Spriggs, New York editor; Aubrey Labrie, political editor; Marvin Jackmon, fiction editor; Charles Akin, Southern California representative; Duke Williams, Southern California representative; Saadat Ahmad, art director; Glen Miles, art director; Jon Lovett, circulation; and Jim Aliniece, circulation. The contents of the July-August 1965 issue of *Black Dialogue* consisted of an editorial on the war in Vietnam, police brutality, and other issues; an essay titled “The South in Perspective” by Bob “Moses” Parris; an article titled “Santo Domingo: U.S. Wins Another Battle” by Abdul Karim; an article titled “The Fantasy and Its Enforcers” by Joe Goncalves (Joe Goncalves); an unsigned article titled “The Duke and the (Pulitzer) Prize” reprinted a periodical known as *The Mallet* and published by the Freedom Now Party; an article titled “Jazz or the Mainstream?” by Charles Akin; an article titled “Africa: Economic Unity” by Joseph Steward; an article titled “Negritude–Black Bomb” by Elongo-Sama; an article titled “European-Latin Myth: An Open Letter from an Indonesian Student” by Gerado Rosal; an article titled “Amen to the Revolutionary Theatre & Black Arts” by Edward S. Spriggs; an article titled “To Make a Poet Black and Bid Him Sing” by Arthur A. Sheridan; an article titled “Black Arts” by LeRoi Jones (Amiri Baraka); a book review titled “Fanon's Wretched Earth” by F. Douglas Lewis; an article titled “Spiral” by Romare Bearden; a short story titled “Mother's Day” by Marvin Jackmon (Marvin X); graphics by Earl Miller; a poem titled “Soul Street . . .” by Ojijiko Oshuntoki; a poem titled “Special Section for the N**as on the Lower Eastside or: Invert the Divisor and Multiply” by Welton Smith; a poem titled “Black Mother” by Welton Smith; a poem titled “The Beast Section” by Welton Smith; a poem titled “Washington” by Welton Smith; a poem titled “Second Genesis” by Welton Smith; a poem titled "Marcia" by Jon Lovett; a poem titled “Marie” by Jon Lovett; a poem titled “Formula for Blue Babies” by De Leon Harrison; a poem titled “Saturday Come Sunday” by De Leon Harrison; a poem titled “The Magnificent X” by Duke Williams; an untitled poem by Oswald L. Jones; a poem titled “Raindrops” by McElroy; a poem titled “Toward the End” by McElroy; a poem titled “LXV” by H. Rainey; a poem titled “The Slave” by Larry Neal; an untitled by Larry Neal; a poem titled “Anthem” by Joseph Bailey; a poem titled “Just Look” by Conyus Calhoun; a poem titled “A Woman’s Love” by Patricia Bullins; a poem titled “Je Suis Las” by Al Young; a poem titled “Topsy Part 2” by Al Young; a poem titled “Tom-Tom” by Alphonse Florian Ngoma translated from the French by Mary Beach and reprinted from *City Lights Journal 2*; a play titled “How Do You Do: A Nonsense Drama” by Ed Bullins; a letter to the editors by Peter Edler; a poem titled “For Eric Dolphy: Feathers” by Bram Dijkstra; a poem titled “Billie” by Bram
Dijkstra; a letter to the editors by Seg. Echeverrid; a letter to the editors by George Olshausen; and some drawings by Glen Myles.

The Winter 1966 issue of *Black Dialogue* was volume one and numbers three and four. The journal reported that its Editorial Board was composed of the following people: Arthur A. Sheridan, editor; Abdul Karim, managing editor; Edward S. Spriggs, New York editor; Joseph Seward, African editor; Aubrey Labrie, political editor; Charles Akin, editorial assistant; De Leon Harrison, editorial assistant; Marvin Jackmon, fiction editor; Joe Goncalves, poetry editor; Duke Williams, Southern California representative; Saadat Ahmad, art director; Jim Aliniece, circulation; and Doug Fox, circulation. The contents of the Winter 1966 issue included an unsigned editorial on the direction of Black literature; an essay titled “Problems of Afro-Americans: An Essay Based on Fanon’s Wretched of the Earth” by Lawrence Neal; an essay titled “Vietnam Eyewitness View from Hanoi” by Harold Supriano; an essay titled “Black Nationalism and Black Nationalists” by Donald Hopkins; an essay titled “Revolutionary Nationalism and the Black Artist” by James T. Stewart; an essay titled “My Queen, I Greet You (An Open Letter to Black Women)” by Eldridge Cleaver; a play titled “Flowers for the Trashman: A Play in One Act” by Marvin Jackmon (Marvin X); photographs of five paintings by Raymond Howell; a poem titled “The Year of the Smoke” by Larry Neal; a poem titled “Professor Whiteside” by Marvin E. Jackmon (Marvin X); a poem titled “hayou the pimp” by E. Spriggs (E. Edward Spriggs); a poem titled “The Ni**a Section” by Welton Smith; a poem titled “Malcolm” by Welton Smith; an untitled poem by Welton Smith; a poem titled “A Folding and Unfolding” by Welton Smith; a poem titled “Longness” by Joe Goncalves; a poem titled “The Instrument” by Joe Goncalves; a poem titled “That To Love Her or Her Eyes” by Joe Goncalves; an untitled poem by Patricia Bullins; a poem titled “The Vultures” by David Diop which was translated by Willy Brown; a poem titled “The Renegade” by David Diop which was translated by Willy Brown; three poems from Africa presented by Joe Goncalves; a poem titled “E. M.” by De Leon Harrison; photographs of four sculptures and two paintings by Sargent Johnson; lyrics and music to a song titled “I’m Telling You Brother” by Kaye Dunham; an essay titled “An Open Letter to the Residents of Watts from an Oakland Calif. High School Student” by H. Labrie; a short story titled “Thomas Jefferson Jones III” by Jane Clay; a short story titled “Love Song for Willa Mae” by C. H. Fuller, Jr.; an essay titled “Like It Was” by Ed Bullins; an essay titled “Claude Brown: A Man-Child” by Abdul Karim; and two cartoons by Ollie Harington.

The Autumn 1966 issue of *Black Dialogue*, which was volume two and number five, reported an Editorial Board with the following names and positions: Abdul Karim, editor; Saadat Ahmad, editorial staff; Jim Aliniece, editorial staff; Charles Akin, editorial staff; Joe Goncalves, editorial staff; Duke Williams, editorial staff; George McNeal, editorial staff; Aubrey LaBrie, editorial staff; Huey LaBrie, editorial staff; Edward S. Spriggs, editorial staff; Marvin Jackmon, editorial staff; T. C. Williams, editorial staff; and E. R. DeMoica, editorial staff; George Holland, circulation; and Ramon Tyson, circulation. The contents of the Autumn 1966 issue of *Black Dialogue* consisted of an unsigned editorial on the death of Matthew Johnson; an article titled “Black Black Power in Urban Ghettoes” by Peter LaBrie; an unsigned article titled “US--Black Nationalism on the Move;” an article titled “How Dat? Watcha Say? Say it Again, Huh?” by Cheebo Batuta (Earl “Vann” Evans); an article titled “Will Success Spoil Aretha Franklin?” by Abdul
Karim; a play titled “Papa’s Daughter or People Cry at Weddings, Sometimes: A Drama in One Act” by Dorothy Ahmad; a short story titled “The Bus Ride” by Jimmy Garrett; a drawing by Eugene White; photographs of seven Black women in “The ‘Fox’ Section;” an article titled “On the Artist as a Black Man” by Marvin Jackmon (Marvin X); a poem titled “The Black Man is Making New Gods” by LeRoi Jones (Amiri Baraka); a poem titled “Part of the Doctrine” by LeRoi Jones; a poem titled “Plenty” by LeRoi Jones; a poem titled “The Occident” by LeRoi Jones; a poem titled “Indians” by LeRoi Jones; a poem titled “A Description of Manhattan Isle” by Norman L. Jacob; a poem titled “The Hermit” by Rudy Bee Graham; a poem titled “we know and still we dance” by E. Simm Spriggs; a poem titled “The Middle Passage and After” by Larry Neal; a poem titled “The Tornado” by Aime Cesaire which was translated by Willie Brown; a poem titled “Burn, Baby, Burn” by Marvin X; a book review of LeRoi Jones’s Home by Curley Duke Williams (C. Duke Williams); photographs of eight drawings by Eugene E. White; and a photograph of a drawing by Majed.

By 1969, the editorial offices of Black Dialogue had moved from California to New York. However, it had staff members on both coasts. Members of the New York Editorial Board included Edward Spriggs, Nikki Giovanni, Jaci Early, Elaine Jones, Sam Anderson, and James Hinton. The editorial staff for the San Francisco/West Coast consisted of one person, namely Joe Goncalves (Dingane). For the Mid-West, the editorial staff consisted of Ahmed Alhamisi and Carolyn Rodgers. The editorial staff for the Southern USA was composed of Julia Fields, Akinshiju, and A. B. Spellman. For Africa, the editorial staff was Ted Joans in the West and K. W. Kgotsitsile at large. The Spring 1969 issue of Black Dialogue, which was volume four and number one, included an editorial by the editors which covered the early history of Black Dialogue and the conflict between the Black Panther Party and US; an interview with Aum titled “Dialogue with Aum” by Edward Spriggs; a poem titled “Dreams” by John Faris; a review titled “And What About Laurie? (A Review of Uptight)” by Nikki Giovanni; a poem titled “All in the Street” by Ameer Baraka; a poem titled “Afro” by Ruth Rambo McClain; a poem titled “dance, like an adjective to you” by Will Halsey; a photograph of a sculpture by Agenor; photographs in “The Fox Section” by Douglas Harris, Rufus Hinton, and Jack Harris (Chaka); a poem titled “Passed on Blues: Homage to a Poet” by Ted Joans; a poem titled “How Long has Trane Been Gone” Jayne Cortez; a poem titled “When Brown is Black” by Keorapetse Kgotsitsile; a short story titled “And They Will Be Astounded” by Melba Kgotsitsile; and a play titled “Judgment” by William Halsey.


In the Fall-Winter 1966 issue of The Journal of Black Poetry, which was the third number and release, Joe Goncalves published the works of poets such as David Diop, Alexander Puskin, Clarence Major, Jon Eckels, Fred Bradford, Dwight Newby, Ed


**Organizational Phase**

Although the life span of the Black Arts Repertory Theatre/School was relatively short, it sowed the seeds for the flowering of other organizations and formations, especially in the Bay Area. Marvin X and Eldridge Cleaver joined forces with a few more people to create a Black cultural center known as the Black House in San Francisco. At the Black House, they sponsored poetry readings and plays on the first floor of the relatively large house. When Amiri Baraka came to the Bay Area to work at San Francisco State College for a brief stint, he quickly got involved with the Black House activities. Emory Douglas, a future Black Panther, worked with Baraka as a set designer on some of his theater projects at the Black House and elsewhere.12

Sadly, the Black House went the route of the Black Arts Repertory Theater/School and only lasted a few months. A crisis emerged at the Black House when Marvin X made a negative comment about Huey P. Newton. The comment led Eldridge Cleaver, Bobby Hutton, and other Black Panthers to evict Marvin X with a few hours notice using the threat of gunplay. Since the Black Panther Party had already been infiltrated by Earl Anthony as an FBI informant, it very well maybe the case that he helped to foster interpersonal conflicts between Marvin X and the other people. The Black House lasted from December 1966 to May 1967.13

The Pan-African Cultural Center was another important organization which developed out of the Black Arts Movement in 1967. The two founders of the Pan-African Cultural Center were Dave “Mudavanha” Patterson and Fritz Pointer. A number of the young people who joined the Black Panther Party were recruited by Huey P. Newton and Bobby Seale from the Pan-African Cultural Center. Bobby Hutton was the first person to join the Black Panther Party after Huey P. Newton and Bobby Seale. Joan Tarika Lewis (Matilaba), was one of the first females, if not the first, to join the Black
Panther Party. Both Hutton and Lewis were involved with the programs of the Pan-African Center (Cromartie, 2008a, 2008b, 2008c, 2008d, 2013a, 2013b, 2013c). 14

Chicago and Detroit were also important locations for the activities of the Black Arts Movement. Chicago was the base of operations for the Organization for Black Culture (OBAC). It was founded in May 1967 with the following purposes: (1) To work toward the goal of bringing to the Black community indigenous art forms which reflect and clarify the Black experience in America; (2) to reflect the richness and depth and variety of Black history and culture; and (3) to provide the Black community with a positive image of itself, its history, its achievements, and its possibilities for creativity. When the organization held its first event in Chicago, the Executive Council consisted of Gerald McWorter, Hoyt W. Fuller, Joseph R. Simpson, Ernest “Duke” McNeil, Jeff R. Donaldson, George R. Ricks, Donald H. Smith, Ronald C. Dunham, Bennett J. Johnson, and Conrad Kent Rivers. At one time or another, some of the people who also became involved with organization were Johari Amini, Nora Brooks Blakely, Sam Greenlee, Nikki Giovanni, Brenetta Howell, Angela Jackson, Mae Jackson, Wadsworth Jarrell, Haki Madhubuti (Don L. Lee), David Moore, Sandra Jackson-Opoku, Sterling Plumpp, Carolyn Rodgers, Sonia Sanchez, William Walker, and Val Gray Ward (“Culture Consciousness,” 1967; Donaldson, 1991).

From its base on Chicago’s South Side, OBAC quickly established a national reputation as a haven for Black people involved with various types of arts and letters. During its first year of existence, OBAC participated in the Festival of Black Arts in Chicago. Before and after the Festival of Black Arts, OBAC developed workshops for writers and visual artists. Hoyt Fuller led a weekly writer’s workshop sponsored by OBAC. The writings of various members were also featured in the organization’s journal Nommo. A leading figure in the visual artists’ workshop was Jeff Donaldson. Members in the visual artists’ workshop planned and created the famous Wall of Respect mural (“Culture Consciousness,” 1967; C. Parks, 1987; Donaldson, 1991; Miller, 2008).

As for Detroit, it was the base of operations for Broadside Press. Founded by Dudley Randall in 1965, Broadside Press played a major role in disseminating the poetic works of Black poets across the country. Between 1967 and 1970, Broadside Press published small chapbooks by more than 100 Black poets. Randall published the poetic works of the well-known poets and the not so well-known poets. Under the leadership of Randall, Broadside Press proceeded to publish some 55 books and 90 broadsides in the form of posters. The types of works he published included one author chapbooks, one author books of poetry, anthologies, children’s books, and literary criticism books as well as the broadside posters (Randall, 1975; Harter, 2008).

In addition to serving as the base of operations for Broadside Press, Detroit was the location of a Black Arts Convention in 1966 and in 1967. At the Black Arts Convention in 1967, there was a panel titled “Black Nationalism” and a panel titled “Literature, Writing and Poetry.” The panelists included Dudley Randall, the publisher of Broadside Press; Francis Ward, a writer for Ebony; and Bobb Hamilton, a poet and editor with Soulbook. The session also featured the reading of some poetry by Amir Rashid and Charles Freeman. The moderator of the session was Robena Nelson. The conference was also attended by Don L. Lee (Haki Madhubuti), David Llorens, Joyce Whitsitt, Harold G. Lawrence, Alfred “Slick” Campbell, Jesse Watts, Elton Hill, Gloria Davis, Le Graham, and Betty Shabazz. Following the panel on Black nationalism, Dudley Randall
presented Betty Shabazz with an anthology commemorating Malcolm X. Dudley Randall was also the catalyst behind an effort to form the Black Arts Alliance (Graham, 1967).

**Stable Phase**

Doubtlessly, the monthly periodical *Negro Digest*, which later changed its name to *Black World*, played a major role in bringing stability and continuity to the Black Arts Movement. Its wide circulation allowed Black people from around the country to participate on a mass level in this important intellectual social force. Edited by Hoyt Fuller, *Negro Digest/Black World* helped to stabilize the situation by making people aware of activities around the country and abroad related to the Black Arts Movement. People were able to get information about conferences and other events. They were also able to exchange ideas by submitting their work to Fuller to be considered for publication. Since the periodical was distributed by Johnson Publishing Company, it could be found next to *Jet* and *Ebony* at 7-Eleven Stores across the country.

People involved with the Black Arts Movement sought to have continuity by having intergenerational social interaction based on mentoring. A case in point is the OBAC in Chicago. Members of the OBAC like Haki Maduhubuti reached out to people like Gwendolyn Brooks and were showered with love and affection in the form of mentoring. At a talk given at the site of her grave, Madhubuti (2009) expressed that he deeply appreciated the mentoring given to him by Gwendolyn Brooks. In New York, Muhammad Ahmad (Max Stanford) was showered with love and affection in the form of mentoring from Malcolm X and Queen Mother Audley Moore. Ahmad (2008) has written about his deep appreciation of the mentoring he received from Malcolm X and Queen Mother Audley Moore. On the West Coast, Dave “Mudavanha” Patterson showered Fritz Pointer with love and affection based on mentoring. Pointer has said that he deeply appreciated the manner in which Patterson served as a dear mentor to him. In turn, Fritz Pointer became a mentor to his mentee Joan Tarika Lewis, a childhood friend of his sister Bonnie Pointer. Those social relationships centered on mentoring helped institutions to develop and prosper (Cromartie, 2008a, 2008b, 2011a, 2011b).  

**External Development**

For King (1956), external development of a social movement pertains to “what happens to the movement rather than what happens to the society as a consequence of the existence and activities of the movement” (p. 49). When considering external development, King has reminded us to consider the social movement itself and the changes which the social movement strives to bring about. He has also informed us that social movements “have lost ground or even failed to survive while one or more of their goals has been widely looked upon with favor” (p. 50). External development consists of these three phases: innovation, selection, and integration.
Innovation

According to King (1956), “innovations” involve the acts or processes of introducing new elements into a society. An innovation is also “any thought, behavior, or thing that is new because it is qualitatively different from existing forms” (p. 50). Within the Black Arts Movement, a number of innovations surfaced. One innovation pertained to material culture in the form of clothing. The Black Arts Movement spawned the wearing of African shirts (dashikis) by Black males and African dresses by Black females. Across the country, many people in the Black masses imitated the style of dress they saw worn by people connected to the Black Arts Movement.

A second innovation pertained to nonmaterial culture in the form of ideas and norms. For instance, the US organization, a Black Arts Movement group based in Los Angeles, developed a holiday known as Kwanzaa. The holiday made its first appearance in 1966 and the celebration was restricted to the self-proclaimed cultural nationalists of the US organization. By 2013, the holiday had become a widespread phenomenon in homes, churches, schools, and community centers across the country. In 2002, the U.S. Postal Service released a Kwanzaa stamp and there were national and communal activities organized around that event. During December 2007, there was even a Kwanzaa event in Oakland’s DeFremery Park (Bobby Hutton Park), which was attended by former members of the US organization and the Black Panther Party.

A third innovation was popularization of poetry readings among Black people. In New York City and elsewhere, a critical mass of Black people began to gather and listen to Black poets read and recite their poetry. Among young Black people, The Last Poets became superstars. When The Last Poets and others like Amiri Baraka would perform, they would draw relatively large audiences. A fourth innovation was the use of poetry ensembles with music. Langston Hughes recorded his poetry with Charles Mingus on an album titled the Weary Blues. During the Black Arts Movement, the poets Gil Scott-Heron and Wanda Robinson continued the Langston Hughes tradition of being a single poet recording and performing poetry to music. However, the Black Arts Movement also saw a new innovative development when groups of poets began to perform a single poem together to music. Some of the poems were accompanied only by percussion instruments. Others were accompanied by jazz, rhythm and blues, or funk music. Such groups included The Last Poets of the New York area, Watts Prophets of the Los Angeles area, and the Black Voices of the Los Angeles area.

A fifth innovation was the use of conferences to bring together like-minded people to talk about issues of concern. For instance, there was a Black Arts Convention held in Detroit in 1966 and 1967. From June 24, 1966 to June 26, 1966, Black people gathered in Detroit to attend a Black Arts Convention. The event was held at Central United Church of Christ. It featured panel workshops on literature, music, art, drama, education, religion, Black history, and politics. Some 300 people attended the conference over the three days. They came from cities and towns across the country. Among the conferees were Charles P. Howard, Max Stanford, Dudley Randall, Larry P. Neal, Rhobena Nelson, Oliver LaGrone, Bobb Hamilton, Harold Foster, Harold Lawrence, K. William Kgositsile, Jackie Wilson, David Rambeau, Denise Nicholas, Sylvia King, Grace Boggs, John Oliver Killens, Betty Shabazz, and Val Gray. When he gave his presentation at one
of the panel workshops, Randall urged the conferees to develop Black controlled media and publishing houses. During another panel workshop, Denise Nicholas, an actress, encouraged Black theatres to come together and pool their resources. Larry P. Neal, the writer echoed her sentiments and called for the formation of a national Black theater initiative that would pool resources in Detroit, New York, and elsewhere (Randall, 1966).

When the second Black Arts Convention took place in Detroit in 1967, there were a number of panel workshops. One was titled “Black Nationalism.” A second was titled “Literature, Writing and Poetry.” For the panel workshop on literature, writing, and poetry, the panelists included Dudley Randall, the publisher of Broadside Press; Francis Ward, a writer for Ebony; and Bobb Hamilton, a poet and editor with Soulbook. The panel workshop also featured the reading of some poetry by Amir Rashid and Charles Freeman. The moderator of the panel workshop was Robena Nelson. The conference was also attended by Don L. Lee (Haki Madhubuti), David Llorens, Joyce Whitsitt, Harold G. Lawrence, Alfred “Slick” Campell, Jesse Watts, Elton Hill, Gloria Davis, Le Graham, and Betty Shabazz. Following the panel workshop on Black nationalism, Dudley Randall presented Betty Shabazz with an anthology commemorating Malcolm X. Dudley Randall was also the catalyst behind an effort to form the Black Arts Alliance (Graham, 1967).

Selection

King (1956) defined “selection” as the processes of both the social acceptance and the rejection of innovations. As the Black Arts Movement unfolded, there was an issue regarding free speech and the use of language. People in the Black Arts Movement departed from the earlier Harlem Renaissance Movement and New Negro Movement in the use of language. Wherein members of the Harlem Renaissance and New Negro Movement rarely used the N-word or profanity, things changed with the Black Arts Movement. One was more likely to see the N-word in a poem during the Black Arts Movement than during the Harlem Renaissance and New Negro Movement. Nevertheless, the N-word was used selectively and to illustrate the status of Black people in the existing social stratification system. For example, The Last Poets rarely used the N-Word in their first seven albums. As a whole, the Black Arts Movement was a paragon of that which Du Bois (1897b, 1903) called true self-consciousness.

Nevertheless, there were major gaps in the merger of theory and practice with regard to language which did not reflect true self-consciousness. Eldridge Cleaver, the aforementioned co-founder of the Black House and a leading member of the Black Panther Party, gave an infamous speech in Harlem wherein he used some rather offensive language towards Fannie Lou Hamer, a titan of the Civil Rights Movement. Marvin X has recalled the speech with the following account:

Mr. Soul on Ice came to Harlem’s Mount Morris Park (now Marcus Garvey Park). He gave a disgusting, degenerate speech in the presence of sister Fannie Lou Hamer, the revolutionary sister from the Mississippi freedom struggle. He rapped that “political power grew out of the lips of a pu**y.” Turning to sister Fannie Lou, he said, “I would kiss her pu**y anytime.” After hearing that, I
didn’t wait for him to conclude, but eased my way through the crowd and headed down Lennox Ave. Harlem was famous for its critical acumen and had a tradition of throwing tomatoes at pitiful suckers—I wish I’d had some ripe ones. (pp. 172-173)

According to Marvin X, “I would not see Eldridge again until he returned from exile in 1977” (p. 173).

Huey P. Newton (1971) has explained that Eldridge Cleaver played a major role in the use of profane language in public by Black Panthers. He has explained that:

We went through a free speech movement in the Party, which was unnecessary, and only further isolated us from the Black community. We had all sorts of profanity in our paper and every other word which dropped from our lips was profane. This did not happen before I was jailed because I would not stand for it, but Eldridge’s influence brought it about. I do not blame him altogether; I blame the Party because the Party accepted it. (p. 52)

For Newton, his organization “defected from the community long before Eldridge defected from the Party” (p. 51). He reasoned that language played a part in alienating the Black Panther Party from the Black community, including Black churches which hosted many of the organization’s free breakfast for children programs across the country.

Integration

For King (1956), “integration,” or the integrative phase, refers to an item or some aspect which is “tied in closely with other cultural elements and contributes to the existence or operation of the society” (p. 56). The Nguzo Saba is an integrated item which is connected to other cultural elements and contributes to the existence or operation of society. It is based upon the following seven principles: Umoja; Kujichagulia; Ujima; Ujamaa; Nia; Kuumba; and Imani. The Nguzo Saba is a part of the US organization’s ideology of Kawaida, which has been described by Maulana Karenga as a communitarian African philosophy (Karenga, 2002).

As the founder of Kwanzaa, Karenga (2002) has defined each of the seven principles of the Nguzo Saba. The first principle is Umoja, or unity, and it means to “strive for and maintain unity in the family, community, nation and race” (p. 7). The second principle is Kujichagulia, or self-determination, and it means to “define ourselves, create for ourselves and speak for ourselves” (p. 7). The third principle is Ujima, or collective work and responsibility, and it means to “build and maintain our community together and make our brother’s and sister’s problems our problems and to solve them together” (p. 7). The fourth principle is Ujamaa, or cooperative economics, and it means to “build and maintain our own stores, shops and other businesses and to profit from them together” (p. 7). The fifth principle is Nia, or purpose, and it means to “make our collective vocation the building and developing of our community in order to restore our people to their traditional greatness” (p. 7). The sixth principle is Kuumba, or creativity, and it means to “do always as much as we can, in the way we can, in order to leave our community
more beautiful and beneficial than we inherited it” (p. 8). The seventh principle is Imani, or faith, and it means to “believe with all our hearts in our people, our parents, our teachers, our leaders and the righteousness and victory of our struggle” (p. 8).

As many Black people attempt to rebuild their families in the wake of the crack cocaine epidemic, they have often turned to values and norms spelled out in the Nguzo Saba. Some of them encounter the Nguzo Saba for the first time at a Kwanzaa and come away inspired to use it in their families and community. According to Karenga (2002), that is exactly what he had in mind when he first developed the holiday. He has informed us that he wanted to help build strong Black families and counter the White supremacy and commercialism perpetuated by Christmas.

**Hip Hop Movement as a Social Movement**

**Goals**

The Hip Hop Movement developed some key four goals. One goal was to promote self-expression among individuals. A second goal was to provide a forum for people to engage people to engage in rapping (MCing), DJing, break dancing (B-Boying/B-Girling), graffiti/aerosol art, and style of dressing. A third goal was to develop institutions for the benefit of individuals. A fourth goal was to function as an expressive social force in the belly of the beast.

**Ideology**

Similarly to Black Arts Movement, the ideology of the Hip Hop Movement has reflected two main aspects as a set of ideas and norms. However, the ideology of the Hip Hop Movement has been a bastion and citadel of racial self-debasement and perpetuating the existing social stratification system. The Hip Hop Movement has also been no threat to Wall Street and Madison Avenue. In fact, Wall Street and Madison Avenue have embraced the Hip Hop Movement as a money maker in the USA and abroad.²¹

Whereas many rappers have started out by developing Black firms to create their own compact discs (CDs), they often rush to take contracts with White firms connected with White capitalists. To shield themselves from public criticism about the resulting products, White firms oftentimes will permit rappers to have a label with a Black face out front. Then, those White firms are in a position to say they did not make the CDs many people find offensive, especially those that advocate Black people killing other Black people, advocate the use of the N-word, and the use of the B-word. Instead, those White firms say that just distribute the CDs. Because the CDs typically have little material which denigrates Wall Street and Madison Avenue, White firms have embraced distribution deals with Black labels which include Death Row Records on the West Coast, Def Jam on the East Coast, Bad Boy Entertainment on the East Coast, Roc Nation on the East Coast, No Limit Records in the South, Luke Records in the South, and Rap-A-Lot Records in the South.²²
**Organization and Status System**

As was the case with the Black Arts Movement, the Hip Hop Movement has been driven by its members and the social conditions they have faced. Personnel and functionaries have also been involved with the Hip Hop Movement. Personnel have had sporadic participation and no specialized roles. Functionaries have had persistent participation and specialized roles. Like the Black Arts Movement, the Hip Hop Movement saw the emergence of these three types of functionaries: (1) the leader, (2) the bureaucrat, and (3) the agitator.

Within the Hip Hop Movement, the leaders have played the role of founders or successors to the founders. Behind the distinctive policies and objectives that could be found in the Hip Hop Movement, there were leaders serving as catalysts. With their high or low status, bureaucrats handled the administrative activities. High status bureaucrats function as the policy-makers and have been responsible for efficiently operating the internal machinery. Low status bureaucrats function as the implementers of policy and major decisions from above. They handle the responsibility for dealing with routine paperwork and other matters. The agitators play the role of liaisons between the Hip Hop Movement and the outside world. The promotion and proselytizing of the Hip Hop Movement are handled by the agitators as their chief function. The agitators, in the role of promoters, further the goals of the Hip Hop Movement with publicity tactics, propaganda tactics, lobbying tactics, legal sanctions tactics, etc. As proselytizers, the agitators function as missionaries with the objective of converting outsiders into members.

**Tactics**

Like the Black Arts Movement, the Hip Hop Movement has sought to bring as many members into the fold as possible. The Hip Movement made a conscious decision to make the transition into a mass movement. Unlike the Black Arts Movement, it has not faced the brunt of a formidable enemy in the form of COINTELPRO (Counterintelligence Program), which was developed by the FBI (Federal Bureau of Intelligence). Because of their political positions or lack thereof, the leaders and followers have not been persecuted by COINTELPRO and faced imprisonment as political prisoners as in the case of the Black Arts Movement. However, people in the Hip Hop Movement have been involved with the possession of illegal drugs and illegal weapons which have caused them to be monitored by undercover FBI agents, agent provocateurs, and informants. Doubtlessly, the actions of the undercover FBI agents, agent provocateurs, and informants have disrupted their normal flow of operations. Many people in the Hip Hop Movement have been sent to prison because of drug and weapons charges developed by the undercover FBI agents, agent provocateurs, and informants.

**Internal Development**

With regard to internal development, the Hip Hop Movement evolved in response to the need for self-expression about certain social conditions. Those social conditions
included poverty, drug addiction, police brutality, and racial discrimination in the criminal justice system. Other social conditions faced by the Hip Hop Movement were heterogeneity, cultural confusion, and mass communication. The Hip Hop Movement has developed different types of artistic modes as it sought to respond to those conditions. Like the Black Arts Movement, the Hip Hop Movement has passed through these three major phases: the incipient phase, organizational phase, and stable phase.

**Incipient Phase**

Within the Hip Hop Movement, some of the key pioneers were Clive “Kool Herc” Campbell, Donald “Afrika Bambaattaa” Donovan, Joseph “Grandmaster Flash” Saddler, Keith “Cowboy” Wiggins, Sylvia Robinson, Russell Simmons, and the Sugar Hill Gang. In regard to Clive “Kool Herc” Campbell, Donald “Afrika Bambaattaa” Donovan, and Joseph “Grandmaster Flash” Saddler, George (2004) has related that “these three are the founding fathers of hip-hop music” (p. 45). George also referred to the three as the “progenitors” of Hip Hop (p. 45). Like George, Hebridge (2004) has identified Clive “Kool Herc” Campbell, Donald “Afrika Bambaattaa” Donovan, and Joseph “Grandmaster Flash” Saddler as three major figures in the beginning of Hip Hop. If George and Hebridge are correct, the key fountainheads and pioneers of the Hip Hop Movement are Clive “Kool Herc” Campbell, Donald “Afrika Bambaattaa” Donovan, and Joseph “Grandmaster Flash” Saddler.

When the Hip Hop Movement emerged as a social movement in the early 1970s, perhaps no one was more important than Clive “Kool Herc” Campbell. On his website, Campbell has informed us that the Hip Movement began on August 11, 1973 in the Bronx, New York. According to Campbell, the Hip Hop Movement started at a party held in a recreation room of a public housing project, located at 1520 Sedgwick Avenue. Campbell and his sister Cindy held a back to school party wherein they charged an admissions fee of 50 cents for males and 25 cents for females. He has argued that this first Hip Hop party went on to change the world (Campbell & Campbell, 2013).

In the view of Campbell, the Hip Hop Movement proceeded to provide a gathering of peers and an innovation in the manner in which music was played and listened to. For the role that he played in 1973 and later, Campbell has been credited as a key fountainhead and founding father of the movement. He has called his sister Cindy the first lady of the movement for the role she played as the co-host of the original parties on Sedgwick Avenue. Campbell’s website has stated that the Hip Hop Movement possesses these five elements: (1) DJing; (2) rapping/MCing; (3) break dancing or B-Boying/B-Girling; (4) graffiti/aerosol art; and (5) style of dressing. Between 1973 and 1993, Campbell became a legendary figure in the emerging movement. He became famous for blasting his break music on extremely loud speakers called Herculoids (Campbell & Campbell, 2013).

The following year, 1974, Afrika Bambaattaa (Donald Donovan) founded the Zulu Nation as an organization in the emerging Hip Hop Movement. The charismatic Bambaattaa was able to attract a number of young people to his organization. His official website has identified Afrika Bambaattaa as one of the three main originators of break-beat deejaying. It has also identified him as the “Grandfather” and “Godfather” of the movement as well as “The Father of The Electro Funk Sound.” The website credits
Bambaataa with co-opting a street gang known as the Black Spades into his culture-oriented organization. Between 1980 and the year 2000, Bambaataa recorded frequently and helped to spread the word about the movement (Universal Zulu Nation, 2013).

Like Clive “Kool Herc” Campbell, Joseph “Grandmaster Flash” Saddler has roots in the Bronx, New York. The official website of Saddler has identified him as one of the founding fathers of the Hip Hop Movement. It also detailed how Saddler got his start as a deejay spinning records at neighborhood block parties. According to his website, Saddler was the first deejay to physically lay his hands on a vinyl record and make it go in a backward, forward, or counterclockwise motion. Until then, deejays would handle a record on its edges, place the arm down, and play the vinyl record. Saddler created an innovation in the form of a compass by marking up the record with crayon, a fluorescent pen, a grease pencil. In 1978, he joined together with several other Black men to create Grandmaster Flash and the Furious Five (“Biography,” 2014; Grandmaster Flash & Ritz, 2008).

Keith “Cowboy” Wiggins, a member of the Furious Five, has been credited with coining the term Hip Hop. During an interview with various members of Grandmaster Flash and the Furious Five, Quan (2005) was informed about some of the contributions of Wiggins to the Hip Hop Movement. For example, Grandmaster Mele Mel and Kid Creole both informed Quan that the term Hip Hop was coined by Wiggins. In response to a question regarding whether Wonder Mike borrowed part of the routine of Wiggins and used it on Rapper’s Delight, Grandmaster Mele Mel stated:

> Without a doubt. This kid named Kokomo was going to the army & Cowboy was messin’ with him—teasing him with the marching Hip Hop rhythm Hip/Hop/Hip/Hop; and he just took it on from there and kept goin’ with it. It just took on a life of its own . . . . (Quoted by Quan, p. 2).

Grandmaster Mele Mel also told Quan that Wiggins was the first MC (emcee). He said, “Yeah, it wasn’t called Emceeing back then, but he was the first to get on Flash’s mic and do the crowd response—without a doubt” (Quoted by Quan, p. 2).

In the interview, Kid Creole made similar remarks to Quan about Wiggins. With regard to the term Hip Hop, Kid Creole related:

> On that that term Hip Hop. A friend of ours named Billy was about to go to the Army. I think this was ’75. We had a party at the Black Door over on Boston Rd and 170th St. That was one of the first places that my brother, myself and Cowboy played as the 3 Emcees along with Flash. This was Billy’s last weekend before shipping out, and Cowboy was on the mic playing around doing that Army cadence: Hip/Hop/Hip/Hop. But he wasn’t doing it to music at the time, and the Disco crowd referred to us as those “Hip Hoppers,” but they used it as a derogatory term. But Cowboy was the first one I heard do that to music, as part of his crowd response. (Quoted in Quan, p. 11)

Quan probed Kid Creole to go deeper into the issue by asking him the following question: “So he did something similar to what Wonder Mike is doing at the beginning of Rapper’s Delight?” In his response to that question, Kid Creole remarked: “Except for
all that bang bang boogie sh*t, the intro to Rapper’s Delight is what Cowboy used to say word for word. Except for that up jump the boogie sh*t. Up jump the boogie was some disco sh*t” (p. 11).

Quan (2005) continued the part of his interview Kid Creole by asking him for clarification about the first rappers. He presented the following statement and question to Kid Creole: “When I ask some of the first Emcees who the first person was that they saw Emcee they usually say either you, Mel or Cowboy. But how many times they say just Cowboy. Where as far as you know did he get it from?” Kid Creole proceeded to clarify the issue by giving Quan this statement:

Well Cowboy never really wrote rhymes. He would say li’l nursery rhymes like everybody else. The first person that I heard say a rhyme . . . and not just a phrase, like at Herc’s parties where Clark Kent and Timmy Tim would say “giving you more that what you what paid at the door, on down to the A.M.” The first person that I heard say a rhyme that wasn’t a nursery rhyme was my brother Mel. He was the very first person that I saw say a rhyme about themselves. Not a poem, a bonafide rhyme. That’s what motivated me to rhyme, ’cause Mel was on the mic and he was getting girls. I couldn’t just stand on the sidelines. Cowboy was a guy who had no fear of just getting in front of a crowd, and asking them to do what he wanted. It was a time when people in Hip Hop weren’t doing that. The only other person who did it to any degree on purpose was D.J. Hollywood. (Quoted in Quan, p. 11)

Thus, Grandmaster Mele Mel and Kid Creole made it very clear that Wiggins, in their view, coined the term Hip Hop. They also made it clear that Wiggins was one of the first rappers along with Mele Mel, Kid Creole, and D.J. Hollywood.

**Organizational Phase**

In comparison to other Black social movements, the Hip Hop Movement has had a relatively long life span. During its life span, the Hip Hop Movement has been sustained by emergence of a number of organizations and firms. A very important organization includes the Zulu Nation. Important firms in the Hip Hop Movement include Sugar Hill Records as well as the aforementioned Death Row Records, Def Jam, Bad Boy Entertainment, Roc Nation, No Limit Records, Luke Records, Rap-A-Lot Records, Rhyme Syndicate, Ruthless Records, and Priority Records.

**Stable Phase**

After the emergence of the Hip Hop Movement, it became stabilized through the development of record labels, magazines, and performance venues. The first self-proclaimed Hip Hop record label to put out a record was Sylvia Robinson’s Sugar Hill Records. That occurred in 1979 when her label released the Sugar Hill Gang’s Rapper’s Delight. According to George (1998), the excitement raised by the Sugar Hill Gang’s Rapper’s Delight “swept the country and eventually the world” (p. 29). Among the magazines promoting the Hip Hop Movement were *Serious Hip Hop, The Source, Vibe,*

**External Development**

Like the Black Arts Movement, the Hip Hop Movement has experienced the social phenomenon of external development. The Hip Hop Movement has undergone the innovation phase. It has gone through the selection phase. In addition, the Hip Hop Movement has gone through the integration phase. On the one hand, some of the goals of the Hip Hop Movement have lost ground. On the other hand, the Hip Hop Movement has had some goals that have been looked upon in a favorable light by the larger society.

**Innovation**

The Hip Hop Movement has led to the development of a number of innovations. One innovation pertains to material culture in the form of clothing. Whereas the Black Arts Movement spawned the wearing of African shirts (dashikis) by Black males and African dresses by Black females, the Hip Hop Movement has led to both men and women wearing sagging jeans. A widespread norm among people in the Hip Hop Movement has been to wear jeans and other pants far below the waist. It has not been uncommon to see young people walking around with their underwear exposed for all to see, including much younger children. Some towns and cities have passed ordinances outlawing the practice of sagging (Kitwana, 2002; Koppel, 2007).

A second innovation deals with material culture in the form of “tricking out” cars with exotic paint jobs and big tires. Some youth with cars paint them in exotic candy apple colors. They also place on their cars oversized tires referred to as “dubs.” For the inside of the cars, they purchase and install speakers that can boom out to the streets the latest Hip Hop songs—sometimes to the dismay of other people (Falcon, 2015).

A third innovation involves nonmaterial culture in the form of ideas and norms. Led by Clyde “Kool Herc” Campbell and Joseph “Grandmaster Flash” Saddler, the Hip Hop Movement proceeded to change the way music was made. The music industry saw the development of “scratching” and other deejay techniques. Like disco music, the deejays were at the center of the movement rather than the periphery. Instead of live musicians receiving the fanfare, the deejays became the stars (Campbell & Campbell, 2013).

A fourth innovation pertains to nonmaterial culture in the form of ideas and norms. Both men and women in the Hip Hop Movement have adopted the practice of wearing tattoos. It has not been uncommon for some men and women to have a whole arm or leg covered with tattoos. Many people in the Hip Hop Movement are following the examples of people like Beyonce, Eve, 50 Cent, LL Cool J, Jay-Z, Lil’ Wayne, Rihanna,
and Tupac Shakur by wearing tattoos on the face, neck, arms, arms, legs, and upper torso (Flowers, 2012; Rathod, 2014).

Selection

Like other Black social movements before it, the Hip Hop Movement has had to deal with the processes related to social acceptance and the rejection of innovations. People inside of the Hip Hop Movement have pioneered clothing styles, tattoo adornment, and flashy jewelry adornment. Some people have accepted the new styles with open arms. Many of those engaging in the social phenomena of the new clothing, tattoo adornment fall into the cohort of people born between 1965 and 1985. People born before 1965 in the Baby Boomers cohort have sometimes criticized the new styles as a backwards development.

Inside of the Hip Hop Movement, some people have expressed concern about the fashion trends. Paniccioli (2002), who Powell (2002) has called the Gordon Parks of the Hip Hop Movement, issued the following statement in his book:

Hip Hop is a powerful medium, but I have to drop this in the book, and it’s gonna upset some people: just as reggae prophet-poets like Bob Marley and Peter Tosh were replaced with a prostitute music called dancehall—which is all about sexing girls and getting high and shaking your butt and has no message—the same thing has happened to hiphop. The shift is what I call the “second colonization.” The second colonization is trying to eliminate our efforts to reach back to our history, to the pioneers of hiphop, such as Afrika Bambaattaa and Kool Herc. As a result, hiphop has gone from Public Enemy and conscious brothers like Chubb Rock to Nelly and bling-bling. And “my watch is bigger than yours.” “My Bentley is newer than yours.” “Oh, you only got this Benz and I got this bigger Benz,” and, “I bet you don’t even have leather seats.” (p. 196)

He continued:

. . . the whorehouses now are the radio stations and the music videos. Instead of going to a strip club and seeing a girl with her butt hanging out, now you go and turn on the television and all the camera angles are from the waist down. We’re at a stage where the music itself—not all of it but a lot of it—has fallen into a den of iniquity. It is very garish and almost a joke. And it’s being pimped and prostituted by a variety of folks. You know the most incredible act ever to come out of hiphop? Not Rakim, not Public Enemy—it was Arrested Development. Not because of their work. Because of their name. That is rap music today: Arrested Development. (pp. 196-197)

The observations of Paniccioli reflect the attitudes of many people inside and outside of the Hip Hop Movement. Like Paniccioli, they are concerned that Hip Hop artists readily prostitute themselves as they strive for more and more dollars from Wall Street and Madison Avenue.25
A key innovation from the Hip Hop Movement, which has found widespread acceptance among the Baby Boomer Generation, is the civic engagement initiatives pioneered by Russell Simmons, Shawn “Puffy” Coombs, and Clifford Joseph “T. I.” Harris, Jr. Russell Simmons, a native of New York, was a catalyst behind the Rap the Vote initiative in 2000. Under his leadership, some arena-sized gatherings were held in a pep rally type of environment. To enter the gathering, people had to register to vote or already be registered. The goal of Simmons was to get people to value voting and to stimulate a discussion of the issues and activism (Nelson, 2005; Simmons & Nelson, 2001; Kitwana, 2002).

Coombs, a native of New York, was a catalyst behind the Vote or Die initiative in 2004. Under his leadership, Citizen Change was formed to encourage voter participation. Coombs used “Vote or Die!” as a provocative slogan on tee-shirts and had celebrities wear them. Coombs worked with Rev. Lennox Yearwood, Jr. of the Hip-Hop Caucus to launch the voter registration project (Nelson, 2005; The 305, 2008). Clifford Joseph “T.I.” Harris, Jr., a native of Atlanta, Georgia, was a catalyst behind the Respect My Vote Initiative in 2008. In conjunction with Rev. Lennox Yearwood of the Hip-Hop Caucus, Harris launched a voter registration drive in some 17 cities in various parts of the USA. To his credit, Harris repeated his voter registration efforts during the 2010 midterm elections (“The 305,” 2008; Manzella, 2008; Winslow, 2010).

Integration

Two integrated items that have connected with other cultural elements and contributed to the existence or operation of society are the Stop the Violence Initiative and the Vote or Die Initiative. The Stop the Violence Initiative emerged in response to criticism by C. Dolores Tucker. As George has pointed out, Tucker “attacked white executives whom she viewed as irresponsible or insensitive because they promoted rap music” (p. 72). Tucker was alarmed that rap music of the Hip Hop Movement was featuring the glorification of Black people killing Black people, drug selling, and referring to females as b**ches and whores, and men as “n**gers.

As a response to the public criticism of C. Dolores Tucker, people like the writer Nelson George, Jive Records music executive Ann Carli, and Jive Records music executive Barry Weiss united with Hip Hop artists to release the CD titled Self-Destruction. The CD was released in 1989 and produced by KRS-One. Dyson (2004) has noted that the message in Self-Destruction “insists that violence predates rap and speaks against escalating black-on-black crime, which erodes the social and communal fabric of already debased black inner cities across America” (p. 63). According to Dyson, Self-Destruction was a top-selling CD. George (2005) has related that rapper Kool Moe Dee later “joined forces with a new generation of rap industry figures in working to mount a well-meaning, though aborted Stop the Violence II record and campaign” (p. 200).

In September 2013, the rapper and actor known as Common spoke out against the rampant violence in Chicago, his hometown. He called for a peace summit led by him and another Chicago rapper known as Chief Keef. Common told the Associated Press that a peace summit was a necessary first step to stop the violent crimes in Chicago. For Common, there is certainly a need for more peace summits around the country and actions to get at the root cause of Black-on-Black violence (Kyles, 2013).
During his talk with the Associated Press, Common posed that rap music was not the root cause of the violence in Chicago, but acknowledged that rap music impacts the mind of many young people. He was quoted as follows: “To decide to take someone’s life, I don’t think they let a rap song determine that” (Quoted in Kyles, 2013, p. 1). However, Common said that the youth are “influenced by that energy and take it the wrong way” (Quoted in Kyles, 2013, p. 1). Common has argued that more educational programs for young people could help turn around the violence young people perpetuate. He also took the position that Hip Hop artists need to play a greater role in making positive change happen. Towards that end, Common has developed a Common Ground Foundation to help youth with a summer camp and mentoring program for public school youth in Chicago (Kyles, 2013).

As for the Vote or Die initiative, it was launched by Shawn “Puffy” Combs in 2004. The civic engagement effort of Combs was preceded in the year 2000 by Russell Simmons with his Rap the Vote Initiative. It was also followed by rapper T. I. and his Respect My Vote Initiative in 2008 and 2010. Like the other two initiatives, Combs used his to encourage young people in and outside of the Hip Hop Movement to register and vote. The data show that the voter participation rate for young people increased in 2000, 2004, and 2008. Thus, people in the Hip Hop Movement can make a significant impact in the outcomes of elections and help to determine the destiny of the USA (Nelson, 2005; “The 305,” 2008; Manzella, 2008; Winslow, 2010; Perry, 2010).

**Implications of the Black Arts Movement and the Hip Hop Movement as Social Movements**

The Black Arts Movement and the Hip Hop Movement shook up the social world as social forces. Their influences reached far beyond their points of origin among Black people in the USA. The significant consequences of the two movements can be found in Africa, Asia, Europe, and throughout the Americas. However, the Black Arts Movement was far more progressive than the Hip Hop Movement. Basically, the Hip Hop Movement represents a regression instead of a progression.

The Black Arts Movement was a social force with a primary aim of negating negative influences and creating positive images. It also called for a radical reconstruction of the economic system and political system as the key to combating negative stereotypes about Black people. In fact, some of the people involved with Black Arts Movement called for a total transformation of the economic system and political system of the USA in the form of a revolution.

In contrast, the Hip Hop Movement has been a social force without the primary aim of negating negative influences and creating positive images. Instead, it has perpetuated negative stereotypes about Black people. Nevertheless, there have been at least three instances wherein the Hip Hop Movement has produced some positive initiatives. One was the Rap the Vote Initiative. A second was the Vote or Die Initiative. A third was the Stop the Violence Initiative.
Summary and Conclusion

This paper has focused on Black social movements past and present with special reference to the Black Arts Movement and the Hip Hop Movement. It has examined the Black Arts Movement as a social movement which emerged during the mid-1960s and lasted until the mid-1970s. It has also examined the Hip Hop Movement as a social movement which emerged during the early 1970s and has lasted to the present. This paper presented a comparative analysis of both social movements and identified their goals, ideologies, organization and status systems, and tactics. The comparative analysis also included an examination of both movements’ internal development in the form of the incipient phase, organizational phase, and stable phase. Likewise, the comparative analysis included an examination of both movements’ external development in the form of innovation, selection, and integration. Additionally, this paper addressed some implications of the Black Arts Movement and the Hip Hop Movement as social movements.

The record is clear that both movements proved to be influential social forces in the most powerful country in the world. Since the Black Arts Movement came first, it paved the way for a new consciousness among Black youth especially in the middle 1960s, late 1960s, and early 1970s. Black consciousness was the order of the day until two drug epidemics hit Black communities across the country. A heroin epidemic exploded in major northern cities such as Detroit, Chicago, Philadelphia, and New York. The epidemic popped up in the late 1960s as cheap heroin made it to the streets of the USA from Asia. That was followed by a powder cocaine epidemic which hit cities like Los Angeles and Oakland after Hollywood put out a film titled Superfly. Overnight, young Black men turned their Afro hairstyle into a processed Lord Jesus hairstyle worn by the character named Priest in the film. He was depicted as a major drug dealer looking to make a big score, i.e. sale.

Whereas the use of heroin became a major social problem in the late 1960s, the use of powder cocaine became a major social problem in the early 1970s. There were many would-be revolutionaries with Black consciousness who suddenly found themselves using those substances and getting caught up with heroin addictive behavior and/or cocaine addictive behavior. By the time the Hip Hop Movement emerged, a bad situation got worst. Instead of many young Black people trying to make their communities a better place, they began to suck the life blood out of those places by becoming dope dealers. It was not long before the party music of the early rap phenomenon gave way to the edgier gangster rap phenomenon. Record companies and their producers encouraged their artists to develop songs with a catchy beat which featured the glorification of Black people killing Black people, glorification of drug selling, glorification of conspicuous consumerism, reference to females as b**ches and whores, and reference to men as “n**gers.

During the second decade of the 21st century, the record companies and their producers continue to encourage their artists to develop songs with a catchy beat which features the glorification of Black people killing Black people, glorification of drug selling, glorification of conspicuous consumerism, reference to females as b**ches and whores, and reference to men as “n**gers. Virtually all of the major Black artists in the Hip Hop Movement listed on the Billboard hit list have at least one song wherein they
glorify Black people killing Black people, glorify drug selling, glorify conspicuous consumerism, refer to females as b**ches and whores, and refer to men as “n***gers. A case in point is Jay-Z. His songs Coming of Age and Coming of Age (Da Sequel) brags about selling drugs while he lived in the Marcy Houses, a unit of public housing projects located in the Bedford-Stuyvesant area of New York’s Brooklyn borough. In his autobiography, he has informed us that, “I saw crack addiction destroy families—it almost destroyed mine—but I sold it, too. I stood on cold corners far from home in the middle of the night serving crack fiends . . . ” (Jay-Z, 2010, p. 18).

Another development in the Hip Hop Movement has been the willingness of Hip Hop artists to do virtually anything for money. Many of them have taken degrading roles in Hollywood which stereotype Black people. Some of them have even taken roles wherein they seemed to have gone against their previous pronouncements for better or worse. A case in point is Ice Cube (O’Shea Jackson). At one time, he was a member of the Hip Hop group NWA wherein they had a song that said “f**k the police.” During March 2014, Ice Cube was playing a role of police officer in the film Ride Along. That same month, Ice-T (Tracy Marrow), another Hip Hop artist, was playing a role of a police officer each week in the television series titled Law & Order: Special Victims Unit. He once released a song called “Cop Killer.” On February 2, 2014, Queen Latifah, another Hip Hop artist, readily embraced singing the song America the Beautiful at the 50th Super Bowl. Many Hip Hop artists seem to be willing and able to do anything that capitalists want them to do—as long as they get paid.

Further, both the Black Arts Movement and the Hip Hop Movement have had their detractors. On the one hand, Gates (1994) has deemed the Black Arts Movement to be “the shortest and least successful effective movement in African American cultural history” (p. 74). Gates seemed to ignore that the Black Arts Movement lasted longer the Harlem Renaissance. He also seemed to ignore the accomplishments of the leading institutions and personalities involved with the Black Arts Movement. Clearly, Baraka, one of the founders of the Black Arts Movement, enjoyed a long and successful career as a literary artist and political activist who was able to merge theory and practice.

On the other hand, Wynton Marsalis has referred to the leading institutions and personalities involved with the Hip Hop Movement as running a modern day minstrel show. In an interview with Lewis (2007), Marsalis stated:

I call it “ghetto minstrelsy.” Old school minstrels used to say they were “real darkies from the real plantation.” Hip Hop substitutes the plantation for the streets. Now you have to say that you’re from the streets, you shot some brothers, you went to jail. Rappers have to display the correct pathology. Rap has become a safari for people who get their thrills from watching African American people debase themselves, men dressing in gold, calling themselves stupid names like Ludacris or 50 Cent, spending money on expensive fluff, using language like “b**ch” and “ho” and “n**ger.” (p. 1)

Marsalis castigated the Hip Hop artists for debasing Black people and glorifying the killing of Black people by other Black people. He criticized the men in the movement for wearing their bling and giving themselves eccentric names. Marsalis also blasted them
for the calling women the B-word and the H-word. In addition, Marsalis blasted them for using the N-word.

Despite such criticisms, both movements have proven to be groundbreaking social forces in terms of innovation, selection, and integration. In the case of the Black Arts Movement, Baraka broke new ground with his plays, poetry, essays, and books. He also broke new ground when he joined with others to found institutions such as the Black Arts/Theatre, Spirit House, and the Black Communication Project. With regard to the Hip Hop Movement, Jay-Z has plowed new ground with his rap songs and entrepreneurship in fashion design. He has also plowed new ground with his development of Roc Nation. Jay-Z has made the transition from a drug dealer living in the housing projects to a successful businessman for Wall Street and Madison Avenue interests. In his present role, Jay-Z represents no threat to capitalism. Jay-Z evolved into a type of asset and commodity for capitalists which Baraka never wanted to be nor sought out. Instead of wanting to be an asset and commodity to Wall Street and Madison Avenue interests, Baraka actively sought their demise as bastions of capitalism.

Notes

1. To understand the context and history of the Black Arts Movement and the Hip Hop Movement, I have conducted in-depth interviews with Marvin X, Fritz Pointer, Ptah Mitchell, Menhuam Ayele, and Zahieb Mwongozi. I have also had personal communication with Askia Muhammad Toure, George Mason Murray, Baba Lumumba, Vulindlela I. Wobogo, Cassandra Chaney, Derrick P. Aldridge, Akosua Bea Francis Gymiah, and others. Whereas the in-depth interviews with Marvin X and Fritz Pointer helped me to understand the Black Arts Movement, those with Ptah Mitchell, Menhuam Ayele, and Zahieb Mwongozi helped me to understand the Hip Hop Movement. For some of their writings, see Mwongozi (1984), Marvin X (1998, 2009), Pointer (1970, 1971, 1972), P. Mitchell (2005), Ayele (2012), and Wobogo (2011).

2. In the second issue of The Journal of Black Poetry, it noted that Marvin Jackmon has used the aliases EJX and X-3 (“About the Authors,” 1966). He has also used the aliases El Muhajir and Nazzam Al Sudan (Marvin X, 1998, 2009; Major, 1969).

3. Both before and after the year 2000, there has been a concerted effort by some academics and non-academics to push Hip Hop as a culture on Black people. Some have stated that if Black people do not accept Hip Hop as a culture, they are not being authentic. See McLeod (1999). Few academics and non-academics have given proper attention to the impact of Black migration patterns inside the USA on the Hip Hop Movement. For example, Black people from Georgia have typically migrated to New York and New Jersey; Black people from Alabama have typically migrated to Detroit; Black people from Mississippi have typically migrated to Chicago; Black people from Louisiana, Texas, and Arkansas have typically migrated to California. Such migrations patterns have influenced Black music, including Hip Hop, in profound ways that have been overlooked or ignored.

4. His essay titled “The Crises of Black Culture” also appeared in Black Theatre #1 (Toure, 1968b). It should be noted that Askia Muhammad Toure has also been known as Roland Snellings and Rolland Snellings (Redmond, 1976; Ahmad, 2008). Toure was a major figure in the Black Consciousness Movement which began to flower during the
early 1960s long before the Black Arts Movement and Black Power Movement. For some more literary works by him before he wrote his important essay on Black culture, see Snellings (1963a, 1963) and Toure (1968c, 1968d, 1968e, 1968f, 1968g).

5. The typologies of members and functionaries used in this analysis have been drawn from King (1956).

6. A key missionary of the Black Arts Movement was the aforementioned Askia Muhammad Toure (Roland Snellings, Rolland Snellings). He played a major role in developing the Black Arts Movement along with Amiri Baraka and others. Toure was involved with three important organizations that predated the Black Arts Movement. Those organizations were the Revolutionary Action Movement, Umbra, and the Uptown Writers Movement. Those organizations were also part of the Black Consciousness Movement which dates back as early as the last decade of the 19th century with the publication of these two essays by Du Bois (1897a, 1897b): “The Conservation of Races” and “Strivings of the Negro People.” Other early examples of the Black Consciousness Movement include “Credo,” an essay by Du Bois (1904); “The Song of the Smoke,” a poem by Du Bois (1907); “The Negro in Literature and Art,” an essay by Du Bois (1913); and “Criteria of Negro Art,” an essay by Du Bois (1926). These works clearly celebrate Black consciousness even if they do not mention the actual term. For example, in his essay, “The Conservation of Races,” Du Bois stated that:

For the development of Negro genius, of Negro literature and art, of Negro spirit, only Negroes bound and welded together, Negroes inspired by one vast ideal, can work out in its fullness the great message we have for humanity. We cannot reverse history; we are subject to the same natural laws as other races, and if the Negro is ever to be a factor in the world’s history—if among the gaily-colored banners that deck the broad ramparts of civilization is to hang one uncompromising black, then it must be placed there by black hands, fashioned by black heads and hallowed by the travail of 200,000,000 black hearts beating in one glad song of jubilee. (p. 10).

Du Bois continued:

For this reason, the advance guard of the Negro people—the 8,000,000 people of Negro blood in the United States of America—must soon come to realize that if they are to take their just place in the van of Pan-Negroism, then their destiny is not absorption by the white Americans. That if in America it is to be proven for the first time in the modern world that not only Negroes are capable of evolving individual men like Toussaint, the Saviour, but are a nation stored with wonderful possibilities of culture, then their destiny is not a servile imitation of Anglo-Saxon culture, but a stalwart originality which shall unswervingly follow Negro ideals. (p. 10).

Thus, Du Bois consciously uses the term “Black” in a positive sense when referring to Black people and he uses the term “Pan-Negroism” in anticipation of the Pan-African Movement which emerged in 1900. Du Bois continued to usher in the Black Consciousness Movement in the USA with his landmark book *The Souls of Black Folk.*
Some 60 years later, Du Bois (1962), at the age of 94, introduced the “Afro-centric” concept in his *Proposed Plans for an Encyclopedia Africana* which he wrote on November 15, 1962 under the auspices of the Secretariat for an Encyclopedia Africana. Du Bois used the term “Afro-centric” to refer to social analysis which places Africa and people of African descent at the center rather than the periphery. By 1960, a critical mass of Black people in the USA had embraced Black consciousness as an idea whose time had come. Malcolm X, Martin Luther King, Jr., and their followers boldly began to increasingly refer to themselves as Black people instead of Negroes. Under the inspiration of Du Bois and others, the Black Consciousness Movement flowered in the USA between 1960 and 1964 and paved the way for the Black Arts Movement and the Black Power Movement. Like Toure, others members of the Revolutionary Action Movement, Umbra, and the Uptown Writers Movement became key missionaries in the Black Arts Movement. Some of the other organizations that provided missionaries to the Black Arts Movement were the Black Panther Party, RAM, US, House of Umoja, Nation of Islam, NAACP, CORE, and SNCC. For more information on these organizations, see Thomas (1978), Baraka (1984), Salaam (1997, 2009), Marvin X (1998, 2009), Ahmad (2008), Perkins (2009), and Wobogo (2011). In the case of the Black Panther Party, it had a symbiotic relationship with the Black Arts Movement. As Marvin X (1998, 2009) has pointed out, some Black Panthers like Bobby Seale, Eldridge Cleaver, Emory Douglas, Samuel Napier, and George Mason Murray were involved with the Black Arts Movement before they joined the organization. Other Black Panthers became involved with the Black Arts Movement after they joined the organization by promoting revolutionary nationalism or intercommunalism as an ideal ideology to fuel the movement.

7. Propelled by the influential *Negro Digest*, which later became *Black World*, literature and news of the Black Arts Movement reached all parts of the USA, including cities and towns in the Southeast and Southwest. Black people in Atlanta, Georgia, Savannah, Georgia, and Waycross, Georgia heard the clarion call of people like Amiri Baraka, Haki Madhubuti (Don L. Lee), Carolyn Rodgers, Mari Evans, and Marvin X and proceeded to develop aspects of the Black Arts Movement in their location. The same is true with New Orleans, Louisiana and Tougaloo, Mississippi. In the case of Savannah, it had an Academy of Black Culture. New Orleans had Blk Art South. See “News,” (1972) and Salaam (1972).

8. Baraka (1984) has related that the Spirit House he later developed in Newark, New Jersey was very similar to the Black Arts Repertory Theater/School in Harlem. He has also said that members of The Last Poets “extended the form of the ensemble poetry performance that we had worked with in the Spirit House” (p. 281). For an important history of The Last Poets, see Oyewole and Hassan (1996).

9. Neal (1968) pointed out that Etheridge Knight called for the development and usage of a Black aesthetic. Knight represented the lumpenproletariat who served time in prison, developed Black consciousness behind bars, and joined the Black Arts Movement and the Black Power Movement. Some of the other imprisoned Black people who developed Black consciousness behind bars were Alprentice “Bunchy” Carter, Eldridge Cleaver, B. Kwaku Duren, George Jackson, and Malcolm X. The emergence of Black history study groups played a major role in helping imprisoned Black people to develop Black consciousness behind bars. For some writings by imprisoned Black people with Black
consciousness, see Knight (1968, 1970). For a very important assessment of the Black Arts Movement about 10 years after its demise, see Neal (1987).

10. In the case of the *Liberator*, the January 1965 issue published an important article by Stanford (1965), who later changed his name to Muhammad Ahmad, titled “Revolutionary Nationalism and the Afro-American Student.” He called for unity and action among the following segments of the Black population: high school students, junior high school students, street gangs, and outcasts. It also published an important article by Black (1965) on the return of Malcolm X to the USA from his last trip abroad. She noted that Malcolm X, during a November 29, 1964 speech at the Audubon Ballroom, praised Patrice Lumumba and called Moises Tshombe a puppet and the worst African ever born. The editor-in-chief of the January 1965 issue of the *Liberator* was Daniel H. Watts. The editorial board for that issue consisted of Clebert Ford, Len Holt, Clayton Riley, Carlos E. Russell, Charlie L. Russell, Ossie Sykes, and C. E. Wilson. Another important periodical used by RAM members to popularize their writings was *Umbra*. For example, the very first issue of *Umbra* published a poem by Rolland Snellings (Roland Snellings, Askia Muhammad Toure) titled “Floodtide.” The second issue of *Umbra* published a poem by him titled “Song of the Fire.” See Snellings (1963a, 1963b). A third important Black periodical during the early 1960s was *Freedomways*, which was widely read by RAM members and non-members. In its important memorial issue for W. E. B. Du Bois, Stuckey (1965) and Moore (1965) wrote articles wherein they acknowledged his role in the development of Pan-Africanism. In his article, Stuckey related that Kwame Nkrumah regarded Du Bois as a “symbol of Pan-Africanism” and “one of Africa’s greatest teachers” (p. 151). Stuckey also said that, “Du Bois’ influence was felt from the tenements of Harlem to the African bush, and countless children because of him have grown up with greater confidence and a new vision of themselves and the world” (p. 153). Moore, in his article, referred to Du Bois as the “Grand Old Man of Pan-Africanism” and credited him with being “the veteran spokesman for Pan-African liberation and champion of human rights” (pp. 183, 187). He also acknowledged that, “Dr. W. E. B. Du Bois was hailed as ‘Father’ of Pan-Africanism by George Padmore” (p. 183). In addition, Moore addressed the “background of the Pan-Africanism of W. E. B. Du Bois” and asserted that Du Bois had a “prophetic world vision which encompassed his idea of Pan-Africa” (pp. 167-168). That issue of *Freedomways* also included some selected poems of Du Bois (1965a, 1965b, 1965c, 1965d, 1965e, 1965f). The political activism, scholarship, literary art, and Pan-African philosophy of Du Bois were major influences on the Black Arts Movement. As Walters (1917) noted, Du Bois participated in the first Pan-African Conference, which was held in London, England during 1900 and organized by Henry Sylvester Williams. Other participants from the USA included B. W. Arnett, Thomas J. Calloway, Anna Julia Cooper, Henry F. Downing, Ada Harris, Anna H. Jones, Charles P. Lee, J. L. Love, and Alexander Walters. According to Walters, Du Bois played an important role in his status as the chairman of the Committee on Address to the Nations of the World. Walters also stated that Du Bois was selected to serve as the Vice-President of America to the short-lived permanent organization known as the Pan-African Association. In his final autobiography, Du Bois (1968) addressed the leading role he played in organizing five Pan-African Congresses. At the five Pan-African Congresses, Black people from different countries gathered to engage in Pan-Africanism as an international form of Black nationalism involving racial

11. Joe Goncalves, also known as Dingane, was one of the key Black people addressing the issue of creating independent Black institutions with a focus on publishing (Redmond, 1976). Throughout the Black Arts Movement, he helped to produce Black Dialogue, Black Theatre, and his own The Journal of Black Poetry. When some people in the Black Arts Movement including Hoyt Fuller, complained about Black writers being left out of the American Literary Anthology, Goncalves said that Black people must concentrate on developing their own literary entities. Regarding that matter, a news items in the “Perspectives” column of Negro Digest stated:

Joe Goncalves, the perceptive editor of The Journal of Black Poetry, advised us to give up the struggle. It wasn’t worth it, he said. Black writers should do their own thing, find their own audience, establish their own critics. Black writers did not need the corruptive influence of the annual literary anthology. He was right. (“The American Literary Anthology,” 1969, p. 49).

During the 1970s, Goncalves continued to call for the development of independent Black institutions with a focus on publishing. See Goncalves (1972).

12. Marvin X (personal communication, January 12, 2014) has told me about his social relationships with Eldridge Cleaver and Amiri Baraka. He has also written extensively about his social interaction with Eldridge Cleaver, Amiri Baraka, Emory Douglas, Bobby Seale, George Murray, Samuel Napier, and others at the Black House. See X (1998).

13. Marvin X (personal communication, January 12, 2014) has stated to me that he and Ethna Wyatt (Hurriyah Asar) fled the Black House after being intimidated with guns by Eldridge Cleaver and Bobby Hutton. For writings by him on the incident, see X (1998, 2009).

14. Fritz Pointer (personal communication, May 14, 2015) has informed me that the Pan-African Cultural Center hosted Amiri Baraka and Muhammad Ali at events in Oakland. In the case of Muhammad Ali, he spoke at McClymonds High School under the aegis of the Pan-African Cultural Center. Pointer also noted that Dave “Mudavanha” Paterson later earned a Ph.D. in political science at the University of California, Berkeley. Pointer later earned a M.A. in African history at the University of California Los Angeles and a M.A. in African literature at University of Wisconsin, Madison.

15. Marvin X (personal communication, January 12, 2014) has related to me that he considered Amiri Baraka a mentor. He became close to Amiri Baraka in 1967 when the latter came to the West Coast and participated in the activities of the Black House in San Francisco. Marvin X has served as a mentor to Ptah Mitchell, Menhuam Ayele, Zahieb Mwongozi, and me. It should be noted that I have also been mentored by Fritz Pointer, Joe “Dingane” Goncalves, George Smith, Markell Johnson, Betty Scott, Fleet
‘Melchizedek’ Johnson, Leroy ‘Lee’ Johnson, M’Wile Yaw Askari, Barbara Paige Pointer, Anita DeFrantz, Bishop Scott, and many others.


17. The multi-talented Gil Scott-Heron was a major voice as a singer, musician, novelist, poet, and pioneer rapper who wrote an important memoir about his life. Although he experienced great difficulty in dealing with substance abuse in the form of alcohol and other drugs, Scott-Heron produced an impressive body of work which ranged from his first album in 1970 to his final album during his lifetime in 2010. Scott-Heron displayed how a poet could use dynamic language without relying on the N-word or profanity as a cliche. On his album *Spirits*, which was released in 1994, Scott-Heron included an important poem titled “Message to the Messengers” wherein he chided Hip Hop artists for calling women the B-word. Scott-Heron had a long history of reaching out and encouraging younger poets. In 1979, Scott-Heron selected my poem “Theme for El Jefe” as a grand prize winner in the Gil Scott-Heron Poetry Contest, which was sponsored by Arista Record Company and Radio Station KRE in Berkeley. For his memoir, see Scott-Heron (2012). Further, Scott-Heron was one of the many musicians who made contributions to the Black Arts Movement. Some of the others included the whole Midnight Band (e.g., Brian Jackson, Sunni Bilal Ali, Danny Bowens, and Adenola), Max Roach, Andrew Hill, Sun Ra, Rahsaan Roland Kirk, John Coltrane, Pharoah Sanders, Albert Ayler, Cecil Taylor, Archie Shepp, James T. Stewart, Sonny Murray, Don Cherry, Henry Grimes, Louis Worrell, Marion Brown, Rashid-Ali, Milford Graves, Gary Bartz, Curtis Mayfield, and William Calhoun. See J. T. Stewart (1966), Baraka (1967, 1984), Marvin X (1998), J. B. Stewart (2005), Smethurst (2005), Thomas (1992, 1995), and Vincent (2013).

18. For some information and writings related to Black writers in the Los Angeles, California area during the Black Arts Movement, see Schulberg (1967) and Troupe (1968).

19. Conferences and festivals connected to the Black Arts Movement were also held in Chicago and elsewhere. As mentioned above, there was a Black Arts Festival held in Chicago in 1968. There were also a series of Black Power Conferences which featured workshops or panels pertaining to the Black Arts Movement. In his autobiography, Baraka (1984) provided background information about the following conferences: 1966 Black Power Conference in Washington, DC; 1967 Black Power Conference in Newark, New Jersey; 1968 Black Power Conference in Philadelphia, Pennsylvania; 1969 Black Power Conference in Newark, New Jersey; and 1970 Black Power Conference in Atlanta, Georgia. Baraka also provided background information about the following gatherings: 1972 National Black Political Convention in Gary, Indiana; 1972 African Liberation Day in Washington, DC and San Francisco, California; 1974 National Black Political Convention in Little Rock, Arkansas; 1974 May Conference at Howard University; 1974 June Sixth Pan-African Congress held in Dar es Salaam, Tanzania; and 1974 Afrikan Women’s Conference in Newark, New Jersey. With regard to the 1968 Black Power Conference, Baraka wrote in his autobiography that, “I was coordinator of the Arts Workshop at the ’68 conference” (p. 273).

20. In addition to true self-consciousness, Du Bois (1897b, 1903) called for Black people to have self-realization, self-respect, and self-development.
21. According to Bialik (2005) in the *Wall Street Journal*, the data indicate that most rap records were purchased by White people in 1995, 1999, and 2001. He reported that a study by Mediamark Research Inc. (MRI) found that for all adults and adults between the age of 18 to 34 the percentage of rap records buyers who are White was 70 to 75 percent in 1995, 1999, and 2001. Bialik also reported that:

Spurred by a change in Census Bureau methodology, MRI researchers no longer decide for themselves the race of their respondents, and the group has expanded the number of races and allowed respondents to check more than one. In fall 2004, using the new method, MRI found that just 60% of rap buyers are white, though 78% of Americans self-identify as white. Apparently, a significant number of people whom researchers thought were white wouldn’t identify themselves as such. (p. 2)


22. A case in point is that the companies established by the rapper Shawn “Jay-Z” Carter have sought out contracts with White firms connected with White capitalists. For example, his Roc Nation has possessed a contract with the Universal Music Group and a contract with Sony. See Sisario (2013) and Morris (2013).

23. Allah (2009) has written that, “With ‘two turntables and a microphone,’ Herc ingeniously gave birth to Hip-Hop Music by isolating the instrumental breaks in funk records, while taking over the groove” (p. 374). Allah has also traced the influence of Five Percenters on Hip Hop personalities like DJ Kool Herc, World’s Famous Supreme Team, Just-Ice, Rakim Allah, King Sun, Big Daddy Kane, Lakim Shabazz, Poor Righteous Teachers, Brand Nubians, Wu-Tang Clan, Digable Planets, and Erykah Badu. According to Allah, the teachings of Father Allah, who was also known as Clarence 13X and Clarence Edward Eugene Smith, can be found in their lyrics. In addition, Allah has detailed the destruction of a “man-made blizzard” in the form of “crack-cocaine” on New York City and elsewhere during the 1980s (p. 361). Further, as early as 1971, I saw T. C. James, a Black man and deejay, doing something similar with turntables and a microphone in Waycross, Georgia to what Kool Herc later did in New York City. For an important statement about the original development of the Hip Hop Movement and his philosophy, see DJ Kool Herc (2005).

24. For a compilation of essays making use of these periodicals as sources of information, see Forman and Neal (2004).

25. Questlove (2014) is a Hip Hop insider who has complained about what he has called the conspicuous consumerism in the social movement. In an article for *Vulture*, Questlove traced the conspicuous consumerism in the Hip Hop Movement as far back as Run-DMC and their hit song *My Adidas*. For Questlove, Rap stars “back in the ‘80s celebrated what they owned” (p. 2). He proceeded to charge that contemporary Rap stars like Jay Z, Kanye West, and Puff Daddy have engaged in conspicuous consumerism. In the case of Puff Daddy, Questlove wrote:

Certainly, Puff Daddy’s work with the Notorious B.I.G. in the early ‘90s did plenty to cement the idea of hip-hop as a genre of conspicuous consumption. Before those videos, wealth was evident, but it was also contextualized, given
specific character that harmonized with the backgrounds of the artists. Run-DMC had East Coast cool and cachet; Dr. Dre had West Coast cool and cachet. But Puffy had — and wanted to tell everyone he had — a different idea of power, an abstract capitalist cachet. His videos, and the image they projected, played as well in California as in New York, as well in Chicago as in Florida. It was a cartoon idea of wealth, to the point that specific reality no longer mattered. In literary terms, it was pure signifier. It would take him a little while to formulate that into a manifesto, but when he did, he hit it on the nose. “Bad Boy for Life,” in 2001, contained a line that says all that anyone needs to know about this strain of hip-hop: “Don’t worry if I write rhymes / I write checks.” Picasso, baby. (p. 3)

In the Hip Hop Movement, people like Questlove, who has proven to be willing to make a critique of conspicuous consumerism in the capitalistic USA, are far and few between.

26. For evidence that the Black Arts Movement had an international impact along with its forerunner the Black Consciousness Movement in the USA, see Biko (1978), Eide (2014), Du Toit (2008), Redmond (1976), Gerhart (1978), and Ahmad (2008). On the one hand, a Black Consciousness Movement had emerged in the USA by 1960 long before the Black Arts Movement and Black Power Movement. The Revolutionary Action Movement (RAM), which was founded in 1962, was part of the Black Consciousness Movement. Ahmad has detailed the history of RAM. The Black Consciousness Movement was inspired by independence movements in Africa as well as the long struggle for social justice in the USA led by Frederick Douglass, Alexander Crummel, Ida B. Wells-Barnett, W. E. B. Du Bois, Carter G. Woodson, James R. L. Diggs, Anna Julia Cooper, Noble Drew Ali, Cyril Briggs, Hubert Harrison, Elijah Muhammad, Paul Robeson, Septima Clark, Queen Mother Audley Moore, Ella Baker, Queen Mother Audley Moore, Fannie Lou Hamer, Robert F. Williams, Malcolm X, Martin Luther King, Jr., Don Freeman, Kwame Ture (Stokely Carmichael), Huey P. Newton, and many others. On the other hand, Biko and others have provided some details about the mutual influence of Black social movements in the USA, Africa, and the Caribbean. Biko has stated:

The growth of awareness among South African blacks has often been ascribed to influence from the American ‘Negro’ movement. Yet it seems to me that this is a sequel to the attainment of independence by so many African states within so short a time. . . . The fact that American terminology has often been used to express our thoughts is merely because all new ideas seem to get extensive publicity in the United States. (p. 69)

Eide has mentioned “Biko’s wider investment in Black consciousness, a political philosophy tied to the Black Power movement of the United States and the Negritude philosophical interventions elsewhere in Africa and in the Caribbean” (p. 14). Du Toit has related that Biko “was influenced by people like Frantz Fanon, Leopold Segnhor, Cheikh Anta Diop, Aime Cesaire, Malcolm X, Stokely Carmichael and the like” (p. 29). Redmond has disclosed that Keorapetse Kgositsile was a key figure in the Black Arts Movement in the USA and a native of South Africa. It is highly unlikely that the well-
read Biko did not know of Kgositsile’s impressive body of literary work. Gerhart has informed us that:

The impact of American ideas in the 1960s on the language of the Black Consciousness movement comes through clearly in the popularity of slogans like “Black Is Beautiful” and the frequent use of such terms as “relevance” and “power structure” in SASO literature. Most significant, however, was the terminological revolution in the use of the term “black” itself. (pp. 276-277).

In the aforementioned statement by Gerhart, SASO refers to the South African Students’ Organisation. Further, for evidence of the international impact of the Hip Hop Movement, see Toop (2000), Mitchell (2001), and Condry (2006). Like other social forces produced by the cultural endeavors of Black people, the Hip Hop Movement faces the dilemma of being disconnected to the population which originated the phenomenon. Consider the plight of soul music and jazz. In a thoughtful essay dealing with the future of soul music in the USA, Howard (1966) complained that:

Soulfulness can be looked at in one of two ways. Most of the black community knows what being soulful means, yet few of us connect it with our past. Jazz, for example, is appreciated, but it is not connected with slave songs and the early Negro church where it originated. Furthermore, it is not connected with Africa because too many of us believe that we are completely American and that everything which was African was left behind or destroyed long ago. We, like most of America, and indeed the rest of the Western world suffer from “Tarzan” type depictions of Africans and African culture. (p. 23)

Howard posed that soul music and jazz were faced with the dilemma of being disconnected to the population which originated the two phenomena.

References


One Killed, 4 Shot in Gun Battle Here. (1968, April 7). *Oakland Tribune, 1*, A.


Nurturing Persistent Mathematical Problem Solvers: A Framework for Facilitating Both Teacher and Student Growth

By
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Topic Area(s): Teacher Education, and Secondary Mathematics Education, Middle School Mathematics, Undergraduate Mathematics

Presentation Format: Workshop

Description of Presentation: This is an interactive session. Workshop serves diverse demographics. Topics (include observed changes in): Teacher training experiences, teachers’ classroom practices, students’ performance, and district cultures. Participants will be actively engaged in diagnosing problem-solving behaviors of colleagues (Vicich, 2014) and use the doc cam to share their reasoning within a student-centered classroom model. Discourse, informal assessment, and sociomathematical norms will be addressed. Models of teacher change (Clarke & Hollingsworth, 2002) and instructional practices that promote deep, well-connected conceptual understandings (Arcavi, et al., 1998, Schoenfeld, 2009) within both teachers and students are presented.

First Preference: 90 - Minute Workshop

Second Preference: 20 minute - Paper Session

Hawaii International Conference on Education
Honolulu, HI
January, 2017
This paper is a revised version of a manuscript currently under review for publication: (Vicich, J, Kimani, P. & Tan, E., 2016). The Teaching and Learning Triad for Nurturing Persistent Problem Solvers. Manuscript under review for publication.

The Common Core State Standards (CCSSI, 2010) have created a platform for the development of more rigorous, focused, and coherent mathematics curricula, instruction, and assessments targeting deeper conceptual understanding and reasoning as well as the development of skill fluency. These shifts — focus, coherence, and rigor — have encouraged educators to rethink how to teach mathematics. Problem solving is a large part of the new standards with an expectation for students to be adept in the selection and use of appropriate tools for solving problems, and to have an ability to persevere in solving problems using multiple representations. Furthermore, students are expected to verbally explain and defend their own approaches as well as to understand and critique the reasoning of others.

This paper presents the Teaching and Learning Triad for Nurturing Persistent Problem Solvers (referred to as the Triad). The Triad (see Figure 1) includes attention to teacher preparation and reflective practice both prior to and during classroom instruction. The Triad, an adaptation of Pat Thompson’s (2008) Teaching Triad, is consistent with the findings of Clarke and Hollingsworth (2002) which recognize that “teachers are themselves learners” who “´seek to change´ in an attempt to improve their performance or develop additional skills or strategies” in a non-linear fashion (p.948). The Triad is based on a synthesis of findings from a series of design experiments (as described by Schoenfeld (2014) and Cobb, et al. (2003)) for the purpose of having research inform teacher training as well as students’ mathematical performance. The paper also synthesizes the results of five MSP grants, high school district funded workshops, and current results of a $9 million NSF grant, [Arizona Mathematics Partnership referred to as AMP], focused on improving middle school mathematics. The following activities and perspectives are grounded in the analysis of class observations, teacher and student test data, teacher reflections, and facilitator reflections collected over the past ten years. The arrows in the Triad represent teachers’ reflective behaviors, changes in beliefs, or actions and indicate the interconnectedness of the three categories. For example, after participating in a professional development workshop that used the Diagnostic Instrument (See Appendix 1) to analyze the problem-solving behaviors of other teachers, a teacher created the first version of a problem-solving template to be used by his own students. The teacher instructed his students to use the template to solve several problems and observed their responses. The teacher shared his observations with the workshop facilitator and the facilitator made suggestions for improving the template, such as adding a rubric and including a comprehensive list of strategies. The final version is included in this paper (see Appendix 2).
Figure 1. Teaching and Learning Triad for Nurturing Persistent Problem Solvers
Professional Development and Philosophical Perspective on Perseverance

Research (Darling-Hammond & Richardson, 2009) supports professional learning that:
• Is content based and includes pedagogical issues of teaching and learning;
• Uses active learning;
• Includes reflection with colleagues;
• Is consistent with school, district, and state reforms;
• Is intensive and sustained over time.

Yet, according to Schoenfeld (1991), the perspective of the mathematical community is this:

‘We know how to teach, and can do it well if we devote the time and energy to it. (It’s a shame we’re as busy as we are and can’t spend as much time grading assignments, etc..) What we need is for people to give us the resources that make things easier --- means of keeping current and good materials, ready for use’” (pp. 270 – 271).

To bridge this seeming conflict of motives AMP has provided professional development to in-service middle school teachers aimed at improving their awareness of productive problem-solving behaviors and instructional techniques that encourage students to engage in the Mathematical Practices (CCSMI, 2010). Teachers are taught to act as a researcher observing another’s problem-solving behaviors by using Vicich’s (2014) Diagnostic Instrument (Appendix 1) which is based on Schoenfeld’s (1992) Theoretical Framework of Problem-Solving Behaviors and is adapted from the analytical techniques of Geiger & Galbraith (1998). Teachers are paired as problem solver and observer. Solvers are asked to think aloud while observers comment on the various categories of behavior such as initial engagement, planning, conjecturing, strategy selection, monitoring of progress, verification, resource knowledge, and beliefs and attitudes such as willingness to explore and perseverance. Teachers then present their solutions to the larger audience by white board or document camera. Audience members critique the mathematics and the researcher shares her/his observations as they unfold. While solving several problems the roles are reversed. In this activity, teachers develop 1) awareness of their own problem-solving behaviors; 2) awareness of how to diagnose students’ difficulties; and 3) empathy for the students’ experience as problem solver. Teacher reflections on this activity include the benefit of seeing alternative solution pathways and the power of accurately identifying givens and goals.

Perseverance is a part of the affective domain as described by DeBellis & Goldin (2006). They define Mathematical Integrity as an insistence that a solution is mathematically adequate
and makes sense; and Mathematical Intimacy as willingness to take risks, persevere, and have confidence. DeBellis and Goldin

“... conjecture that students with strong mathematical integrity structures have the potential to engage in powerful learning and problem solving especially if their mathematical integrity is interacting with their capability for mathematical intimacy.” 138 – 139)

To view perseverance and persistence as only a function of time ignores the ways in which problem solvers make progress through the various categories of problem-solving behaviors (Carlson & Bloom, 2005). Students can spend time on a problem without recognizing that they are engaged in a “dead end” solution pathway that does not move them closer to a goal or subgoal (Schoenfeld, 1992; Vicich, 2002). In contrast to a myopic view of persistence, we see five forms of persistence/perseverance in mathematical problem solving. We include problems that provide teachers and students opportunities to focus on productive problem-solving behaviors while attending to mathematical integrity and mathematical intimacy. The first Mathematical Practice defined by CCSSI (2010) and individual states’ standards is: Make sense of problems and persevere in solving them. Although we have selected problems to highlight aspects of perseverance, multiple Mathematical Practices can and usually occur during the problem-solving process in any one problem.


Circa 1875: Twelve ships will leave San Francisco, one per month, to travel around the horn of South America bound for New York. At the same time, twelve different ships will leave New York, one per month, along the same route bound for San Francisco. Excluding meetings in the harbors, how many times will ships headed in opposite directions pass each other on the open seas? Each ship will take six months to reach its destination.

2. Persist in finding an efficient strategy based on conceptual understanding to explore relationships: Source: (NCTM, 2015) Mathematics Teaching in the Middle Schools, August 2015, Vol. 21, Issue 1, NCTM, Reston, Va..

Provide a coherent, convincing argument to support your final answer. Provide a written check. What is the smallest positive integer n so that n + 125 and n + 201 are both perfect squares? What is your plan? Can you make an initial conjecture about the final answer?
3. Persevere/Persist at implementing a rigorous, time consuming, solution pathway:

Make a separate, labeled drawing of each of the twelve isosceles triangles. Provide sufficient explanation of how to determine the length of each side of every triangle. Given, CM = CN = 2, compute the sum of the twelve hypotenuses. Source: Adapted from Mathematics Teacher, 108(1), 2014. NCTM. Reston, Va.

<table>
<thead>
<tr>
<th>Triangle</th>
<th>COP</th>
<th>CPN</th>
<th>NCM</th>
<th>MOL</th>
<th>KLG</th>
<th>KGP</th>
<th>FKE</th>
<th>EDI</th>
<th>IEL</th>
<th>PIF</th>
<th>JNH</th>
<th>HMG</th>
</tr>
</thead>
</table>


3. Is this assertion true: A semicircle constructed on the hypotenuse of a right triangle is equal in area to the sum of the areas of the two semicircles constructed on the legs? Explain how you know. (Hint: Don’t forget Pythagoras.)

Extension/Exploration: Does the assertion hold true for replacing the semi-circles with equilateral triangles?
5. Persist in verification and monitoring of progress (metacognitive reflection of moving toward a valid answer, and establishing subgoals).

First make a conjecture as to the nature of the answer (large or small number, rational or irrational, or close to 1) and then write a plan for solving the problem. Be sure to identify any subgoals and also appropriately label drawings used in your subgoals (that is, focusing and redrawing a selected portion of the original drawing). Source: Chris Benton, Scottsdale Community College (2010)

The two identical, adjacent squares have sides of one unit. Find the area of the oblique (that is slanted) rectangle. Show all steps. Hint: An excellent strategy is to label all vertices and redraw smaller sections of the larger figure for detailed subgoal analysis. (Adapted from the NCTM 100 Favorites Calendar)

Reflective Practices & Resources that Precede Instruction

We use a broad definition of reflective practice, adapted from Schön (1983) to describe the practice by which professionals become more aware of their professional knowledge and learn from their experiences. “Engaging in reflective practice enables the teacher to learn from, and potentially enhance, their teaching practice” (Saleh & Hussin, 2011). As described by Clarke and Hollingsworth (2002), the reflective process enables teachers to grow in the artistry of teaching via multiple networks and experiences.
Prior to instruction the teacher must set the goal that students will develop deep, well-connected conceptual understandings. Hiebert and Carpenter (1992) suggest a theoretical framework for learning and teaching mathematics with understanding. They define mathematical understanding in the following way: “a mathematical idea or procedure or fact is understood if it is part of an internal network” (p. 67). A network may be a vertical hierarchy where one concept may be represented as a special case of another idea. The vertical network may be narrow and deep showing many hierarchical relationships. Sfard (1991) describes a network that is shallow and wide known as the "mother with too many sons" model (p. 27). A network may also be thought of as a web showing multiple links allowing one to identify similarities and differences between ideas (Hiebert and Carpenter, 1992, p. 67) (See Figure 2 below). The web helps students build a coherent mental network in which all pieces are joined to others with multiple links. The degree of understanding is determined by the number and strength of the connections that a student is able to make within her/his network.

Prior to instruction the teacher must design a “mathematics classroom culture” in which students will have the experience of doing mathematics with the following characteristics (Arcavi et al., 1998):

- Development of a mathematical point of view – using mathematics to symbolize, abstract, model, prove or disprove conjectures, perceiving connections across problems and results, and creating knowledge that is new to oneself or the community.
- Emphasis on process as well as results – explanations of how ideas are generated are highly valued even when they do not produce solutions.
Leadership and Authority – the teacher leads the class towards assuming responsibility for standards of completeness, coherence, and the conviction of mathematical arguments. Here the mathematics itself is the ultimate authority.

Communication – the classroom setting encourages written and oral communication. Students are encouraged to evaluate, question, and critique each other’s suggestions and work. [Note: In this culture be sure to establish the norm that ideas, not the person, are critiqued ([Redacted], 2007).]

Reflective mathematical practice – Is your argument convincing? How could you arrive at the same answer using a different solution pathway? Can this result be generalized?

We suggest that implementation of the eight Mathematical Practices (CCSMI, 2010) and students’ productive struggle (NCTM, 2014) occur in a student-centered classroom that has the following characteristics: (Source: Redacted for a blind review)

Students will:

- Be engaged in mathematical discourse with the teacher and fellow students.
- Be explaining their mathematical thinking.
- Be justifying their reasoning mathematically.
- Critique the thinking of others.
- Be engaged in problem-solving.
- Be communicating (verbally and in writing) mathematical thinking coherently and precisely (language).
- Be sharing alternative solution pathways.
- Embrace mistakes and remain persistent when problem solving.
- Routinely seek, examine, and verify patterns, structures or repeated reasoning to make connection to problem solve.

In such a classroom culture, mathematical reasoning will be the ultimate authority to determine the validity of a claim and students will need to convince their own classmates through sound and logical reasoning.
How should a teacher select tasks that promote the development of productive problem-solving behaviors and attitudes? Arcavi et al. (1998) described Schoenfeld’s Criteria for problem selection:

- Problems should be accessible on the basis of prior knowledge.
- Problems should be solvable or at least approachable in more than one way.
- Problems should illustrate important mathematical ideas in terms of either the content or solution strategies.
- Problems should be constructible without tricks.
- Problems should serve as first steps toward mathematical explorations and springboards for further problem posing.

Writing about the importance of one’s belief system, Schoenfeld says that one’s beliefs about mathematics can determine how one chooses to approach a problem, which techniques will be used or avoided, and how long and how hard one will work on a problem (Schoenfeld, 1992).

Teachers must create learning experiences that directly attack the following unproductive beliefs:

- Experts move directly from the problem statement to the solution.
- There is only one way to solve a math problem (usually the teacher’s way).
- It is **not** OK to stop and start over using a different approach once I’ve started.
- I just need to get an answer; it does not have to make sense to me.
- If I cannot solve a problem in 5 minutes or less then I cannot solve it at all.
- The best way to learn math is to memorize.
- Every problem uses a formula to arrive at an answer.
- Making unsuccessful solution attempts is **not** a natural part of doing mathematics.

Adapted from Carlson & Bloom (2005), [Redacted] (2002) and Carlson & Buskirk (1997)

**Reflective Practices That Occur During Instruction**

Within the classroom the teacher must reflect on the effectiveness of instructional techniques and adjust accordingly. The following active learning techniques place an emphasis on individual accountability while creating a community of mathematicians in which the mathematics itself is the ultimate authority.
Facilitating and Assessing Students’ Oral Presentations

An effective practice to implement oral presentations is to 1) pair students by ability, a stronger student with a less able student; and 2) make student presentations an everyday classroom practice. Within the pairings, students are introduced to new patterns of thought, such as alternative solution paths or strategies, as a result of engaging in dialogue with peers. (See Vicich (2007, 2002) for more on Paired-Board Work).

Give students five simple guidelines for their oral presentations: 1) Provide a neatly organized, thorough written solution; 2) be poised, look and sound confident; 3) use proper body position so that the audience can easily see both your written work and your face; 4) maintain eye contact with the audience; and 5) use a voice that is clear and appropriately loud for the setting.

Give feedback to students on their presentations. First compliment the elements of the performance that are admirable, and then suggest ways to improve any weaknesses. In the classroom, this means the teacher should first find something he/she likes about the student’s solution, (e.g., neatly organized, axes of graphs labeled correctly and with proper units, good body position); then ask the class for suggestions on how to improve any weaknesses of the presentation. Very quickly, the qualities that the teacher and students recognize as desirable in this public forum become the established mathematical norms of your classroom practices. For those teachers who prefer a quantitative assessment, we recommend the following Rubric for Grading Oral Presentations:

- Neatness, 1 point;
- Thoroughness, 2 points;
- Mathematical Correctness, 1 point;
- Verification, 1 point. Total = 5 points

Note: A major challenge for students is to shift the belief that their solutions are only for themselves rather than for the purpose of convincing everyone else.
Camera ready specifically refers to the form a solution should be in before it is presented to the class via a document camera. While what constitutes camera ready can vary from classroom to classroom, here are some elements of camera ready that we have found necessary for it to be effective:

- Solutions should be neatly organized, thorough, and coherent.
- Explanations should consist of mathematical arguments, not simply procedural summaries of the steps taken to solve the problem.
- All figures should be labeled and referenced.
- Students should exhibit very good oral presentation skills. (Poise, Voice Eye Contact & Body Position)

Use of Problem Solving Template & Rubric With Students

The problem solving template (Perales & Vicich, 2014) (Appendix 2) is used as a formative tool to increase students’ awareness of productive problem-solving behaviors. A rubric is used to reinforce the importance of various behaviors. For example, early on in a semester students may need to earn more points for verifying that their solution makes sense until that behavior becomes a habit. Note, final answers are required to be written as a complete, grammatically correct sentence.

Schoenfeld (2015) has developed a set of questions for teachers to ask that help students move forward if they are having difficulty. When students say, “I don’t know what to do next?”, the teacher can respond with several prompts:

- What do you know?
- What are you trying to do?
- What have tried so far?
- Can you think of a helpful representation?
Conclusion

Foundational knowledge teachers may lack about productive problem-solving behaviors can be learned through actively engaging in appropriate professional development activities. We suggest that perseverance is not measured exclusively by time spent solving a problem but rather by attending to a willingness to persevere in all categories of problem-solving behaviors. The authors call for teachers to reflectively engage in the professional development experiences described in this paper and solve the problems for students prior to classroom implementation.
(Appendix 1) Diagnostic Instrument for Problem-Solving Behaviors
(Vicich, 2014)(Adapted from Geiger & Galbraith, 1998)

**Engagement**

<table>
<thead>
<tr>
<th>Problem is read</th>
<th>Key words underlined</th>
<th>Givens and goals established</th>
<th>Givens and goals represented symbolically</th>
</tr>
</thead>
<tbody>
<tr>
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*Executive Behaviors

*Planning: Did you make a plan or “jump into” this problem? Did you make any conjectures regarding the answer or possible solution path?*

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</table>

*Monitoring/Control

<table>
<thead>
<tr>
<th>Recognition that a solution pathway will lead to a dead end</th>
<th>Changing from one solution pathway to a different solution pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

*Heuristic Strategies

<table>
<thead>
<tr>
<th>Appropriate strategy initially selected</th>
<th>Data organized</th>
<th>Multiple Strategies used to make progress or clarify</th>
<th>No heuristic used</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

**Verification**

<table>
<thead>
<tr>
<th>Checked if answer was reasonable</th>
<th>checked correctness of answer</th>
<th>Checked for errors in solution</th>
<th>No verification used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Mathematical Practices and Habits: Solution (is)**

<table>
<thead>
<tr>
<th>Based on reason/logic</th>
<th>Thorough/Complete</th>
<th>Neatly organized</th>
<th>Attended to Precision</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

**Resources: Knowledge is**

<table>
<thead>
<tr>
<th>Complete</th>
<th>Sound with minor errors</th>
<th>Some but significant faults appear</th>
<th>No knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

**Beliefs and Attitudes: Problem Solver Exhibited**

<table>
<thead>
<tr>
<th>Persistence</th>
<th>Confidence</th>
<th>Curiosity</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
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</tbody>
</table>

References


NCTM. 2014. Principles to action: Ensuring mathematical success for all. Reston, VA


Questions for getting unstuck:

Have I tried the strategies and followed my plan?

Am I getting closer to solution?

Can I break this problem into smaller pieces?

Other questions I asked myself:

Conjecture (reasonable guess):

Plan: What will you do to solve this problem? (I am going to … so that I can …)

Strategy Selection:

1. Draw and label a diagram.
2. Examine special cases.
3. Simplify the problem.
4. Consider equivalent problems.
5. Consider slightly modified goals and subgoals.
6. Act out the problem/ use manipulatives.
7. Identify what does NOT work.
8. Work backwards.
(Adapted from Schoenfeld (1998))

Underline the givens and circle the goals.

Name

Date Hour
Solution Pathway (Not just what you did, but WHY you did it. Remember, your work is for everyone!)

Answer (Stated in a complete sentence, referring to the question, units included as necessary):

Check (verification): Use mathematical reasoning to prove that your answer is correct.

I know my answer is right because…

<table>
<thead>
<tr>
<th>Underline the givens and circle the goals (1)</th>
<th>Conjecture and plan are appropriate and make sense in context of the problem (3)</th>
<th>Solution pathway is complete; questions are present; solution is checked for reasonableness and verified (4)</th>
<th>Answer is correct, and is stated in a way that responds directly to the question asked (2)</th>
<th>Total (10):</th>
</tr>
</thead>
</table>

Template: (Perales, M. and Vicich, J., 2014)
1) Title: Preschoolers Improve Phonological Awareness Skills with Short Duration Instruction

2-5) Names of Authors, Affiliation, Address, and E-mail:

1) Karissa Marble-Flint, MSEd, CCC-SLP, Doctoral Candidate, Communication Sciences and Disorders, Wichita State University, 401 Ahlberg Hall, 1845 Fairmount, Wichita, KS 67260-0075, kjmarble-flint@shockers.wichita.edu

2) Kathy Strattman, PhD, CCC-SLP, Associate Professor, Communication Sciences and Disorders, Wichita State University, 401 Ahlberg Hall, 1845 Fairmount, Wichita, KS 67260-0075, Kathy.Strattman@wichita.edu
6) Abstract:

There is a strong relationship between phonological awareness abilities, early reading instruction, and later reading skills. When Phonological awareness (PA) instruction occurs before learning to read, advances appear in reading development, advances greater than those from other types of pre-reading activities. Advantages of PA instruction have been shown up to four years later. [1] The current study determined the effects of short duration, low intensity PA treatment of typically developing preschoolers (26) and 14 preschoolers with identified speech/language impairments in a literacy-based playgroup. Results comparing pre- and post-test scores indicated that both children with speech and language impairments and typically developing children improved. When compared with 91 age-matched, peers from a local preschool program for typically developing children, those in the playgroup scored significantly higher following the PA treatment.

Summary:

We know benefits of Phonological Awareness in preschool [2], especially for children with speech/language deficiencies [4]. With so much to include in a preschool curriculum, how much time is needed for explicit instruction in PA? Are children in a typical preschool already gaining phonological awareness through the regular curriculum? Our study investigated results in phonological awareness development from a literacy-based playgroup for preschoolers and their parents/caregivers at an urban university’s speech-language clinic. The playgroup provided a multi-sensory approach for emergent language, literacy, and writing skills. This program was a 28-week program (considered short duration), which included one hour and thirty minutes of treatment once a week. A portion of the treatment was a 15-minute (considered low intensity treatment) phonological awareness learning lab, [3] with the child and parent/caregiver. Pre- and Post-treatment testing utilized, the Assessment of Primary Literacy Skills (APLS) [5] that included both syllable level and phoneme level tasks.

Participants in this study were 40 children in the playgroup (PG) 21 males and 19 females ages 2:5-5:10 and 91 children, 39 males and 52 females who attended a typical preschool (TP) from 3:0-5:11. [6]

When examining the relationship between the pre-test scores of the children in the playgroup and scores of the TP group prior to intervention, the group’s scores were strongly correlated ($r = -0.983$). Following intervention, scores were significantly higher for children in the PG group in the 4:6-4:11 age category, $t(13) = 8.78$, $p < .001$, and the 5:0-5:5 age category, $t(30) = 8.264$, $p < .001$. There was not a significant difference between the children in the PG group in the 5:6 age category and the TP 5:6 age category, $t(6) = 1.235$, n.s. However, in the PG group in this age category there were only seven participants, while there were fourteen participants in the TD group, potentially limiting the statistical power.

In comparing scores of children in PG identified with speech and language disorders (N=14) and children in PG without identified speech and language disorders (N=40), both groups made gains from pre-test to post-test. Results of a repeated measures t-test showed a significant difference existed in the APLS scores of the children, $t(53) = 17.09$,
p < .001. In addition, the results of a paired sample t-test indicated there was not a significant difference in the gain scores between these two groups, t(52) = 1.11, n.s.

Additionally, data analysis was conducted to determine the difference between gain scores of boys and girls in the PG group and to compare the current study to previous research. An independent sample t-test indicated no significant difference between the gain scores of girls and boys, t(52) = .982, n.s., which was inconsistent with results of previous research [3].

In summary, children who had short duration, low intensity PA treatment when matched with same age children who had typical preschool experiences showed significantly different scores in PA activities. Not only did children with short duration, low intensity PA treatment demonstrate significant differences in PA scores from age-matched peers in a typical pre-k, but they did this with a minimal amount of treatment. The current findings are important for preschool programs demonstrating positive results even when PA skills are taught in short, fifteen minute learning center activities (examples will be included in this poster presentation). Additionally, parents were a key component to these children’s emergent literacy development.

References:
Abstract.

In far too many elementary classrooms today, teachers are tied to curriculum mandates that address disciplines in isolation, which thwarts students’ understanding of important key concepts. A compartmentalized approach creates difficulty for teachers to be cross curricular in their instruction which, in turn, limits the opportunities for students to closely relate content and make real world connections. Teaching disciplines independent from one another does not promote students’ ability to engage in meaningful and relevant activities toward delving deeper in the content and naturally making important connections between the disciplines.

With the current overwhelming expectations placed on educators to create pathways for student understanding across the plethora of required curriculum standards, teachers must be intentional in their instructional approaches. Developing multidisciplinary integrated curriculum units that support students in higher levels of understanding with the ability to exhibit superior mastery of content standards is imperative in today’s assessment-driven classroom. Field tested and vetted through scholarly circles, the authors of internationally published integrated curriculum units have developed an innovative approach that is a recipe for ensuring students’ deeper understanding with a guaranteed demonstration of greater levels of proficiency on key curriculum content.

Pulling from the scholarly literature, authors of the integrated curriculum units capitalize on the benefits associated with research-based best instructional practices to create learning opportunities that serve to heighten student learning, as evidenced by the
overwhelming success on student outcomes time and time again. The unit design evidences many and varied grouping structures, plentiful opportunities for meeting diverse learning styles and modalities, and an abundance of authentic texts, tasks, and assessments to facilitate student understanding of learning goals in content areas. Another key facet of multidisciplinary instructional units planning is to be mindful of offering opportunities that allow for student choice as this serves to engage learners toward the cultivation and retention of knowledge.

Unit planning tools such as a standards crosswalk, customized graphic organizers to highlight options for showcasing student understanding, matrices delineating authentic print and non-print inquiry tools and resources, and grouping structures were put through a rigorous vetting process and deemed highly beneficial in supporting educators who plan multidisciplinary units. Integrated curriculum unit tools by design allow teachers the freedom to use their professional judgment in determining the best avenues to support student ownership in the inquiry process, construction of knowledge across key concepts in creative ways, and unique platforms to share understanding of content in authentic settings.

Teachers must be efficient and effective in optimizing student learning, and therefore, it is imperative that students be engaged in a high volume of authentic, meaningful, and relevant learning experiences through the use of integrated curriculum units. In doing so, teachers are in a position to enable students to develop a deeper understanding of many and varied content area topics that promote meaningful connections across disciplines and facilitate making real-world connections.

In this era of high stakes assessment, it is more important than ever before that teachers purposefully plan with a multi-disciplinary approach to foster fervent learning.
Delving Deeper into Depression: An Examination of Pre-Service Teachers’ Understanding of Depression, and the Implications for Policy Recommendations

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**Topic Area:** Teacher Education

**Presentation Format:** Paper Session

**Abstract:** Families for Depression Awareness (n.d.) states that depression in young adults between the ages of 12 and 17 has risen at startling rates. From an educator’s perspective, this news is distressing as students’ depression can negatively impact their lives in multiple ways (NIMH, n.d.). Fifty-five pre-service teachers in teacher preparation programs were administered the Depression Multiple Choice Questions (Gabriel & Violato, 2009). Results and implications are discussed.

**Introduction**

With roughly 14.8 million annual adult victims within the United States alone, depression has been cited as the leading cause of disability in the U.S. for individuals between the ages of 15 and 44 (ADAA, 2014). While mood fluctuations and negative emotions in response to life’s obstacles are normal and short-lived, depression presents itself as a much different opponent. According to the National Institute of Mental Health (2016), a person must have persistent signs and symptoms for at least two weeks, which may include: continuous sad or empty moods, fatigue, difficulty concentrating, feelings of worthlessness, physical pains with no clear cause, and thoughts of suicide, among others. Families for Depression Awareness (n.d.) states that depression in young adults between the ages of 12 and 17 has risen at startling rates. In addition, suicide reigns as the second leading cause of death for individuals from the ages of 15-29 (WHO, 2016). From an educator’s perspective, this news is distressing as students’ depression can
negatively affect their school performance, disrupt both their personal and professional relationships (NIMH, n.d.), and ultimately, end their lives.

**Literature Review**

Fortunately, there are a multitude of effective treatments available for depressed students. Unfortunately, as little as 21% of Americans afflicted receive care compliant with the American Psychiatric Association guidelines, while 50% receive no treatment at all (Gonzalez, H.M., et. al., 2010) In addition, minorities--especially Mexican Americans and African Americans--yield even lower percentages. The major obstacle in seeking or receiving treatment is ultimately the lack of knowledge about depression, which often leads to stigmatization and high levels of misconceptions regarding the subject (DNA Learning Center, n.d.).

Treatments available include antidepressants which may adjust brain chemical levels to help control mood or stress, psychotherapies (talk therapy), or the herbal medicine “St. John’s Wort” (NIHM, n.d.). Effective treatment of depression is not immediately gratifying; in the case of antidepressants, it typically takes two to four weeks to reach therapeutic levels and several different medications to find the correct “fit”. If treatment is effective, it is still vital to continue unless otherwise advised by a healthcare professional, especially in the case of antidepressants as withdrawal symptoms may occur. Positive benefits from each of the aforementioned treatment options have been reported; however St. John’s Wort has not been FDA approved and there exist “serious concerns about its safety” (NIHM, n.d.). Beyond treatment, there are several lifestyle changes that may provide aid during treatment such as exercise and surrounding oneself with loved ones. Yet 70-80% of young people and young adults do not receive the appropriate mental health care (Wei et al, 2015).
With that in mind, depression, especially in the younger population, still remains an area in dire need of addressing. Among adolescents and young adults, untreated depression is a strong indicator of lower occupational achievements, dysfunctional interpersonal and family function, as well as decreased life expectancy due to an increase associated medical conditions (Wei et al, 2015). Currently, ¾ of US high schools implement a mandatory suicide prevention program; however, these programs typically do not address mental health nor its correlation to suicide risk (Swartz et al, 2007), yet 70-75% of mental health problems identified in adults began to manifest during their adolescence or early adulthood. During this time, students typically spend a significant portion of their day at school with their teachers rather than at home with their parents and thus teachers may see more indicators than those in the household. Therefore teachers occupy a special position in which can provide this early identification and intervention that is vastly important as it can significantly reduce depressive symptom as well as depression’s effects on academics and occupational performance (Kuo et al, 2013). In addition to teachers’ advantage in early identification, schools also provide a setting that can better serve students with a wide variety of backgrounds who may otherwise have limited access mental illness resources. The fact that depression often manifests during adolescence and the importance of early intervention combined with teachers’ advantage in acting upon the situation highlights the critical role that teachers may play in mitigating the upsurge of student depression.

As of now, there is a dearth of literature regarding teachers and their knowledge of depression. However, in order for teachers to fulfill their potential as front-line intervention personnel, they must show an acceptable level of competence in the area. Thus, educational programs regarding depression and intervention might need to be implemented for teachers. These programs would be doubly beneficial as they will also help destigmatize depression and
treatment thus reducing an additional barrier for students seeking help (Swartz, et al, 2007). Having a baseline knowledge indicator would allow program developers to tailor a more effective training course for pre-service teachers and those already in the field.

**Methods and Data Sources**

**Participants**

The participants in this study were 55 undergraduate students (pre-service teachers) in the fall semester of their junior year at a university in the Southwestern USA in the elementary education teacher preparation program. The pre-service teachers’ demographics included female \( n=50 \) and male \( n=5 \). The pre-service teachers ranged in age from 18-34 (See Table 1).

Table 1. Age of Preservice Teachers

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>28</td>
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<td>21</td>
<td>8</td>
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<td>22</td>
<td>6</td>
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<tr>
<td>24</td>
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</tr>
<tr>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>34</td>
<td>1</td>
</tr>
</tbody>
</table>

Racially, the demographics were reported as the following: White (57.5%), American Indian/Alaska Native (9.6%), Asian (9.6%), Biracial/Mixed (9.6%), or Other (13.5%).

Ethnically, 67.9% described themselves as Not Hispanic or Latino and 32.1% identified as
Hispanic or Latino. All of the pre-service teachers were enrolled in the elementary teacher education program, with 74.5% enrolled in the general program and 25.5% enrolled in the Bilingual/English as a Second Language endorsement program. We are in the process of collecting additional data which includes participants in secondary education.

Instruments

This study employed a mixed methodology design with data collected from two sources. In this proceedings paper, we will only be reporting on the quantitative data sources since we are still in the processes of analyzing. Qualitative results will be shared at the HICE 2017 conference presentation.

Surveys. The primary data source was the Multiple Choice Question (MCQ) Instrument to test knowledge of depression and its treatments in individuals suffering from depression developed by Gabriel & Violato (2009). The MCQ was developed using items based on empirical evidence from an extensive review of the literature, theoretical knowledge, and in consultation with national and international psychiatry experts. The survey consists of 27 items and is reported as having an internal consistency of 0.68. The instrument consists of 27 multiple choice questions that were broken into the following subscales: “Definition (5 items), risk of relapse (2 items), etiology (2 items), presentation and symptoms (6 items), and biological and psychological treatments (12 items).” Due to a technical difficulty, responses to question number 21 were not recorded and thus are not reported in the results.

Qualitative data source. Data were collected through two focus groups using a semi-structured interview protocol, each lasting 30-40 minutes. Interviews were recorded and later transcribed verbatim.

Analysis
Qualitative data sources will be analyzed using induction methods to identify common themes across the pre-service teachers’ responses to the focus group questions (LeCompte & Preissle, 1993). Data triangulation, peer review, and member checking were used to support the trustworthiness of the data, and a search for negative cases. Descriptive statistics are reported for the survey data.

Results

For the MCQ survey data, we report the percentage of correct responses for each question as well as the percentage of responses for the three incorrect responses (see Appendix B). In addition, we have identified four categories based on the responses (see Table 2).

Table 2. Categories Identified

<table>
<thead>
<tr>
<th>Category</th>
<th>MCQ Items</th>
<th>Percent Correct (%)</th>
<th>Percent Incorrect (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview (Definition/ Risk Factors/ Demographics)</td>
<td>1, 2, 3, 4, 5, 6, 7, 11</td>
<td>67.95</td>
<td>32.05</td>
</tr>
<tr>
<td>Causes and Symptoms</td>
<td>8, 9, 10, 12, 13, 14, 15</td>
<td>82.33</td>
<td>17.67</td>
</tr>
<tr>
<td>Types of Treatment</td>
<td>18, 22, 27</td>
<td>57.76</td>
<td>42.24</td>
</tr>
<tr>
<td>Logistics of Antidepressants</td>
<td>7, 16, 17, 19, 20, 23, 24, 25, 26</td>
<td>62.42</td>
<td>37.58</td>
</tr>
</tbody>
</table>

These categories were split in this fashion in order to better understand the baseline knowledge of what depression is, its causes and symptoms, and treatment options and processes. These aspects are important, especially to pre-service teachers, because in order for them to make a meaningful impact in depression intervention among their students, they must have a solid understanding of what depression is and who is more likely to be at risk, how to recognize it via symptoms/signs, and what the process of recovery is like so they can be understanding and provide support from an educated point of view.
Discussion

At the present time, data was collected and analyzed only for preservice elementary school teachers. Although most often, the approximate onset of depressive disorders is at about 11 to 14 years. (JUSTIFY WHY ELEMENTARY)

The authors argue that given the levels of misconceptions that exist among the future teacher population, opportunities for depression awareness education through teacher preparation programs or professional development should be offered to pre-service and in-service teachers. In addition, policies should be developed that would require mental health education programs at the middle and high school level, thus equipping all students with knowledge about depression prior to their college experience. Currently, a number of US high schools mandate some type of suicide prevention program; however, these programs often neglect to explain depression or mental health and their association with suicide (Swartz et al, 2007). As educators, it is critical that classroom teachers understand depression in the case that it may arise among their students.

Implications

Teachers should act as a front line intervention-personnel for the reasons described above; however, their role is not to provide counseling as their priority is still educating the class as a whole and they are not professionally trained to do so. The role of teachers in terms of depression among students would be to identify depression as early as possible, refer them to appropriate resources, and, if need be, act as a bridge between home and school. Their current knowledge of depression, bolstered with knowledge from training programs, would better prepare teachers for this role.
However, the data collected limits baseline knowledge to pre-service teachers in elementary while need is highest in secondary education. More research would be needed in gathering a baseline for those pursuing a career in high school and middle school teaching. Once data for these demographics are accumulated, programs can be implemented and teachers would have the ability to act as front line interveners, resulting in early treatment for students and subsequent improvement in their condition and academic achievement.

References


Appendix A

Multiple Choice Question (MCQ) Survey to Test Knowledge of Depression and Its Treatments in Patients Suffering from Depression

(Survey Administered Through Google Forms)

From:

Thank you for taking the time to fill out this survey on knowledge about depression. We appreciate your time!

Demographics Questions (section added to original MCQ survey)

1. What is your age? _____ (Text Box)

2. With what gender do you identify? (Choice)
   a. Male
   b. Female

3. How do you identify racially? (MC)
   a. American Indian/Alaska Native
   b. Asian
   c. Black or African American
   d. Native Hawaiian or Other Pacific Islander
   e. White
   f. Biracial or Mixed

4. How would you describe your ethnicity? (MC)
   a. Hispanic or Latino
   b. Not Hispanic or Latino

5. What is your current teacher education program? (MC)
   a. Early Childhood/Special Education
   b. Elementary Education
   c. Elementary Education/Special Education
   d. Elementary Education/STEM
   e. Elementary Education/BLE or ESL
   f. Secondary Education
g. Educational Studies
h. Education Exploratory
i. Other

6. In what term of your program are you currently in? (MC)
   a. Term 5
   b. Term 6
   c. Term 7
   d. Term 8

Multiple Choice Knowledge Questionnaire

1. Which of the following statements about clinical depression is FALSE?
   a. It is a medical disorder.
   b. It is a weakness of character.
   c. It is a common psychiatric disorder.
   d. It affects both males and females.

2. What is the risk of death by suicide among depressed patients?
   a. The risk is very minimal.
   b. The risk is between 15% and 50%.
   c. The risk is below 15%.
   d. The risk is above 50%.

3. What are the lifetime chances of becoming clinically depressed?
   a. One in 1000
   b. One in 50
   c. One in 3
   d. One in 1

4. Which of the following is TRUE about the age of onset of depression?
   a. Depression does not begin in adolescence
   b. Depression can start in childhood or adolescence.
   c. Depression appears for the first time in middle-aged people.
   d. Depression does not affect young children.

5. Which of the following, about sex differences in depression is TRUE?
   a. Only women get depressed.
   b. Clinical depression is more common in women than men.
c. Clinical depression is more common in men than women.
d. Only men get depressed.

6. Which of the following is FALSE about the relapse of clinical depression?
a. The number of previous episodes of clinical depression increases the chances of subsequent episodes.
b. After the first episode of clinical depression, there is an increased risk of a second episode.
c. Maintenance treatment can reduce the chances of relapse.
d. After recovery, there is zero risk for recurrence.

7. Which of the following behavior is associated with poor outcome?
a. Taking antidepressant treatments regularly
b. Being involved in talk therapy (psychotherapy)
c. Staying sober
d. Stopping antidepressant medications if feeling well

8. What factors may trigger the onset of clinical depression?
a. Biological factors, such as genes
b. Psychological factors such as having marital problems
c. Social factors such as losing a job
d. All of the above

9. Depression may be triggered by all the following EXCEPT:
a. Prolonged severe grief over loved ones
b. Taking antidepressants
c. Certain medical conditions
d. The birth of a new baby

10. The following are indications of clinical depression EXCEPT:
a. Changes in sleep patterns
b. Poor concentration
c. Frequent crying for no obvious reasons
d. Occasional sadness

11. Which is NOT true about the differences between depression and a passing blue mood?
a. People with depression can "pull themselves together"
b. Depression can be much more disabling in day-to-day functioning.
c. Patients who are clinically depressed look sad.
d. Without treatment, symptoms of clinical depression can last for weeks, months, or years

12. All of the following are recognized symptoms of clinical depression EXCEPT:
a. Marked loss of interests.
b. Excessive sleep
c. Loss of energy
d. Good concentration

13. Which of the following is NOT a symptom of clinical depression?

a. Restlessness
b. Changes in appetite
c. Good decision making
d. Lack of energy

14. All of the following are typical of patients suffering from clinical depression EXCEPT:

a. Negative thinking that can lead to self-defeating or suicidal behavior
b. Mental fatigue and the inability to solve complicated problems
c. Marked forgetfulness
d. Normal memory

15. Which is NOT a common symptom of clinical depression?

a. Poor motivation
b. Normal energy
c. Guilty thoughts
d. Fatigue

16. Which of the following statements about the speed of response to the treatment with antidepressants is FALSE?

a. Symptoms improve immediately after treatment is begun.
b. Many antidepressants may take several weeks to start to work.
c. It is important to continue taking medication even if there is initial improvement.
d. Not all symptoms respond to antidepressants at the same rate.

17. If medication does not improve depressive symptoms, one should:

a. Stop taking all medication.
b. Talk to a health care professional.
c. Double the pills.
d. Ask friends about what to do.

18. Which is NOT a recognized treatment for clinical depression?

a. Medication
b. Talk therapy.
c. Light therapy (photo-therapy).
d. Kickie therapy
19. Which is NOT a common side effect antidepressant drugs?

a. Upset stomach
b. Sleep disturbances
c. Sexual side-effects (e.g. problems with sexual desire or orgasm)
d. Feelings of depression

20. Which is FALSE about the effectiveness of antidepressant medications?

a. About 30-40% of patients do not respond to the initial treatment.
b. Moderate symptom improvement may take few weeks to be achieved in those who will respond.
c. Using more than one antidepressant may be necessary for some patients.
d. Recovery of symptom can be achieved in all depressed patients

21. What should one do if one's first antidepressant medication fails?

a. Consult one's doctors
b. Take sleeping pills
c. Drink more alcohol
d. Use magnetic therapy

22. Which is FALSE about Electric Convulsive Therapy (ECT) for treating clinical depression?

a. It is proved to be effective.
b. It is a safe method.
c. It is no longer used for treating depression.
d. It is given under general anesthesia.

23. If one feels better during the course of treatment, one should

a. Stop taking antidepressant medication.
b. Discuss the course of antidepressants treatment with doctor.
c. Reduce the antidepressant dose by half.
d. Start a course of herbal treatment.

24. Which is NOT a common occurrence during treatment with antidepressants?

a. Gaining weight
b. Severe continuous headaches
c. Feeling sleepy
d. Sweating

25. Which is FALSE about the response to treatment with antidepressants?

a. Up to 80% of people with depression do get better with the right medication.
b. Most people with depression need to be treated for at least six to nine months to prevent relapse.
c. For some people, it is necessary to stay on medication for long-term maintenance therapy.
d. If the acute depressive symptoms are relieved, the patient should stop antidepressants.

26. Which is FALSE about selecting the right antidepressant for someone with depression?
   a. There are no available laboratory tests to guide doctors' choices for treating clinical depression.
   b. Different people have different responses to antidepressants.
   c. Doctors can tailor antidepressants to suit the symptoms of individual patients.
   d. Doctors can always tell beforehand how a person is going to respond to the medication they prescribe.

27. Psychotherapy can help many people with depression. Which of the following statements about psychotherapy is FALSE?
   a. Both individual and group talk therapy provides an opportunity to express and discuss thoughts and feelings with the therapist.
   b. Therapy may help to resolve life issues that may contribute to depression.
   c. All depressed individuals benefit from psychotherapy.
   d. In psychotherapy, negative, and self-defeating thoughts can be replaced by more positive, realistic thoughts.
## Appendix B

### Overall Pre-service Teachers’ Responses

<table>
<thead>
<tr>
<th>Questions</th>
<th>Key</th>
<th>Percent Correct (%)</th>
<th>Percent Incorrect (%)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Which of the following statements about clinical depression is FALSE?</td>
<td>B</td>
<td>89.1</td>
<td>10.9</td>
<td>5.5</td>
<td>89.1</td>
<td>5.5</td>
<td>0.0</td>
</tr>
<tr>
<td>2. What is the risk of death by suicide among depressed patients?</td>
<td>B</td>
<td>70.9</td>
<td>29.1</td>
<td>0</td>
<td>70.9</td>
<td>5.5</td>
<td>23.6</td>
</tr>
<tr>
<td>3. What are the lifetime chances of becoming clinically depressed?</td>
<td>C</td>
<td>56.4</td>
<td>43.6</td>
<td>1.8</td>
<td>41.8</td>
<td>56.4</td>
<td>0.0</td>
</tr>
<tr>
<td>4. Which of the following is TRUE about the age of onset of depression?</td>
<td>B</td>
<td>90.9</td>
<td>9.1</td>
<td>1.8</td>
<td>90.9</td>
<td>7.3</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Which of the following, about sex differences in depression is TRUE?</td>
<td>B</td>
<td>78.2</td>
<td>21.8</td>
<td>0</td>
<td>78.2</td>
<td>21.8</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Which of the following is FALSE about the relapse of clinical depression?</td>
<td>D</td>
<td>36.4</td>
<td>63.6</td>
<td>5.5</td>
<td>30.9</td>
<td>27.3</td>
<td>36.4</td>
</tr>
<tr>
<td>7. Which of the following behavior is associated with poor outcome?</td>
<td>D</td>
<td>74.5</td>
<td>25.5</td>
<td>10.9</td>
<td>7.3</td>
<td>7.3</td>
<td>74.5</td>
</tr>
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<td>8. What factors may trigger the onset of clinical depression?</td>
<td>D</td>
<td>96.4</td>
<td>3.6</td>
<td>1.8</td>
<td>1.8</td>
<td>0</td>
<td>96.4</td>
</tr>
<tr>
<td>9. Depression may be triggered by all the following EXCEPT:</td>
<td>B</td>
<td>72.2</td>
<td>27.8</td>
<td>1.9</td>
<td>72.2</td>
<td>11.1</td>
<td>14.8</td>
</tr>
<tr>
<td>10. The following are indications of clinical depression EXCEPT:</td>
<td>D</td>
<td>61.8</td>
<td>38.2</td>
<td>5.5</td>
<td>23.6</td>
<td>9.1</td>
<td>61.8</td>
</tr>
<tr>
<td>11. Which is NOT true about the differences between depression and a passing blue mood?</td>
<td>A</td>
<td>47.3</td>
<td>52.7</td>
<td>47.3</td>
<td>12.7</td>
<td>32.7</td>
<td>7.3</td>
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<tr>
<td>12. All of the following are recognized symptoms of clinical depression EXCEPT:</td>
<td>D</td>
<td>85.5</td>
<td>14.5</td>
<td>7.3</td>
<td>1.8</td>
<td>5.5</td>
<td>85.5</td>
</tr>
<tr>
<td>13. Which of the following is NOT a symptom of clinical depression?</td>
<td>C</td>
<td>89.1</td>
<td>10.9</td>
<td>1.8</td>
<td>7.3</td>
<td>89.1</td>
<td>1.8</td>
</tr>
<tr>
<td>14. All of the following are typical of patients suffering from clinical depression EXCEPT:</td>
<td>D</td>
<td>81.8</td>
<td>18.2</td>
<td>1.8</td>
<td>9.1</td>
<td>7.3</td>
<td>81.9</td>
</tr>
<tr>
<td>15. Which is NOT a common symptom of clinical depression?</td>
<td>B</td>
<td>90.9</td>
<td>9.1</td>
<td>3.6</td>
<td>90.9</td>
<td>5.5</td>
<td>0.0</td>
</tr>
<tr>
<td>16. Which of the following statements about the speed of response to the treatment with antidepressants is FALSE?</td>
<td>A</td>
<td>72.2</td>
<td>27.8</td>
<td>72.2</td>
<td>9.3</td>
<td>7.4</td>
<td>11.1</td>
</tr>
<tr>
<td>17. If medication does not improve depressive symptoms, one should:</td>
<td>B</td>
<td>92.7</td>
<td>7.3</td>
<td>1.8</td>
<td>92.7</td>
<td>3.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Question</td>
<td>Option</td>
<td>Correct Answer</td>
<td>Probability</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Which is NOT a recognized treatment for clinical depression?</td>
<td>D</td>
<td><strong>52.7</strong></td>
<td>47.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Which is NOT a common side effect antidepressant drugs?</td>
<td>D</td>
<td><strong>36.4</strong></td>
<td>63.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Which is FALSE about the effectiveness of antidepressant medications?</td>
<td>D</td>
<td><strong>50.9</strong></td>
<td>49.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Which is FALSE about Electroconvulsive Therapy (ECT) for treating clinical depression?</td>
<td>C</td>
<td><strong>50.9</strong></td>
<td>49.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. If one feels better during the course of treatment, one should</td>
<td>B</td>
<td><strong>89.1</strong></td>
<td>10.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Which is NOT a common occurrence during treatment with antidepressants?</td>
<td>B</td>
<td><strong>29.1</strong></td>
<td>70.9</td>
<td></td>
<td></td>
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<td>25. Which is FALSE about the response to treatment with antidepressants?</td>
<td>D</td>
<td><strong>50.9</strong></td>
<td>49.1</td>
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<td>26. Which is FALSE about selecting the right antidepressant for someone with depression?</td>
<td>D</td>
<td><strong>50.9</strong></td>
<td>49.1</td>
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<td>27. Psychotherapy can help many people with depression. Which of the following statements about psychotherapy is FALSE?</td>
<td>C</td>
<td><strong>69.1</strong></td>
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Worldviews and Conceptualizations of Teaching, Learning, and Inquiry in Two Teacher Preparation Programs

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Overview
This study analyzes the worldviews and conceptualizations of teaching, learning, and inquiry held by students in an education major, and in a teacher preparation program for non-education majors. It dives deep in analyzing the intricate relationships between worldviews, conceptualizations, and metaphors. Understanding these relationships can inform teacher preparation programs in development of methodologies by which to engage students in critical reflection regarding their own worldviews and conceptualizations in which their teaching practices will be grounded.

The purpose of this study is to investigate the nature of worldviews regarding teaching, learning and inquiry held by students in two different forms of teacher preparation programs. An investigation along these lines was conducted by Hammrich (1998) to investigate worldviews in teacher preparation programs following Shuell’s (1992) finding of two worldviews:

In 1992 Teaching and Teacher Education published an article entitled, ’The Two Cultures of Teaching and Teacher Preparation,’ by Thomas J. Shuell. In this article, Shuell investigated the existence of two different worldviews in prospective secondary education teachers. He sought to examine the orientation of students majoring in the sciences and mathematics versus students majoring in English, literature, and history. Shuell’s analysis revealed the presence of two distinct worldviews among the students majoring in the different disciplines. He found that students majoring in science and mathematics valued worldviews aligned with traditional positivists views of scientific thinking and devalued the learning of the humanities and more aesthetic studies such as Art, history, English. (p. 19)

Hammrich’s study found that “pre-service elementary teachers showed two very distinct worldviews based on whether they were in a four-year traditional education program or a five-year education program where their major was outside education” (p. 32). Since those studies, research on worldviews and conceptualizations of teaching, learning, and inquiry have contributed to the literature (Vosniadou & Mason, 2012; Hager & Hodkinson, 2009; Alger, 2009). Furthermore, there is evidence that despite decades of progress, students’ worldviews and conceptualizations often do not align with those held by experts (Meyer, Shanahan, & Laugksch, 2005; Kincheloe, 2005).

Like previous studies, this study analyzes the worldviews and conceptualizations of teaching, learning, and inquiry through analysis and comparison of rich data from students in two teacher preparation programs: an education major, and a teacher preparation program for non-education majors. However, it dives deeper by analyzing the intricate relationships between worldviews, conceptualizations (of teaching, of learning, and of inquiry), and metaphors.
Theoretical Framework
A theoretical framework was developed by the authors to describe the relationships between metaphor, analogy, worldview, and practice.

Worldviews
Research on worldviews and conceptualizations of teaching, learning, and inquiry have contributed to the literature (Vosniadou & Mason, 2012; Hager & Hodkinson, 2009; Alger, 2009). Furthermore, there is evidence that despite decades of progress, students’ worldviews and conceptualizations often do not align with those held by experts (Meyer, Shanahan, & Laugksch, 2005; Kincheloe, 2005). Worldviews are mental frameworks of assumptions, ideas, and behaviors informing the way reality is perceived (Kearney, 1984).

Metaphors and Analogies
Worldviews consist of constellations of metaphorical concepts covering a particular domain (Lakoff & Johnson, 1999). Worldviews are dependent on metaphors and analogies (Lakoff & Johnson, 1980; Kearney, 1984; Hofstadter & Sander, 2013).

Many researchers in education and related fields have conceptualizations of learning grounded in a construction metaphor of learning: meaning is individually, collaboratively, and collectively constructed (e.g., Bruner, 1996; Collins & Halverson, 2009; Kafai & Burke, 2014; Papert & Harel, 1991; Stahl, Koschmann, & Suthers, 2014; Bransford, Brown, & Cocking, 2000; Kincheloe, Steinberg, & Tippins, 1999; Hofstadter & Sander, 2013; Lakoff & Johnson, 1980; Kearney, 1984; Deignan, 2010). People outside these domains tend to have conceptualizations of learning grounded in a transfer/acquisition metaphor of learning (Bruner, 1996; Kincheloe & Steinberg, 1998; Papert & Harel, 1991; Freire, P., Freire, A. M. A., & Barr, 2014).

The transfer/acquisition metaphor sees knowledge as consisting of discrete entities, and learning as the transfer of those entities from authoritative sources such as teachers and books into the minds of learners. This metaphor is the dominant metaphor in society today (Hager & Hodkinson, 2009) and is rarely recognized as a metaphor: “So fixed are acquisition and transfer in the popular mind that this conceptual lens can be dubbed the ‘common-sense account of learning’” (p. 622).

The construction metaphor of learning has origins in the work of Piaget who saw learning as the construction of meaning within learners’ individual minds (Kincheloe, Steinberg, & Tippins, 1999). Vygotsky and Bruner introduced a social dimension: “The ‘reality’ that we impute to the ‘worlds’ we inhabit is a constructed one. . . . Reality construction is the product of meaning making shaped by traditions and by a culture’s toolkit of ways of thought.” (Bruner, 1996, p. 19).

Worldviews, Metaphors, and Practice
The relationship between metaphors, worldviews, and conceptualizations of learning can be interpreted through an iceberg metaphor (see Figure 1). The structures and processes of the subconscious mind—the part of the iceberg beneath the surface—consist of metaphors, worldviews, and conceptualizations. These structures and processes are fueled by analogy. Observable phenomena—the tip of the iceberg—such as what we do, what we say, what we can and cannot see, and what we deem relevant are the operationalization of our conceptualizations and the worldviews and metaphors in which they are grounded.
People with a *transfer/acquisition* metaphor of learning (Figure 2) tend to have substantially different worldviews and conceptualizations from people with a *construction* metaphor of learning (Figure 3), leading to observable phenomena in the domains of practices, communication, cognitive
filtering, and values. For instance, a person with a *transfer/acquisition* metaphor of learning may tend toward learning practices involving lectures, drill-and practice, and tests. Communications regarding learning may tend to be dominated by terms such as acquire, achievement, assessment, measurement, outcomes, evidence, and standards. Cognitive filtering may prevent this person from seeing multiple perspectives and socio-historical context, but instead may focus on proven facts and learning which can be objectively observed and analyzed. Values regarding learning may tend to emphasize rigor, high standards, accountability, evidence, and a system of rewards and punishments (Kliebard, 1995; Collins & Halverson, 2009; Croft, Roberts, & Stenhouse, 2016; Freire, P., Freire, A. M. A. j., & Barr, 2014; Hager & Hodkinson, 2009).

Figure 2: Prototypical Person with a Transfer/Acquisition Metaphor of Learning
A person with a construction metaphor of learning (Figure 3) may tend toward learning practices involving collaboration, project-based learning, student-directed learning, and metacognitive practices. Communications regarding learning may tend to be dominated by terms such as collaborate, construct, interpret, creativity, engagement, and motivation. Cognitive filtering may prevent this person from seeing absolutes and “common sense reality,” but instead may focus on exploration, deconstructing socio-historical reality, and critical analysis. Values regarding learning may tend to emphasize learner agency, diversity, social justice, creativity, and individuality (Kincheloe, 2003; Kincheloe, Steinberg, & Tippins, 1999; Ohanian, 1999; Papert & Harel, 1991).

Figure 3: Prototypical Person with a Construction Metaphor of Learning
Understanding these relationships can inform teacher preparation programs in development of methodologies by which to engage students in critical reflection regarding their own worldviews and conceptualizations in which their teaching practices will be grounded (Kincheloe, 2003).

**Research Questions**

What is the nature of the worldviews regarding teaching, learning, and inquiry held by students in each teacher preparation program?

What are the similarities and differences between the worldviews regarding teaching, learning, and inquiry held by students in the two types of programs?

What is the nature of the relationships between worldviews, conceptualizations, and metaphors?

**Research Methodology**

This study uses multi-case study methodology with grounded theory coding strategies.

**Data Collection**

Teacher candidates enrolled in two different teacher preparation programs will be asked to do two things:

1. Give two short (2-3 minute) audio responses answering the questions: “What is learning?” and “What is inquiry?”
2. Write papers describing themselves as learners in two different discipline courses—one in which they did well, and one in which they did less well. Regarding each course, they will be asked to address a) their background knowledge and experience, b) how they go about preparing for class and assignments, c) the learning strategies they used, d) mode of instruction (i.e., inquiry-based, direction instruction, collaborative learning), e) the role played by their feelings and emotions about each subject, and f) the impact (both good and bad) that teachers and/or other persons made to their learning.

Audio responses will be transcribed and the audio files destroyed.

**Analysis**

Data from the two teacher preparation courses will constitute the two cases in this study. Analysis will be conducted at three levels: 1) individual participant response analysis, 2) within-case analysis, and 3) between case analysis. Responses will be coded in MAXQDA qualitative analysis software. Grounded theory techniques will be used, including constant comparative analysis, open coding, axial coding, and selective coding. Analysis will be conducted independently by all researchers and compared for inter-rater reliability. Grounded theory analysis will attempt to identify themes and categories to describe the nature of the worldviews regarding teaching and learning within and across the two cases. In addition, metaphor analysis will be conducted to identify and describe the metaphors of learning, metaphors of mind, and metaphors of education which may relate to particular worldviews of teaching and learning. Overall findings will be compared to findings of a similar study conducted two decades earlier (Hammrich, 1997).

**Potential Findings**

We expect our findings to contribute to the literature in understanding the complex relationship between worldviews, conceptualizations, and metaphors held by future educators. Our analysis may
also reveal potential strategies for engaging students in critical reflection regarding the worldviews, conceptualizations, and metaphors upon which their teaching will be grounded.

References


Shifting Conceptualizations of Science through Cooperative Controversy

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Overview
This study investigates the impact of a cooperative controversy activity on participants’ conceptions of the nature of science. Conceptions teachers hold has a direct impact on their practices and thoughts regarding doing, understanding, and teaching science. Engaging them in critical reflection is a crucial aspect of preparing the next generation of teachers to cultivate conceptualizations of science more closely aligned with those held by scientists and to engage their students in transformational critical constructivist learning.

This study will investigate the short-term impact of a cooperative controversy in-class activity on participants’ conceptions of the nature of science. Conceptions teachers hold about the nature of science has a direct impact on their practices and thoughts regarding doing, understanding, and teaching science (Smith, 1990; Kearney, 1984; Lakoff & Johnson, 1999; Kincheloe, 2003). Helping students in teacher preparation programs to engage in critical reflection regarding their conceptualizations of science is a crucial aspect of preparing the next generation of teachers to cultivate conceptualizations of science more closely aligned with those held by scientists (Meyer, Shanahan, & Laugksch, 2005) and to engage their students in transformational critical constructivist learning (Kincheloe, Steinberg, & Tippins, 1999). Instructional strategies aimed at facilitating conceptual change are the subject of increasing research interest (diSessa, 2014; Kalra & Baveja, 2012; Sinatra & Chinn, 2012; Vosniadou & Mason, 2012).

Instructional strategies aimed at facilitating conceptual change are the subject of increasing research interest (diSessa, 2014; Kalra & Baveja, 2012; Sinatra & Chinn, 2012; Vosniadou & Mason, 2012). Cooperative Controversy is an instructional strategy which has been shown to be an effective approach to engaging students in critical reflection, often leading to conceptual shift and enhanced critical thinking (Jacobs, 2010; Hammrich, 1998; Johnson et. al. 1985; Scharman, 1990; Solomon et al. 1992).

This study will analyze participant conceptualizations of science before and after engaging in a cooperative controversy activity. Furthermore, it will compare findings between participants who are students in an education major teacher preparation program and those in a non-education major teacher preparation program.

Research Questions
How do participants define their conceptualizations of science prior to engaging in a cooperative controversy activity?
How do participants define their conceptualizations of science after engaging in a cooperative controversy activity?
Does participation in a cooperative controversy activity have a short-term impact on participants’ conceptualization of science?
In what ways are conceptualizations of science (both prior to, and after engaging in a cooperative controversy activity) different and similar between participants who are students in an education major and those who are students in non-education majors.

Research Methodology
This study uses multi-case study methodology.

Data Collection
Students in one course each in two teacher preparation programs will participate in a cooperative controversy lesson designed to reveal and challenge their conceptions of the nature of science. Participants will write down their conceptions of the nature of science prior to and immediately following the cooperative controversy activity.

**Analysis**

Responses will be analyzed by content analysis measuring patterns and trends on how students define the nature of science. Analysis will be conducted independently by both researchers and compared for inter-rater reliability. Pre-intervention response analysis findings will be compared to post-intervention response analysis findings to determine short-term impact (change over time). Findings will be compared between participants who are students in an education major teacher preparation program and those in a non-education major teacher preparation program. Findings will also be compared with literature in the fields of conceptual change and conceptualizations of science, including Thagard & Findlay (2012), Thagard (2014), Sinatra & Pintirich (2003), Pintrich & Sinatra (2003), Koponen (2014), Jaber & Hammer (2016), Gentner et al (1997), and Amin (2009). Overall findings will be compared to findings of a similar study conducted two decades earlier (Hammrich, 1998).

**Potential Findings**

We expect our findings to contribute to the literature in understanding the nature of conceptualizations of science along three dimensions: 1) conceptualizations before engaging in critical reflective activity regarding conceptualizations of science, 2) conceptualizations after engaging in critical reflective activity, and 3) conceptualization patterns between education majors and non-education majors.

**References**


Importance of the Piano Repertoire and the Attitude towards its Formation - Approach, Figuration, Options

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SUMMARY
This work aims to assist the performer in compiling, figuration and maintaining a repertoire fund. The presented cogitations and conclusions are based on the author’s long personal experience as a pedagogue and a concert pianist.

The artistic results prove that the chosen method functions correctly, which gives the researcher a reason to recommend it and put it in practical use in her teaching and concert activities.

OBJECTIVES
Research objective is to help build a broad-spectrum profile covering a repertory in a large historical range, as an overview of classical music in the broadest sense. A conscious repertoire "policy" is of great importance for the professional and also for an amateur, who, under certain circumstances could transform his or her "hobby" into a "profession". (Ivanova, 2009)
It also is a kind of management and marketing of the intellectual property, which our repertoire in fact is.

METHODOLOGY
Using the holistic approach in our methodology, we are looking for a comprehensive vision regarding the repertoire, which will help us rethink it in perspective and depth. We emphasize not on the quantity only, but on the quality of the products, according the individual abilities, (Ivanova, 2015) whether address it to professionals or hobbyists, similar to small or large construction works, with adequate project, materials, investment and work required.

ANALYSIS
If we are allowed to paraphrase God’s Word, we come to the following parallel:"By their repertoire ye shall know them!" Indeed, its selection fully reveals the taste, the preferences, the nature, and ultimately, the personality of the musician. The basic positions that we highlight here are related to the formation, structuring and storage of the personal piano repertoire, as archive and reserve. Its accumulation lasts a lifetime and it should, in conscious age, and before that - with the help of the educator be methodically organized and meaningful over time. It is desirable that the teacher has "played through" almost the entire piano literature in order to know it. The teacher’s ability to react a prima vista-at a glance- and his or her suggestive example of a practicing pedagogue (Neuhaus, 1958 ) (except if a personal desire or "force majeure" reasons
have not suspended his or her performers practice) is crucial for building a lasting paradigm in
the mind of the young pianist. J. S. Bach’s teaching method was often expressed by the removal
of the student from the chair and taking position in front of the instrument by himself, instead of
rushing in excessive reflections. The personal and artistic paradigm of my teacher Professor
Nikolai Evrov/Bulgarian National Academy of Music, Sydney Conservatorium/ as an outstanding
pianist and a wonderful pedagogue remains integral to us, who have had the chance to be his
disciples, like an endless source of inspiration and reflection. The urge and the idea of cultivating
a repertoire I also owe to my teacher.

Our goal here is not only to audit the vast piano literature funds, but using it as an inexhaustible
reservoir to be able to select a repertoire according to our preferences and to situate it
respectively combining and systematizing the available resources, including intended to be
absorbed in the future. In this sense, we should try to build a solid but flexible structure by using
its components, similar to building materials, such as bricks, panels, fixtures. We are not only
talking about the undergone repertoire played before, but mainly about the always available one,
including the standard testing and competition catalogue.

Therefore, the performor, and also the teacher need to have "read" and played, possibly, the entire
piano literature or to have tried to explore in depth. The material presented here is based on that
over the years has been sharpened and accumulated, subsequently to be created as selection,
structured in categories-a model reflecting the personal choice and the nature of the pianist. This
is the representative, the best of his/her production, which would act to promote and manifest the
musician in the best way. The artist should feel satisfied and fulfilled in the environment of a
preferred repertoire of favorite pieces, which provides and maintains creative confidence. That is
the "honey" of personal experience accumulated throughout challenging process of labour and
creativity until the present moment. Thus is formed a collection of masterpieces and at the same
time represents reserved trademark.

FINDINGS

On the management of the repertoire massif, we would recommend that it should be organized
and divided into several groups, respectively the classification of genres and formats, outlining
possible concert programs, depending on the timing and frequency of upcoming and regular
events. Each category could be considered as a segment with a corresponding core.

Due to the frequency of sharpening of a certain musical piece, we can create a system analogical
to a rotation around a fixed center of gravity: a wider orbit would mean a lower frequency of
work, and a smaller one, respectively – a higher frequency. As measure of time and a basis for
organization of the work process could serve a week. To achieve optimum levels of quality and
competitiveness in the creation and marketing of our products is essential to identify goals and
opportunities and thus to prioritize and sort your tasks in a strategic and tactical plan. To take into
consideration the needs of the moment, but also to be able to maintain minimum repertoire,
which we are able to perform at all time, without undue burden upon our psyche or altering dramatically our daily routine, except in special cases. To know the capacity and the amplitude of our repertoire storage, what is the maximum amount it can take and "bear", without becoming an extra-load or in "mission-impossible". The main thing we aim here is to rationalize our work process, to make it as effective as possible (Kurteva, 2006).

From the standpoint of our experience and concert practice, we would subdivide the repertoire massif to several main blocks and segments, providing at the same time by the proposed matrices unlimited options and models to be combined and regrouped in different categories.

1. Basic Piano repertoire - which we use in exams and competitions, and also as raw material for "construction" of recitals and themed concerts.

Here are meant full cyclic pieces, not just individual movements.

Under certain circumstances, however, it is acceptable to perform them such as independent pieces entered in certain aggregate programs or encores.

2. Shorter piano pieces of all genres, with duration in the range of miniature of 2-3 min. and not to exceed 5-6 minutes each.

I. Solo piano repertoire.

It includes solo pieces and sonatas, as well as highly artistic instructive literature, such as Etudes by F. Chopin, F. Liszt, C. Debussy, S. Rachmaninoff, A. Scriabin, I. Stravinsky, as well C. Czerny, M. Clementi, M. Moszkowski, etc.

II. Chamber Music

1. Sonates, Trios, Quartets, Quintets, etc.
2. Piano Ensembles - 4 hands, duos, etc.

III. Concertos with orchestra, including other solo instruments or vocals.

IV. Accompaniments of singers, instrumentalists, choral and other ensembles.

V. Entertainment repertoire - Lounge music

The object of this study is mainly piano repertoire, reflecting the programs outlined in the Appendix at the end. The samples list, illustrating our views on its formation, covers all major periods, styles and genre directions, conventionally structured in a manner, subjected to the specific field of expression or to another principle. In our overall repertoire we have at our disposal musical pieces that are not mentioned here, but we quote mainly what has been realized as videos or recent concert programs in the last few years, based on own solo participations’ experiences and ongoing activity. We express our views on the scheme of the available fund from the position of formatting, arranging programs, not on formal, even less, a commercial, but on an ideological principle.
Compilation of a concert program is an Art and responsibility.

Programming must be read and complied with the audience and the case, but considered on the binary principle of contrast or polarity (a term from linguistics), which maintains traction between the listener, respectively, the viewer and the artist, on one hand, as well as the very freshness of their perceptions on the other.

In regard of repertoire, as artists, we are going to allow ourselves several analogies and references to the primordial universal behaviors as related to clothing or food consumption and approach to them. There are unwritten fashion rules defining good taste of colors, silhouettes, jewelry and accessories selection, combining them with the appropriate for a certain case discrete or more intense makeup, all that shows class and style. Such is the workmanship in program compilation. The idea could be provocative, outrageous, and simply elegant or conservative in the conventional, but always distinguished.

The same applies, as simplistic as it may sound, to the repast, as appropriate, depending on the occasion. The menu should be varied, and the dose and the portions must comply with the quantity and necessary "calorie rates". For example, in front of public, which is away from things or its attention is engaged by a side event, like reception cocktail, speeches-needs a concert "assorted mix" of popular pieces where here and there could be "sprinkled" less listened plays with educational or aesthetic purpose, but embedded "mosaic" in the structure of the event rather than randomly. It also must be avoided accumulation (and intrusion) of the same taste sensation, though pleasant separately, like presented one after another, but too many wonderful sweets as the basis of a dinner. The same goes for too much salt. The food at a banquet should be easily digestible, and the concert program, too. Another analogy with nutrition, this vital process, focusing on life itself is: the audience should not be saturated. Whatever masterpieces are being served to the public, when the duration and taste range is exceeded disrupting the proportion, the result is poor—even opposite to the expectations. The audience should always be "thirsty" for more, and not sated and exhausted, looking forward to the end of the concert as masterly as it is, same the magnificent and varied, but too generous "heavy" dishes. The sense of measure is the benchmark of the class and wisdom, as always. What matters is the audience to become "hungry" for "more" what the word "encore" exactly means. Even served masterfully when the point of saturation is reached, this depreciates the process itself. In this connection, it is recommended we respect the golden rule of “golden mean”. The program generally should not exceed more than 60 minutes pure playing, divided into two relatively symmetrical parts, or in a "monolithic" form, without pause, respectively from 45 up to 50 minutes, unless other duration is explicitly requested. Such exceptions are allowed in certain cases, due to the organization of the event, according to its specificity. The program modifications depend on the case, genres, country, costumes, show-business practices, for ex. in Japan and China usually one and a half hour, variety shows 3X50 min. acts, etc. And respectively,—as a mini recital of 20-30 minutes within a
A seminar, illustrating a lecture, workshop or other parallel format, but surely having a thematic subject or landmark. The duration of maximum one hour is the optimal period to maintain the fitness of perceptions, the concentration and psychomotor endurance and freshness before the drop of the physical and emotional charge, both for performer and the audience. With all my respect and admiration for colleagues, creating great achievements within the reach of a few, performing integrals like 32 Sonatas by Ludwig van Beethoven or 48 Preludes and Fugues of Johann Sebastian Bach, here we do not reflect similar formats. Normally, such a project is subdivided into several concerts or recitals cycle. Here I must mention an exploit under whose impression I am still: the concert of the great Bulgarian Pianist Dr. Tsonka Al Bakri, Assoc. Professor at University of Jordan: In one evening she performed phenomenally in the First Part-J.S. Bach-Goldberg Variations (usually plaid by the other distinguished pianists but as unique composition in one concert) - and in the Second Part-the whole Opus. 28-Twenty Four Preludes by F. Chopin.

In this context, paying tribute to the integrated programs, it is better such sets to be recorded, so the listener should have a choice to select or stop, by own discretion, which is not possible in live concert. Therefore, it is necessary the two "genres" to be distinguished and respectively their content, too.

You must have at least three musical pieces for an encore, no matter how many times we will be acclaimed. If it comes to performance of all three of them, it is now marked success. If more is strongly desired we must be ready, anyway. Probably after the third time we must retire behind the stage with dignity and gratitude in order to keep desire for reunion with new or loyal audience. It is not necessarily for an encore pieces to be from the authors represented in the program, unless the intention expressly requires it. But it no need to be mechanically "sewn" simply for the convenience of the performer or concession towards the mass taste, although the latter should not be ignored, but following the concert outline as a whole, without creating the impression for its own sake “diversity” only and tastelessness. By all means, the encores must be unifying thematic thread of the program logically interwoven into it and better not exceed five minutes each.

The program content has to present the performer in a favorable light, but not at the price of negligence of the artistic creed and aesthetic appearance (Stoyanov, 1954). Elements alien to the concept of the program should not be tolerated. In all cases the performer has to control the process, knowing the psychology of the audience, its tendencies and traditions and to respect them, because the music is created for the people. The mission of the artist is to be a messenger, a mediator between the genius of the composer and the audience for whom this music was intended. But there must be feedback: to feel the place, the customs, "the subtleties" in communication between the musician and the environment in the hall. In any situation performer must fall into homogeneous, "coherent" mode to fit in it, to make contact and not to be in conflict. Like acts of egocentrism and originality focused on themselves, not in accordance with the specific trends, what threaten the intimate, fragile relationship podium-auditorium.
In front of strictly professional audience the criteria are different, with a view to the increased precision and expectations, where the selection should be organized upon an adequate basis. In any case, there must be the idea. We should not resort "mechanically" to programming clichés that would be more appropriate for an exam or competition. The chronological order is not always mandatory. Sometimes an atypical perspective that combines seemingly incompatible and incomparable pieces appears very appropriate in a more unfamiliar context.

The diversity, even in thematic programs should be leading principle, but always subjected to a certain invention, sometimes paradoxical, but justified. This rule must also be valid when making a selection of the so-called lounge music. It is known that its top examples, among which many masterpieces, are created in that time on demand and carried in their quality of "lounge music" in palaces halls and ballrooms.

The binary system- through the principle of contrast can be set as universal algorithm of correlations: on the format-large scaled or miniature, cyclic or sonata: regarding tempo and rhythm-opposing slow or fast plays, in terms of psychodynamics subsequent plays, such as slow-fast. It is better to start with a moderate in pace and articulation piece, for accommodation. Thus the pragmatic approach could be discreetly embedded in programming, for adaptation to the instrument, stage and acoustics. By all means, leading is the requirement for balancing style amplitude. The creative imagination, applied here, successfully coordinates the purposes and method. The paradox is that the more things we play, opposite in nature and amplitude, the more they complement and support reciprocally. Induction between various in shape and age pieces is schooling for forging a sense of style, art measurement as a whole, acquaintance with the gallery of personalities of the composers (Ilievksa, 1978). This differentiates the performer’s approach, giving it a real perspective and making the work interesting, thorough and skillful. Dealing with such a large musical spectrum, it constantly streamlines the growth of the pianist as an artist-virtuoso. Thus, with the experience acquired the concepts become mature.

Concerning the repertoire content, its components and maintenance, with good labor planning and organization, even the gap in time between learning time-period, performance moment is a positive factor to detect and eliminate "the loopholes" in the mind. Thus useful "fermentation" process is formed, generating new, straightforward motivation, which refreshes the repertoire of the upcoming stage presentation. (Al-Bakri, 1998). This aspect, contributing to the interpretation of the piece, is useful for the pianist’s development. So the outlined panoramic vision of the repertoire has a decisive impact in shaping the character and the creative individuality and uniqueness, in certain cases. This masters a sense of connection and belonging with "our" works, which helps the ability to "manage" the repertoire fund entirely and its constituent units.

We should be able to judge correctly about our capabilities and strength, how and what we can support. Our ability to plan our efforts is crucial for our readiness to respond to the moment. The pieces must be stored in such a condition and fitness so that we are able to present them in minimum on "demand"-that should be our management mode-to think over our repertoire in
perspective. It is good for the pianist to have at least two major solo programs available. I.e., as we mentioned above, the performer must be able, even on a "kaleidoscopic" manner, but necessarily analytical, to draw on the reserve, which refreshes, sharpens and maintains permanently. It might be an ad hoc program, expedient and reactive to the requirements of the occasion, and able to present the composer except through major concert form, but also through his miniatures, for example, the works of Beethoven, Chopin and other authors with a wide creative range (Shushulova, 2007).

Building a reliable system is the key concept for accumulation of repertoire for a certain period of time and maintaining it permanently. In practice, this might look in the following way: the pianist can form several groups of music literature, each of which to reflect a certain artistic intention, for example: for technological development – with artistic task sketches – Chopin, Liszt, Rachmaninoff, Scriabin, Stravinsky and others., piano exercises, plays with virtuous character – "development" plays, Toccata type or "Perpetuum mobile", as following:

- Polyphonic pieces
- Major works
- New material
- Concertos with orchestra
- "Quick Response" plays, available at any time.

Our goal is to help build such an organization and "hygiene" so that maintaining a large repertoire can be carried out by normal daily routine and efforts. The main point here is to embed and educate a sense of good condition and reliability in the personal options. We have to work in stages, properly dosed according to the individual specifics. The important thing is to make the schedule relatively to the macro- and micro- frames within a single period: year, month, week, and to establish the pattern of regular daily working load in this aspect. The essential is to keep practicing systematically and the presumption what to be included in the determined daily norm of the repertoire maintenance: technique exercises, polyphony, new pieces for learning, current concert program, preparation for new performances. No matter the specific parameters of the program matrix, the model must be structured in a way that allows us to change it periodically and adjust it flexibly to certain circumstances, compressed or expanded in time. How to develop our pianism is a subject to other works of the researcher.

**RECOMMENDATIONS**

A concert artist and a playing one, in general, should be in a state of permanent mobilization, alert and ready to react quickly to the commitments that arise ad hoc – here and now. Apropos, not a small number of global careers began catching a chance precisely in such a way. Every professional pianist with self-respect should be in a state of “stand by” and capable to play at
least a half, better-an hour-by heart. The author is in the permanent condition to play approximately 100 titles, or several hours live music. The latter requirement, or, desire, means that the performer masters and stores the music, which is a prerequisite for his or her stage confidence and hence - to the success. It is not good for the “pianistic honor” to refuse performance at the moment, asking for excuses or using the pretext of being in the process of preparing for the upcoming recital, followed of invitation to listen to the piece then. Often the real reason is the lack of courage due to creative discomfort, even for capable people that would be really unfortunate. Therefore we would be pleased if this present is useful to overcome such problems caused by the lack of experience in dealing with it. The key solution of this issue is to approach consciously in strategic and tactical plan.

We need to practice slowly and calmly, with motivation that every moment is essential for keeping lifelong what is once learned and reviewed. A solo repertoire is good to be memorized and maintained regularly with this attitude. It is recommended to work on the pieces in the same order against upcoming concert program. The recovery of a material to be approached with extreme caution, from the very initial learning of the musical text, knowing that absorbing the piece is for a lifetime with vision of its proper storage and preservation. Our work environment is an extremely important factor. The order of a well managed note lists, providing access at any moment to the desired composition, similar to an immaculately maintained household would have brought clarity same in our mentality.

In our opinion, the pianist must have in his or her repertoire "saved" at least similar to those presented as examples of each category, most of which were documented by 165 live video recordings published in the channel www.youtube.com/yurdanic, also Piano concerts with Orchestra and recitals performances, already performed live before audience or in a period of preparation for future realization. Here are meant memorized pieces only. On the other hand, Chamber Music and accompaniment experience and corresponding repertoire accumulation is strongly recommended again as indispensable for a solid musical and professional foundation, as presented to the end.

I Baroque Period

It is good to be familiar with the German Baroque and the Old Masters, but also French, Italian and Spanish, English and other authors from this epoch, as for instance, the recommended examples:

From Preludes and Fugues of the "Well-Tempered Clavier" by J. S. Bach:

Prelude and Fugue № 2 in C Minor of Volume 1

Chromatic Fantasy and Fugue

Italian Concerto in F Major

Some frequently performed pieces such as:

Invention № 8, F Major, by J. S. Bach

Chorale from Cantata 147 "Jesus, Joy of Man Desiring"

And the colossal Goldberg Variations, mentioned above.

Sonatas by D. Scarlatti – Sonata in C Major, Sonata in D Minor

Domenico Cimarosa - Sonata in G Minor,

Padre Antonio Soler – Sonata in F sharp Major

and other musical forms:

J. F. Rameau – "La Poule"("The Hen")

C. Daquin – "Le coucou"("The Cuckoo"

Passacaglia in G Minor of G. F. Handel

We will mention here the famous Canon by J. Pachelbel, whose numerous "cover versions" enjoy great popularity, along with the “hit" of all times, "Fur Elise".

II Viennese Classics:

Sonatas by F. J. Haydn, W. A. Mozart and Ludwig van Beethoven, at least one Sonata from each of his three creative periods:

It is appropriate to master compositions by all these three great authors. May we recall that it comes to an operative repertoire that is managed constantly, with a view to fast reconstruction and readiness for podium performance, when is necessary.

Here we offer two sonatas by F. J. Haydn: the whole № 42, C Major and № 5 in C Major, First Movement.

As well as two Sonatas by Mozart: The whole № 13, KV 333 in B flat Major and the First Movement of the so called "Sonata facile" (which, of course, is not “easy” at all) N.16, KV 545, and the Third Movement of Sonata in A Major, Rondo "alla Turca", known to everyone as the famous "Turkish March".

By Ludwig van Beethoven here we recommend the whole sonata op. 27, № 2- the “legendary” "Moonlight Sonata" or at least its first Movement, and the two parts last Sonata № 32, op. 111, in C Minor.
From the Major Romantic works by:
Carl Maria von Weber, F. Schubert and F. Mendelssohn-Bartoldi:

Carl Maria von Weber – "Invitation to Dance"
Franz Schubert – Fantasie "Wanderer" Impromptu A flat Major, and others
Felix-Mendelssohn-Bartoldi "Rondo-capriccioso" and "Serious Variations" op. 54
R. Schumann - Toccata op. 7, Carnival op. 9
E. Grieg - Sonata in E-Minor
F. Chopin - Fantasie op. 49 in F-Minor, Impromtu in A flat Major and
Fantasie-Impromtu in C sharp Minor, Polonaise in A-Major,
Valses in D flat Major and C sharp Minor, Prelude op. 28, N.24 in D-Minor
J. Brahms - Rhapsody Op. 79 in G-Minor
M. Mussorgsky - “Pictures from an Exhibition”

From Impressionism and modern Music:

C’ Debussy - “Pagodes” from Estamps
S. Rachmaninoff - Preludes in C sharp Minor and G-Minor
A. Scriabin - Sonata N.6, Etude op. 65, N.3
B. Bela Bartok - Sonata 1926, “Ostinato” from “Mikrokosmos”, Allegro Barbaro
S. Prokofiev - Sonata N.7, “Montecchi and Capuleti” from “Romeo and Juliette” Suite
I. Stravinsky - Tango Piano solo
D. Shostakovich - Prelude and Fuge N.24 in D-Minor

The frame of the construction of the repertoire consolidates through the set of concertos or concerto pieces for piano and orchestra covering the major eras and stylistic trends, as offered here:

1. J. S. Bach Concerto in D Minor

2. W. A. Mozart – Concerto №23 in A Major, KV488
3. W. A. Mozart Kammerkonzert in A-Major, KV 414-very convenient opportunity in case only chamber orchestra in disposition without wind instruments is available.

NB Other Concertos are recommendable, as Concerto N. 20 in D-Minor, KV 466, etc.

4. L. van Beethoven – Concerto №4 in G Major, op.58

All Five Beethoven’s concertos are strongly recommended to be learned.

That would be the basic look of an "operational available classical repertoire, applicable to events of different nature in which we are ready to participate at any time.

Here should be added also fundamental concertos, like by J. Brahms N1 in D-Minor, op.15, P. I. Tchaikovsky N1 in B flat-Minor, E. Grieg-in A-Minor, Andante Spianato and Brilliant Polonaise by F. Chopin, and others, like the concertos of R. Schumann, F. Liszt, S. Rachmaninoff, M. Ravel, S. Prokofiev, G. Gershwin, and other famous authors. As Bulgarian musician I introduce the national greatest composition of this genre-Concerto N.3 in B flat Minor by Pancho Vladiguerov, also performed live.

CONCLUSION

In conclusion, the following maxima must be underlined and noticed: the repertoire selected as the essential personal choice, should be just a small part, the core of the whole material learned by the concert pianist during his/her entire education and career.

On the basis of the long years of professional experience, I am convinced that it is natural and quite possible to design an optimal collection, a private capital, stored in the vault of our creative bank, and drawing from it in each case according to its special characteristics. Final decision about the repertoire fund might even reduce the number of performed before audience pieces.

Must emphasize that the choice of repertoire should not be given to chance, but by its content it should reflect and defend highly valuable artistic ideas, selected style and finesse of an outstanding creative talent.

The conscious attitude towards the repertoire is the main concept and the subject of this paper and its achievement improves and turns the pianist in a true artist of great magnitude.

APPLICATIONS

Here are a few examples of program ideas as well as some related short annotations from the past few years or more recent events:

Piano Recital - Singapore, 27.03.09 dedicated to a number of great anniversaries in 2009

I Part
J. S. Bach - C. Gounod - "Ave Maria" (Annunciati - 25.03.) (Based on The Prelude № 1 in C Major from the "Well Tempered Piano", Book I, inspired by the discovery of the prototype of the contemporary Piano "Das Wolltemperierte Klavier" in 1709-its 300th Anniversary)

G. F. Handel - (250 years from the decease of the composer)
Passacaglia in G-Minor

F. J. Haydn - (200 years from his decease -1809)
Sonata № 42 in C-Major
Allegro
Adagio
Allegro molto

F. Mendelssohn - Bartholdi (200 years from the Birth-1809)
"Spring Song" ("Fruhlingilied genannt") - op. 62, №6

I. Albeniz-"Sevilla“(150 years from the Birth-1859)

E. Villa-Lobos-"Acordei de Madrugada“ (50 years from the decease-1959)

S. Obretenov-Prelude-(100 years from the Birth)
P. Vladiguerov-Rhapsody „Vardar“-(110 years from the Birth)

II Part

M. Mussorgski-"Pictures from an Exhibition" (170 year from the Birth)
Promenade
"The Gnome"
Promenade (2nd)
"The Old Castle"
Promenade (3rd)
"Tuileries (Children's Quarrel after Games)"
"Bydlo" "Cattle"
Promenade (4th)
"Ballet of Unhatched Chicks"

"Samuel Goldenberg and Schmuýle"

Promenade

"Limoges. The Market (The Great News)"

"Catacombs (Catacombæ-Roman Tomb-Sepulchrum Romanum)"

"The Hut on Hen's Legs (Baba Yaga)"

"The Bogatyr Gates (In the Capital in Kiev)"

**Piano Recital “The Great Piano Sonatas” at the Goethe Institut in Bangkok, Thailand, 07.12.2012**

Dedicated to the Memory of Prof. Ludwig Hoffmann, under whose leadership I was honored to work on such significant pieces on the Piano Seminar in Hochschule für Musik Franz Liszt- in Weimar, Germany, the spiritual center of Bach, Goethe and Liszt), composed of two iconic for piano literature sonatas.

F. Liszt – Sonata in B Minor

L. van Beethoven Sonata № 32, op. 111, in D Minor.

Maestoso. Allegro con brio ed appassionato

Arietta: Adagio

The unique structure and dramaturgy of Beethoven’s late op.111 assigns the role of a bridge between the Viennese Classics and the early Romanticism, logically “preparing” and “foreshadowing” the monothematic one-piece sonata dramaturgy of Liszt who admired the Genius and initiated the construction of his Monument in Bonn.

Comprehensive analysis of the topic would become the subject of a treatise: but there should be also mentioned the unusual construction of two-movements of the cycle and the "rhapsodic" character of its design theme – Arietta with free variations, represented as the second movement. Even today, we do not cease to marvel at the innovation that these musical ideology revolutionaries generated and integrated into the musical forms and languages, tracing the main trends, benchmarks of the present time.

In this sense, a new, more unconventional chronologically approach to show the works –first Liszt, then Beethoven, would lay more emphasis on this organic connection of theirs, and this way presenting the two colossuses of humanism, music and pianism.
Further you can imagine a promenade through epochs, genres and styles, a menu of emblematic Piano compositions of so-called entertaining repertoire – for every occasion and taste, titled "Evergreens", covering music from the Baroque to "Pop" and Jazz. This compilation includes a large number of favorite pieces-what the literal translation of the word “play” is. The idea to collect such “treasures” was suggested and inspired by the marvelous a long playing vinyl record compiled by my Piano Professor Nikolai Evrov called by himself "Pearls of The Music". There is nothing more to be added to this motto.

J. S. Bach – (C. Gounod) - "Ave Maria"
J. S. Bach-Chorale Joy of Man's Desiring from Cantata 147
J. S. Bach- Invention № 8, F Major
G. F. Handel- Passacaglia in G Minor
D. Scarlatti – Sonata in C Major
H. Purcell-The New Ground in E-Minor
D. Cimarosa - Sonata in G Minor
P. A. Soler-Sonata in F sharp Major
J. F. Rameau –“The Hen”
F. J. Haydn-Sonata № 5 in C Major, 1st Movement
W. A. Mozart-"Sonata facile", №16, in C-Major, 1st Movement
L. van Beethoven - "Fur Elise"
L. van Beethoven - "Moonlight Sonata" 1st Movement
F. Schubert – “Ave Maria”
Musical Moment” in F Minor
R.Schumann - "Dreaming"
F. Mendelssohn-Bartholdy - "Spring Song"
E. Grieg - "Brucklet", “The Little Bird”
A. Dvořák-“Humoresque”
P.I.Tchaikovsky - "Kamarinskaya"
“Seasons”-March-“Lark Song”, April - "Snowdrop"

N. Rimsky-Korsakov – "Flight of the Bumblebee"


F.Liszt - "Love Dreams" № 3

I. Albeniz - "Sevilla"

C. Debussy - "Moonlight"

S. Joplin- "Entertainer", Paragon Rag

H. Arlen - "Under the Rainbow"

J. K. Gershowin – Piano Preludes

L. Denev –“Rainy Day in San Francisco”, Invention-from “The Rhythm’s Hour”

D. Brubeck–“Blue Rondo à la Turk”

H.M. King Bhumibol Adulyadej of Thailand-“Phiromrak” (“A Love Story”) from Kinari Suite

Thai Popular Song-"Tepankon"("In the previous life")

J. Pachelbel Canon

A. Piazzolla-« Street Tango »

H. Mancini - "Moon River"

A.C. Jobim-Desafinado »

J. K. Horner - "My Heart will go on" ("Titanic" soundtrack)

Yiruma-"River flows in your", “Kiss the Rain”

J. Lennon - "Imagine"

Rosemary Hancock-Child-“Leo” from “Zodiac-12 Preludes”

A. Lloyd Webber-« Jesus Christ Superstar” Suite

Jan-Tiersen - "La contine d'un été " ("Amelie Poulain")

O.Toussaint – P. de Senneville - "Ballade pour Adeline"
Chinese Popular Song-“The Moon represents my Heart” 月亮代表我的心

Kozaburo Y. Hirai-“Sakura”

Nguyen Van Nam-“Bamboo Song”, “Thousand Faces Buddha”, “Children Game” from “The White Stork”

Yuyama Akira-“Mozart is a Friend of Mine”, “Warabeuta”, “Amma Natto”, “O-Koto-no Hibiki”.

Following suggestions could complete the above programs by the works of Bulgarian composers, plus the mentioned above, since the researcher is Bulgarian by origin and citizenship:

D. Nenov - "Bagpipes", Toccata
V. Stoyanov-Nocturn
L. Pipkov-Studio N.1
M. Goleminov - "Fresco"
P. Hadjiev - "Burlesque"
A. Raitchev - "The Bells of the old Monastery"
D. Hristov-“Prestissimo in Extasi” from Miniatures concertantes
V. Kazandjiev - "Toccata"

(NB: Some of the compositions might be subjects of Copy Right Regulations.)

An opinion on this type of aggregated program that could accompany a lecture or to be included in the workshop was expressed above. It is noteworthy that all samples of this "historical musical walk" enjoy lasting popularity, and are accepted even by those who are "a priori" more distant from the environment incorporated into the so-called Classical Music in a broad plan.

Shown above was demonstrated as compilation by 2-3 miscellaneous Programs within

**China 2016 - Piano Concerts Performances and Master Classes Demonstrations**

The next selections imply the unusual strong spiritual connection of Schubert and Beethoven, as well Bach and Mozart, which carried the historic transition from the era of Classicism to the vast horizons of romanticism, through the impressionism to the modern music.

L. van Beethoven –Bagatelles op. 11.

F. Schubert - Fantasy in F Minor for 4 hands
M. Ravel-My Mother the Goose

Piano Duos presented here were performed by Students and Teacher.

**Prof. Nikolay Evrov Anniversary Concert**

As a reminiscence of the unforgettable play together with the beloved Teacher Prof. Nikolay Evrov, to whom this study is dedicated, in the occasion of his 70-th Anniversary, with each of his devoted Students. Our duo-piano ensemble was I. Stravinsky-Tango and Circus Polka for Young Elephant.

**Soloist of Chamber Music Orchestra “Orfey”, Bulgaria**

J. S. Bach- Concerto in D Minor

W. A. Mozart – Kammerkonzert in A Major, KV 414

To the pianist a performance of these two giants of the music in one night is a challenge. Besides the differences is important to us to discover the common between these two geniuses of humanity: their universality and connection with the Primary. And the fact, that Mozart, Beethoven and Schubert also belongs to the genius polyphonic composers.

In terms of "ideological" plan the differences are obvious: In Bach we have: Religious parable (an attempt to restore the relationship with God, broken by the Fall, narrative and depth, solidity, power, "universal" tempo-rhythm, elevation, objectification, communication with the Transcendental: If we can express through music, even a fraction of this "absolute", that would have lead us closer to the "Divine". In Mozart there are: drama, action, i.e. the opera-etymologically the semantics of the three concepts is common-as Mozart perceived his composer’s vocation most "powerful" there: an ensemble of characters, recitativo and tutti, vitality and optimism, grace and vocal, "laughter through tears"...

Finally, it’s worth mentioning that my students already perform some of listed Piano Works, which is more than a happy fact and a real creative satisfaction for educator.

**REFERENCES**

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Spark: A Case Study on Teachers’ Perceptions Regarding Creating for Passion Learning

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Abstract

This qualitative study examined four self-selected educators working from a transformative, conceptual framework (Spark) to develop their own educational model to enhance learning passion and creativity. The four educators’ perceptions regarding the role of passion and creativity in student learning were examined. The four Spark educators’ pre-brainstorming short-answer prompts, post-Spark interview experience reflection transcripts, field notes and photographic evidence were analyzed using open coding, axial coding and selective coding. Researchers reported 12 codes from reviewing narrative pre- to post-narrative data. After peer debriefing, researchers agreed all codes were valid, with 100% agreement. Five categories emerged from the data; two themes emerged: Theme One (T1), Learning Creatively is an Interactive Social Experience and Theme Two (T2) Positive Relationships with Fellow Educators were Critical to Accomplishing Spark Goals.

Keywords: teachers, perceptions, creativity, social emotional learning, relational trust, relationships in learning
Introduction

Since educational reform beginning in the 1980s, quantifying learning and student achievement has increasingly become the central focus of most educational forums. Standardization of learning objectives, learning outcomes, and measurements currently drive the curriculum and school calendar. Yet, invariably, almost every school mission statement includes the goals of producing lifelong learners and well-rounded citizens, creating disconnection among the educational goals. Increased rigor and standards have both educators and parents expressing concern about the amount of time focused on test preparation and the loss of quality of student engagement and passion for learning. Much research is concentrated on Bloom’s Taxonomy of the Cognitive Domain (Krathwohl, Bloom, & Masia, 1973) which links to the development of intellectual skills including: remembering, understanding, applying, analyzing, evaluating, and creating (Bloom’s Taxonomy Revised) (Krathwohl, 2002). However, much learning is connected to the Bloom’s Taxonomy of the Affective Domain which focuses on developing feelings or emotional aspects of learning; including internalizing values, organizing, valuing, responding to phenomena, and receiving phenomena (Krathwohl et al., 1973). The lack of literature and study in the Affective Domain supports a need for greater insight into the “softer” side of learning.

Spark, a transformative, conceptual framework embracing discovery, passion for learning, and creativity, acknowledges the importance of the Cognitive Domain, but places greater emphasis on the Affective Domain in the learning process. The underlying tenet of Spark is classrooms and schools do not have to be lifeless and concentrated on content alone. While the framework of Spark does not negate the need for quality training and staff development in content or curriculum and instructional strategies and techniques, it does support the development of the often ignored affective elements of learning. The Spark framework focuses
on developing quality relationships among students, parents, and other educators, and reintroducing a passion for learning into the classroom. In addition, the framework places an emphasis on creative and critical thinking as necessary for successful thinkers and future workers.

The framework melds the curriculum and instruction strategies and techniques that guide adequate coverage of content and development of process skills with a focus on strategies and techniques to build relationships and develop a passion for thinking and living. At the same time, the framework design supports the health and well-being of all learners, whether they are students, educators, or parents. No one can “produce” from an inner feeling of hopelessness.

The concept for Spark evolved from the following premises:

- Everyone has value.
- Everyone has a gift to offer.
- The education process is never finished; it can always be improved.

Furthermore, Spark was founded on the following beliefs:

- Schools can be dynamic, engaging places.
- Schools can be places of joyful learning.
- Schools can be places of great innovations that benefit students.
- Schools can be these kinds of places because they are filled with caring passionate people.

The goals for Spark are:

- To nurture wellness of educators and students
- To investigate a passion for living and learning in every educator and all students
- To develop and expand quality relationships between and among educators and students
- To promote and develop critical thinking and creative thinking in educators and students
To promote the development of quality learning environments and opportunities through the advancement of research proven curriculum and instructional strategies and techniques

The Spark Academy was created when a group of educators were given an opportunity to create a summer academy embodying the principles of Spark. The study focused on the experience and passion of the educators as they participated in the creative process and the specific goals of developing “Passion for Living and Learning” and “To Promote the Development of Quality Learning Environments and Opportunities through the Advancement of Research Proven Curriculum and Instructional Strategies and Techniques.”

**Review of Literature for Spark**

*Spark Goal:*

**To Invigorate Passion for Living and Learning in Every Educator and All Students**

*Passion*

If energy, inspiration, and emotion are essential to one’s ability to move forward and embrace new things, the value of nurturing passion for learning is clear. Merriam-Webster defines passion as a type of motivation containing extreme energy and emotion; it may also be connected to spirituality (Merriam-Webster Collegiate Dictionary, 2008). The French philosopher and educator Foucault (1996) described passion as the ability to move a being to a new state. Robinson (2009) further expanded the role of passion with the concept of the Element, which is the point natural talent meets passion, and people feel most like themselves and most inspired to achieve at their highest levels. Collectively, passion is described as motivational properties manifested as behaviors and based on relationships to internal emotions (Roeger, 2012).
Closely related to passion is the term *zest*, which is also tied to energy and enthusiasm and noted as one of the five characteristics necessary for a positive life (Seligman & Csikszentmihalyi, 2000). McGovern and Miller (2008) connected *zest* to teaching and learning, identifying it as a demonstration of passion for teaching and learning grounded in reflective practice focused on deliberate well-being and a sense of priorities. Another closely related topic to passion is Flow Theory, which identifies intense engagement as “the zone.” Csikszentmihalyi (2008) acknowledges *flow* as the experience that makes life worth living. Neumann (2006) used Flow Theory to examine the relationship of passion and scholarship of higher education faculty. Flow Theory uses a 13-point attribution scale to describe Ultimate Flow as a basis to sort and categorize educator passion. Neumann identified four distinct traits of passion: peak emotion, absorption, heightened physical and psychological awareness, and intense interest in the subject of study. Scholars who were in complete flow experienced heightened physical and psychological awareness. Neumann purported passion led to discernment, sharper thinking and increased focus, and creativity.

**The Importance of Passion in Teaching and Learning**

Literature on passionate teaching often theoretically correlates to passion and student learning. Palmer (1999) notes passionate teaching leads to greater connectivity to the subject and the educator. Wong and Wong (1998) indicate middle school students were more motivated, punctual, and cooperative when they perceived their educator cared about them. In *The Passionate Teacher, A Practical Guide*, Fried (1995) acknowledges two specific indicators of passionate teaching. First, passionate educators share their attractions of power and beauty for the subjects they teach with their students, offering a depth of engagement in the subject that motivates students to pursue other interests. Second, passionate educators express their passion
to the students by acting as partners in learning rather than an expert; this builds competence and active confidence in students who might otherwise be passive learners.

Passion can influence student learning and well-being intrinsically and extrinsically. Passion’s association with motivational and emotional properties (Vallerand et al., 2003; Vallerand et al., 2007; Patrick, Hisley, & Kempler, 2000; Carbonneau, Vallerand, Fernet, & Guay, 2008; Neumann, 2006) relates to an ability to channel people to action intrinsically or extrinsically (Vallerand et al., 2007). Intrinsic motivation (Vallerand, 2008) can be tied to Self-Determination Theory (SDT) (Deci, Vallerand, Pelletier, & Ryan, 1991) which promotes autonomy, self-efficacy, feeling good about oneself, and self-made decisions that strengthen overall well-being, creating a positive learning spiral (Fredrickson & Joiner, 2002). When a student successfully engages in learning, expansion occurs within the mind, creating an upward effect “spiraling” to higher and expanded learning.

Furthermore, intrinsically motivated individuals carry out actions with a sense of value, making it seem effortlessness and more seamless and increasing the likelihood of completing the action (Csikszentmihalyi & Csikszentmihalyi, 1988) impacting successful learning and well-being. For example, students who perceive their teacher to be excited and passionate may become intrinsically motivated and “catch the passion” through “emotional contagion” (Hatfield, Cacioppo, & Rapson, 1993), making learning more enjoyable and thus, more manageable. In addition, memory of content supported with emotional stimuli are more often remembered than non-emotional stimuli; therefore, students demonstrated greater capacity to remember concepts presented by an enthusiastic teacher (Sutton & Wheatly, 2003; Heuer & Reisber, 1992; Patrick et al., 2000).

Social Emotional Learning
Social Emotional Learning (SEL) is defined as a process in which individuals acquire knowledge, attitudes, and skills to assist them in recognizing their emotions, setting positive goals, demonstrating caring and concern for others, maintaining positive relationships, making responsible decisions; and handling interpersonal situations effectively (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Payton, Weissberg, Durlak, Dymnicki, Taylor, Schellinger et al., 2008). The SEL conceptual framework combines behavioral, emotional, and cognitive development in order to prevent behavior problems by promoting social-emotional competence (Zins & Elias, 2006). The primary goals of SEL programs are to foster the development of five interconnected sets of cognitive, affective, and behavioral competencies including self-management, self-awareness, relationship skills, social awareness, and responsible decision making. Within school contexts, SEL programming incorporates educational strategies to enhance school performance and youth development (Collaborative for Academic, Social, and Emotional Learning, 2005). Quality SEL instruction provides students with a sense of belonging and opportunities to contribute to their class, school, and community (Hawkins, Smith, & Catalano, 2004).

A growing body of empirical research supports the impact of SEL programs both academically and behaviorally. A meta-analysis of 213 school-based, universal social and emotional learning programs encompassing 270,034 kindergarten through high school students found significantly improved social and emotional skills, behavior, attitudes, and academic performance (11-percentile-point gain in achievement) for SEL participants (Durlak et al., 2011). A technical report summarizing results from three large-scale review of research including 317 studies involving 324,303 students rendered in SEL programs yielded multiple benefits, including social-emotional skills, positive social behavior, and increased academic performance.
(11 to 17 percentile points) (Payton et al., 2008). Furthermore, research supports that SEL programs improve social and emotional competencies cross-culturally (Coelho, Sousa, Raimundo, & Figueira, 2015).

The educational process is collaborative in nature and framed by social, emotional, and academic components (Fischer, Giaccardi, Eden, Sugimoto, & Ye, 2005; Zins, Weissberger, Wang, & Wallberg, 2004). For most students, learning does not occur in isolation, but rather in collaboration with peers and teachers along with support and encouragement from their families. In addition, emotions can impede or assist in the learning process (Elias et al., 1997). Today’s students must be prepared not only to pass academic tests, but also to navigate the complexities of life. Social-emotional competence and academic achievement are related and key to a student’s success in life (Zins & Elias, 2007) Evidence-based SEL programs integrated into education practice can contribute to the development of the whole child.

**Building Relationships: Teacher-Student**

Research has documented that when educators build relationships with their students there is a deeper connection to learning (Jensen, 2005); furthermore, feeling safe in the learning environment creates a scaffold to develop both social and academic skills (Baker, Grant, & Morlock, 2008; McCormick, Cappella, O’Connor, & McClowry, 2013; McCormick, O’Connor, Cappella, & McClowry, 2013; O’Connor, Dearing, & Collins, 2011; Silver, Measelle, Armstrong, & Essex, 2005). In essence, teachers who create a positive, supportive learning environment can have a positive impact on social, emotional, and academic development including school-completion and employment (Baker et al., 2008; O’Connor et al., 2011; Silver et al., 2005). However, school failures and school dropouts increase when children are exposed to relational adversity over time (Spilt, Huges, Wu, & Kwok, 2012).
Building a positive relationship with a student is much more complex than being cognizant of previous scores and educator comments, superficial demographics, or even being able to call every student by name. An effective educator strives to gain insights on student interests, learning styles, and educational needs of each and every one of his/her students. Acknowledging or profiling each student as his/her strengths and weaknesses and building educator-student relationships create a positive learning environment that addresses both effective classroom management and collaborative instructional strategies. In terms of classroom management, Marzano and Marzano (2009) explained, “exhibiting appropriate levels of dominance; exhibiting appropriate levels of cooperation; and being aware of high-needs students” (p. 161) are behaviors of effective educators creating an effective classroom management environment. A positively managed classroom environment might utilize instructional strategies developed by Kagan and Kagan (2009) who have produced myriad structures to facilitate content learning and relationship building, simultaneously providing a platform to engage student interactivity while nurturing community and team learning experiences within the content.

Ron Clark embodies the phenomenon of building relationships and communities of learners. In fact, Clark (2003) developed “the essential 55” which is a collection of rules designed for relationship building and creating positive learning environments. These rules are currently used at the Ron Clark Academy (RCA) in Atlanta, Georgia. RCA’s first mission is for students to build relationships with educators and fellow students. Clark attributes his school’s focus on relationships as the defining characteristic toward academic and career-building success. Numerous educators visit RCA to acquire or enhance best practice for engagement of educator-student relationships. One such practice utilizes educators’ social and emotional
competence (SEC) and well-being to support implementation of social and emotional learning programs, to develop and maintain supportive educator-student relationships and applying effective classroom management techniques. The SEC model proposes utilizing the aforementioned factors to create a classroom climate that is more conducive to learning and promoting positive development outcomes among students (Jennings & Greenberg, 2009). Research supports building relationships as essential to student engagement; students who perceive teachers as creating a caring supported with a well-structured learning environment were more engaged (Klem & Connell, 2004). Furthermore, high levels of engagement yield higher attendance and test scores which are also prominent variables strongly related to predicting youth high school completion and tendency to pursue postsecondary education, achieving later economic self-sufficiency (Gambone, Klem, & Connell, 2002). Lee (2007) further noted positive teacher-student relationships not only impacted student performance, but also supported students in school adjustment and academic motivation.

Relational Trust among Teachers

A key component of creating an environment that fosters social and emotional learning and relationships is relational trust. Defining relational trust, as well as creating it in a classroom, is a complex process. Facets of relational trust include integrity, confidence, reliability, willingness to take risks, openness, and vulnerability (Byrk & Schneider, 2003; Mayer, Davis, & Schoorman, 1995; Tschannen-Moran, 2004). Byrk & Schneider (2003) note relational trust is grounded in social respect developed from the social discourse that takes place across a school community, the process of genuinely listening to the views of others, and respecting their opinions even if there is disagreement. Relational trust is a bonding agent between school members that encourages educational support, student success, change, and reform, and is
essential when creating an environment supporting creativity, collaboration, confidence and trust that implements change and advances initiatives (Tschannen-Moran, 2004).

The Professional Learning Community (PLC) model provides a framework for teachers to build relational trust within the context of their professional practice. A meta-analysis of empirical research on PLCs noted well-developed PLCs impact student achievement and teaching practices (Vescio, Ross, & Adams, 2008). PLCs encourage shifts in school culture (Andrews & Lewis, 2002; Berry, Johnson, & Montgomery, 2005), including positive impact on morale, more collaborative instructional practices, and movement away from an isolationist approach (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005). Cranston (2011) found the following themes connecting relational trust and PLCs: building relationships is a key component to developing trust; establishing relational trust includes defined group norms that support risk-taking and change orientation; supporting effective collaboration processes increases relational trust; and developing leadership (principals) who foster a climate of trust is paramount to creating faculty trust. Creating a culture that cultivates relationships and builds trust among teachers can nurture student development and achievement as well as empower teachers to grow professionally. However, it should be noted relational trust must be intentionally fostered and developed.

**Creativity**

The process of creativity utilizes imaginative skills to generate new ideas, making connections between existing and new, or rearranging what is known in order to discover what is not known (Olatoye, Akintunde, & Ogunsanya, 2010). Literature on creativity noted three different kinds of creativity that served as the basis for research at the Institute of Personality Assessment and Research Laboratory (IPAR), Berkeley, California: artistic, scientific and
technological, and hybrid. Artistic creativity reflects the inner needs, perceptions, and motivations of the creator. Scientific and technological creativity focuses on solving problems and novel solutions without connection to the inventor’s personality; and hybrid creativity, which encompasses both novel problem solving and connection to the personality of the creator (MacKinnon, 2005).

Creativity is identified as one of the crucial skills for the 21st Century, yet little time or focus is given to creativity in the American traditional school curriculum. However, recent international studies found a statistically significant relationship between creative thinking and students’ academic achievements in terms of tests measuring processes of creative thinking (Anwar, Aness, Khizar, Naseer, & Muhammad, 2012) and their relationship to academic achievement (Nami, Marsoli, & Ashouri, 2014). Furthermore, a meta-analysis of 210 pieces of educational research noted the impact of creative learning environments on learners’ academic achievement: increased confidence and resilience; enhanced motivation and engagement; development of social, emotional, and thinking skills; and improved school attendance (Davies et al., 2013).

The benefits of creativity are well documented and support the need to provide a pedagogical environment in which creativity can thrive, including opportunity for play, collaboration, novelty, and authenticity. In terms of including play in the academic environment, much support can be found for the early years of learning; however, reasonable evidence exists to include more ‘playful’ or ‘games-based’ approaches into classrooms for all ages to support the development of creative skills (Cremin, Burnard, & Craft, 2006; Cumming, 2007; Jindal-Snape, Baird, & Miller, 2011; Miller, Hudson, Miller, & Shimi, 2010).
Sir Ken Robinson, in a conversation in Educational Leadership, noted the importance of collaboration in creativity by stating,

> Most original thinking comes through collaboration and through the stimulation of other people's ideas. Nobody lives in a vacuum. Even people who live on their own—like the solitary poets or solo inventors in their garages—draw from the cultures they're a part of, from the influence of other people's minds and achievements. In practical terms, most creative processes benefit enormously from collaboration. The great scientific breakthroughs have almost always come through some form of fierce collaboration among people with common interests but with very different ways of thinking (Azzam, 2009, p. 25).”

Student creativity is closely connected to opportunities providing peer collaboration elements (Burgess & Addison, 2007; Dillon, Craft, Best, Rigby, & Simms, 2007; Halsey, Jones, & Lord, 2006; Rutland & Barlex, 2008; Wood & Ashfield, 2008). Furthermore, the relationship between creativity and collaboration appears to be reciprocal since cooperation can foster creativity and creativity can foster cooperation (Miller et al., 2010).

Research supports student creativity is enhanced when a balance of structure and choice is provided, and students are given control over their learning and supported when taking learning risks (Burgess & Addison, 2007; Cremin et al., 2006; Halsey et al., 2006). Specifically, the aspects of novelty and authenticity are connected to student motivation and risk-taking. Students were more likely to be engaged and motivated when presented with new and exciting school activities (Gkolia, Brundett, & Switzer, 2009). Halsey et al. (2006) noted authentic student tasks were more likely to motivate and engage students if set in a real context and self-evidently worthwhile. In addition, creativity is derived from multiple experiences that are supported with the development of personal resources (Gandini, Hill, Cadwell, & Schwall, 2005). Thus, creativity in learning is connected to the environment and resources developed and shared by the teacher.
The pedagogical environment fostering creativity is formed by the teacher; this environment extends beyond the classroom, lesson design, and resources to include the relationship between the students and teacher. Key components for the teacher-student relationship are mutual respect, freedom/flexibility, and dialogue. Burgess and Addison (2007) found relationships encouraging mutual respect were a foundational component for promoting creativity. In addition, Gandini et al. (2005) reported creative attitudes encouraging flexibility, freedom, and open-ended options provided students with the possibility to invent and create in unexpected and surprising ways. Moreover, dialogue plays a key role in the student-teacher pedagogical relationship; routinely scheduled teacher-student conversations creates a framework to support the student’s work and products and create a classroom culture that fosters thinking, interpersonal exchange, conflict negotiation, and the exchange and development of ideas.

In summary, a systematic review of 210 scholarly articles related to educational research suggests creative teachers embrace a positive view of learner engagement and creativity/creative learning; they adopt the perspective of the “long-term view” of learning potential. Regarding their own professional development, creative teachers seek to continuously improve their knowledge and skills in order to further promote the development of student creativity (Davies et al., 2013).

**Summary**

In the American public education system, relatively no one questions the importance of the Cognitive Domain in learning; however, little emphasis is given the role of Affective Domain. Learning is a complex process involving multiple intrinsic and extrinsic components. A greater understanding of elements which inspire a passion for learning has many implications. Components such as teacher passion, social emotional learning, student-teacher relationships,
relational trust, and creativity are all factors associated with “softer side” learning, but direct ties to student achievement.

**Method**

The overall purpose of the study was to examine what happens when four self-selected educators are supported to develop their own educational model designed to enhance passion and creativity in learning. The four educators’ thoughts, ideas, and perceptions regarding the role of passion and creativity in student learning were examined as they planned, created, and implemented curriculum designed to motivate and inspire creative learning among unmotivated or disengaged learners. This study employed qualitative phenomenological-inquiry methodology to examine four educators’ perceptions of their experiences over a 10-week period (planning and academy implementation) while working with fifth and sixth grade students. The *Spark* curriculum was an open-ended curriculum designed by the four participating educators to encourage free thought and creativity within students who were identified by schools as disengaged or unmotivated for learning. *Spark’s* goals and curriculum were created and promoted by the participating educators as a means to revitalize students and engage them in an individualized, creative way.

**Participants**

Purposeful sampling was utilized to select educators for the *Spark* Academy summer learning experience. Teachers whose schools were members of the Effective School Project (ESP), a collaborative between public schools and Tarleton State University, responded to a call for participation. Six teachers attended the initial information meeting; eventually, four teachers self-selected to participate in the academy and the study. Two researchers held advanced doctorate degrees: one in educational leadership and one in curriculum and instruction. Both
participants and researchers attended the Ron Clark Academy National Conference in Atlanta, Georgia during January 2015. The teachers collaborated online and some face-to-face sessions to design the Spark Academy experience for the targeted student population of disengaged learners. During the planning phase, teachers responded to several pre-brainstorming short answer prompts by the researchers regarding their reasons or interest in working with students who have engagement in learning challenges and their beliefs about quality learning, passion, and education beyond standardized tests. The prompts were:

- Quality learning is like…. Create an analogy and explain and explain your comparison.
- What would learning look like without standardized test as emphasis?
- Passion comes from within or does it? What are your thoughts?

Brainstorming Planning Activity

- Please design your idea Spark Academy.

While these discussions did not remove teacher participants from the study, the interaction and alignment or misalignment in thoughts and beliefs among the teachers resulted in two participants removing themselves from the study in April 2015; the Spark Academy actually occurred in June 2015.

The final four teacher participants included three Caucasian females and one Caucasian male. Together, these educators had 67 years of teaching experience. The female educators were in leadership roles in their respective school districts. The female educators’ leadership roles were assistant principal (Spark Administrator), Response to Intervention (RTI) intervention specialist, and fourth grade team department head, respectively. The male educator was a professor at a regional university and had served as a special educator and curriculum director
with various public school districts prior to his appointment as a college professor. Spark educators’ levels of education varied from Bachelor of Science degrees to the doctorate of education degree. One of the educators was completing her Master of Science degree in Educational Administration. The male educator and two of the female educators had experience with children who were challenged with autism. The female educator who was working to complete her Master's degree in leadership had experience working with children challenged with behavior disorders.

In addition, all teacher participants completed the Myers-Briggs Type Indicator, a personality inventory designed to facilitate application of Jung’s theory of psychology types noting seemingly random variation in the behavior is actually quite orderly and consistent due to how individuals use to use their perception and judgment (Myers & Briggs Foundation, 2016). The following types were identified with a brief summary of their Myers-Briggs type’s characteristics:

Spark Director - INFP
Imaginative, independent, helper, reflective, inquisitive, empathetic, loyal to ideals, more interested in possibilities than practicalities.

Spark Administrator - ENFP
Warmly enthusiastic, planner of change, imaginative, individualistic, pursues inspiration with impulsive energy, seeks to understand and inspire others

Intervention Specialist - ESTJ
Fact-minded, practical, organizer, aggressive, analytic, systemic, more interested in getting the job done than people’s feelings.

Teacher Leader - ISFJ
Analytical manager of facts and details, dependable, decisive, painstaking and systematic, concerned with system and organization, stable and conservative

**Professor - ESFJ**

Practical harmonizer and work-with-people; sociable, expressive, orderly, opinionated, conscientious, curious about new ideas and possibilities.

**Data Analysis**

Open coding and axial coding, content analysis procedures, were employed using four *Spark* educators’ pre-brainstorming short-answer prompts and post-*Spark* interview experience reflection transcripts. Concepts, categories, and, ultimately, themes were discovered by individual separate coding of three solo researchers using pre and post narrative data (Creswell, 2016). Three peer debriefing sessions allowed researchers to collapse categories and form themes from the findings (Spall, 1998). Before coding, researchers agreed narrative data must be supported across all *Spark* educators’ statements to be considered a category or, ultimately, a theme. Researchers decided this imposed restriction would help reduce bias during the coding process and provide a framework to discover themes from the narrative data.

The *Spark* research team determined possible themes (Creswell & Miller, 2000; Creswell, 2016) after researchers completed solo content analysis procedures. Categories were collapsed as comparisons between researchers’ findings continued from content analysis. Themes or categories without support or deemed unsubstantiated by fellow content analysis researchers were not reported. Selective coding from researchers’ notes, artifacts, and pictures representing various *Spark* experiences were utilized to further substantiate themes found from coding of narrative data sources (Price, 2010). Before researchers’ notes and/or photographs were selected as theme representations based on the findings discovered from the content
analysis of narrative text, researchers determined that unanimous agreement must be obtained before using this selected data. Also, the four Spark educators participating in the study reviewed the researchers’ findings via peer debriefing sessions (Spall, 1998). The four Spark educators’ review of the findings provided the participants a “voice” of the experience they planned, created, and implemented (Creswell, 2016; Spall, 1998). Educators were asked to make final comments related to the findings during peer debriefing sessions, and these comments were reported. Researchers used field notes to record behaviors and conversations between Spark educators and students, and these behaviors and conversations were reported.

Frequency counts and percentages of the four Spark educators’ narrative responses were recorded. Pre-brainstorming, short-answer responses and post-Spark interview experience reflection transcript narrative statement totals and percentages by discovered theme were reported. Krippendorff’s alpha (α) was used to determine interrater reliability between three solo raters (Krippendorff, 1980, 2004b, 2007). Quotes identified as representing identified themes were reported.

**Results**

**Quantitative: Spark Educators’ Perceptions**

The overall narrative statements generated from the Spark educators’ pre-brainstorming documents (120; 28% sentences /3,227 or 38% words) and post-interview transcripts (306; 72% sentences/5,279; 62% words) comprised 426 statements and 8,506 words. From these data, researchers were able to code 130 (30.5%) supporting statements, which comprised 2,158 (25.3%) words. Researchers reported 12 codes from reviewing narrative pre- to post-narrative data. After peer debriefing, researchers agreed all codes were valid, with 100% agreement. Five
categories emerged from the data; two themes emerged after the collapsing of categories (See Figure 1).

**Figure 1.** The 12 codes organized into one of five categories within two themes. Researchers organized 12 narrative text based codes into two themes through peer debriefing sessions (Creswell & Miller, 2000). Note. For each code generated, supporting text was identified. Theme one has four categories and ten codes while theme two produced one category and two codes.

Theme One (T1), Learning Creatively is an Interactive Social Experience, represented most of the statements and word coding support, respectively, with 98 (23%) and 1,636 (19.2%). T1 represented a complex array of ideas that support the theme of learning creatively. For example, building trusting relationships between students/peers and between educators and students were perceived as foundational by educators (Klem & Connell, 2004). Spark educators reported the need to know students’ personalities and interests before commencing an individualization curriculum to promote learning creatively (Burgess & Addison, 2007; Davies et al., 2013; Jenson, 2005). This led Spark educators to create an interest discovery inventory related to the Spark goals. Researchers’ discussion during peer debriefings with the Spark
educators led researchers to a deeper finding, thus, T1 (Byrk & Schneider, 2003; Mayer et al., 1995; Tschannen-Moran, 2004).

Theme Two (T2), Positive Relationships with Fellow educators were Critical to Accomplishing Spark Goals produced 32 (7.5%) statements, which comprised 523 words (6.1%). T2 had supporting statements from all Spark educators and led researchers to the finding that Spark educators perceived the need of having strong relationships between each other. Spark educators’ statements mentioned trust and the need to depend on each other in an environment seeking to meet individualized learning goals of students (Byrk & Schneider, 2003; Davies et al., 2013; Mayer et al., 1995; Tschannen-Moran, 2004).

Although the number of statements supporting T1 and T2 was small with 130 (30.5%) statements from narrative data, these statements were represented in all four of the Spark educators’ pre- and post-statements, thus, creating a pattern. Therefore, researchers were unwilling to identify a theme without pattern support within statements between all Spark educators pre- and post-narratives. Three researchers’ content analysis coding produced adequate internal reliability as determined by Krippendorff’s $\alpha = 0.834$ (Krippendorff, 2004a; Lombard, Snyder-Duch, & Bracken, 2002).

**Qualitative: Spark Educators’ Perceptions**

The four Spark educators shared ideas and planned together all the experiences students encountered with the Spark experience. This represented a reflection of their “voice” (Creswell, 2016). The samples provided here were selected as the best representatives of their respective themes.

**T1: Learning creatively is an interactive social experience.** Learning as social phenomena is well supported by seminal research (Vygotsky, 1978). In the age of computers,
learning with creative expression remains a social experience, and creativity is bolstered by peer interactions and discussions (Fischer et al., 2005; Yurt & Pilots, 2015). Several statements supported this finding:

Educator 1: “Talent Show where kids get to research something they like (on their own or in teams) and make a song, skit, dance, etc. about it. It is not all about technology. Humans with humans is important.”

Educator 3: “The students learned more the more they were invested in the day - the days that had to do with what they were researching were full of questions and discovery. They learned to do things differently than before by listening to each other… That made this unique and I guess Spark like.”

Educator 2: “Focus being on gradual release of control, educator as part of the team in role of facilitator to create a positive, nurturing environment. The students need to have input always if creativity is wanted.”

T2: Positive relationships with fellow educators were critical to accomplishing Spark goals. Educators valued their teaching peers’ input and ideas in the work to meet Spark goals.

The statements below represented this finding:

Educator 1: “We could share opinions and look at options without worrying about hurting feelings or personal agendas because we knew we were absolutely all in 100% for the same goal...kids”

Educator 4: “The students needed us to be together and with it… When lost, I was ready to tag team with my teaching buddies.”

Educator 2: “Creative activities that were individualized for each one placed us in a stress filled spot. I know I learned to listen to [Educator 1 named], so we could be ready and meet each kid’s individualized Spark goal.”

Educator 3: “When I look at that yucky behavior, I read between the lines and see the person and the needs.”

Selective coding: Educators’ statements from peer debriefing with researchers and researchers’ field notes. Educators reviewed data and the “story” elements behind some of the statements researchers deemed to support T1 or T2. Spark educators agreed with researchers’ selections and added more statements to support T1 and T2. Researchers and the Spark educators unanimously agreed that the peer debriefing sessions were beneficial. Three of the four Spark educators shared that peer debriefing should be a daily practice for educators in the field to
discover findings and make changes in classroom educator practices. Some of the peer debriefing statements supporting T1 and T2 were reported in Figure 2.

Figure 2. Sample statements from Spark educators during debriefing sessions with researchers to validate findings from pre- and post-narrative data (Spall, 1998). Note. Spark educators offered comments related to researchers’ findings that emerged into themes 1 and 2.

Researchers noted peer debriefing Spark educators’ statements supported the results from content analysis procedures. This further confirmed researchers’ results as a valid representation of the educators’ perceptions of the Spark teaching experiences. The comments were offered freely and not elicited nor modified in any way by researcher.

Also, researchers noted the content and length of time for the end-of-day conversations between Spark educators. The Spark educators’ conversations ranged from one to two hours per day. Often Spark teachers’ conversations centered on methods to engage students identified as disengaged with the day’s activities. New plans and techniques were discussed by Spark educators for implementation the next day. These plans were frequently unique and individualized for the students in need, respectively. Researchers observed this became a pattern for the Spark educators at each day’s end.
Selective coding for T1 and T2 from pictorial evidence. Researchers, educators, and students had access to cameras at various times throughout Spark. After themes were established from the content analysis process with narrative textual data, researchers examined photographic data that would support the results found in this study. For photographs to be used as representations of T1 or T2, researchers unanimously agreed upon their use (See Figures 3 and 4).

Figure 3. Pictures from the Spark experience representing Theme One (T1), Learning Creatively is an Interactive Social Experience. The pictures represent the various creative, individualized projects students chose to express their ideas and learning during their Spark experience.
Figure 4. Pictures from the Spark experience representing Theme Two (T2). Positive relationships with fellow educators were critical to accomplishing Spark goals. The pictures show the teachers and the organizational ideas they created with students for students to express and plan creative projects and learning expressions. The top left photograph was a plan the educators developed for students to discuss and organize ideas while determining their creative learning project and creative artifacts. The bottom left picture and the top right picture represented the plan Spark educators implemented for students to share their creative ideas and artifact representations from the Spark experience with parents and community.

Selecting pictures as best representations of the Spark experience for T1 and T2 proved challenging. There were over 2,390 photographs from the Spark experience. This was a small representation of the experiences that influenced Spark educators’ perceptions. Many photos were excluded since permission to use photos was not granted nor obtained by parents and participating Spark students.

Discussion
Because the actions of educators flow from their respective views and perceptions of students, it is important for educators practice reflection often. Educators need to question their perceptions regarding reluctant/disengaged learners before engaging in any instructional activity with them. Since the educator serves as the engagement model for students, the perceptions guiding educators’ application of creative expression, relationship building, and social interaction are of paramount importance. Learning socially is needed for creative learning experiences (Burgess & Addison, 2007; Davies et al., 2013; Vygotsky, 1978). Both students and educators need to be observant. As one Spark educator said, “The students needed us to be together and with it.” Creative projects are connected by peer-to-peer dialogue and collective inquiry. A student's creativity is best served in a supportive learning environment built on trust (Byrk & Schneider, 2003; Davies et al., 2013). Trust between students and peers is a byproduct from positive relationship building.

However, the start of building relationships with students for all educators begins with the desire or perception to be flexible and work with students, regardless of students’ attitudes and behaviors. Spark educator three shared, “When I look at that yucky behavior, I read between the lines and see the person and the needs.” Therefore, the perceptions behind the actions of educators prompted researchers to investigate the perceptions of a group of educators who expressed an interest in working with and meeting the instructional challenges of reluctant, disengaged learners. A student's creative expression is enhanced in schools with reflective educators who are willing to build relationships with challenging learners (Davies et al., 2013).

1. Educators felt for students to be creative, the learning experience needed to be both social and interactive: teacher to student and student to student.
2. Educators perceived that positive relationships were needed among educators to receive the desired outcomes.

3. The school setting focused on standardized achievement does not create a pedagogical environment supportive of creativity.

   Creativity is not spontaneous but must be a part of an overall plan allowing choice within an atmosphere providing learners time to discover personal learning interests and ideas. Also, educators, at Spark and any other school, must have the desire and ability to be leaders. The Spark educators wanted to do something different from the norm and were open to the challenge of engaging reluctant/disengaged learners. Educators envisioning reluctant learners as engaged learners is a salient teacher disposition requisite with today’s diverse student population.

**Conclusions/Recommendations**

Recommendations from this study include an examination of educators’ dispositions, educators’ desire to impact disengaged learners, and self-reflective practices in terms of enhancing creativity. When working with disengaged learners, educator disposition is everything. Dispositions guide preferences, and educator preferences guide actions in classrooms (Davies et al., 2013; Gandini et al., 2005). The education of today’s diverse population requires educator-leaders. Findings in this study support the need for leadership experience as well as a desire of educator-leaders to improve instructional environments for disengaged learners. Leadership and the desire for positive change for disengaged learners are essential for improving perceptions related to the process of “sparking” creativity thinking (Davies et al., 2013). Disengaged learners are challenging and require special teaching techniques and relationship building to ensure success and to inspire creativity. Creativity experiences and other individualized learning choice experiences may be denied or neglected by educators who do not
have the motivation to build relationships with disengaged learners. Educators’ perceptions regarding the building of relationships and fostering said relationships with fellow educator peers and students were the hallmark perceptions of the *Spark* educators in this study.

The challenges to engage the disengaged, reluctant learner require teachers with perceptions of determination and desire to meet said challenges directly with a sense of hope for engagement growth within disengaged students. Simply, educators must want this task or educators risk becoming reluctant educators (Fredrickson & Joiner, 2002). Therefore, a flexible, individualized curriculum, such as the *Spark* curriculum, remains an option for teachers to design learning experiences focused on individual creativity and a love for learning. Perhaps, educator professional development could include reflective practices for educators to examine their perceptions regarding reluctant learners.

A key to working with disengaged learners is developing and supporting teachers who show interest and aptitude in this area. Teachers in this study engaged in self-reflective practice in the pre-brainstorm short-answer prompts, planning phase, and at the daily closure of the *Spark* Academy. At the end of each day, teachers lingered for one to two hours to reflect and plan for the next day. There was a sense of camaraderie and trust building during this time. It should be noted, any in-service related to creativity expression and interactive social learning experiences could be enhanced by educator self-reflection of personal perceptions and peer discussion.

Furthermore, the development of any educational model designed to enhance passion and creativity in learning begins with educators who have relational trust (Byrk & Schneider, 2003; Tschannen-Moran, 2004). Providing time to reflect and discuss is essential to this process. In addition, to have a creative, classroom environment, the atmosphere must be in place to support these interactions and open communication protocols, which is also supported with reflection.
and discussion (Davies et al., 2013). The classroom environment is then directly impacted by educators’ perceptions of disengaged learners in those environments.

Thus, much of learning is connected to the Bloom’s Taxonomy of the Affective Domain, the “softer side” of learning. The underlying tenet of Spark revolved around the idea that classrooms and schools do not have to be lifeless and concentrated on content alone, but should instead focus on the growth of the educator as well as the student in order to build relationships and develop a passion for thinking and living. Positively influencing educators’ perceptions of disengaged learners’ capacity for creativity via educator self-reflection and peer debriefing have the potential to be transformative, putting the passion back into learning for students and educators alike. It all begins with a “Spark.”

Limitations and Further Research

This study examined four educators’ perceptions regarding disengaged learners while participating in the building and implementation of a curriculum designed to improve disengaged learners’ creativity expressions and overall experiences with learning. This does not represent the perceptions of all teachers who may participate in similar projects. Therefore, the results of this study cannot be generalized to all teachers. Simply, this was a snapshot of the perceptions shared by this group of educators who chose to participate in this experience. It is important to note the educators in this study chose to participate and could have dismissed themselves from the planning to the implementation of the Spark curriculum at any time. This study adds to the body of literature regarding the influence of educators’ perceptions while serving disengaged learners and the idea of empowering creative expression in learning. Although this was a small representative sample of educators who had leadership experience, it is important to note this
study represented one experience with a group of students and, thus, needs replication with different teachers and students.

Future research will be needed to study the complexities of educators’ perceptions while building curriculum designed to influence creativity and passion for learning within disengaged learners. Because teachers’ perceptions influence the reality of teaching techniques used in their respective classrooms as well as the affective elements within such environments (Davies et al., 2013), more studies examining educators’ perceptions and student learning outcomes are warranted. A study focused on the perceptions of disengaged learners who experience a “Spark” like curriculum would be an interesting addition to the results determined from this study, which focused solely on the educators’ perceptions.
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http://www.elainehatfield.com/ch50.pdf


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Do We Really Need this Class?: Former K-12 Teachers Transitioning to Teaching as University Faculty

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Topic Area: Higher Education

Presentation Format: Paper Session

Description. Often doctoral programs in research-intense universities prepare graduate student to enter the professoriate with the skills and dispositions needed to be successful researchers with little or no training to teach. This session will share our experiences as faculty at a research intensive university in developing and teaching a course to prepare future education faculty. We will share the findings (across surveys, interviews, and document analyses) from our ten participants in this yearlong experience. We will present graduate student feedback about the usefulness of features this class as well as the instructor feedback that will inform future iterations of this course. Key findings included a misalignment between graduate student and instructor goals for the course and central constructs perceived as useful for current and future teaching endeavors.

Introduction

The focus of many Ph.D. programs in research-intense universities across disciplines is to prepare its graduate students to enter the professoriate with the skills needed to be successful in regard to meeting institutional research expectations. Although teaching and service commitments are commonly part of the expectation as a new assistant professor, these two areas are rarely systematically addressed through coursework nor are graduate students mentored when assigned teaching assistantships. Boden, Borrego and Newswander (2001) claim that “higher education institutions in which graduate students are trained are ill-equipped to facilitate
interdisciplinary research, teaching, and other aspects of interdisciplinary graduate training” (Boden et al., 2011, p.742). Furthermore, only about 26% of Ph.D. students in the United States move into tenured or tenure-track positions and even then, the time to get into these positions can take much longer than Ph.D. candidates expected (Gould, 2015). Many graduates find themselves taking positions in which their primary responsibility is to teach while they seek out tenure-track positions. There are few resources that are available to guide future faculty through the process of transitioning from teaching at K-12 setting to the university classroom. Although many Ph.D students in colleges of education may have experience teaching in K-12 settings, there is an adjustment in terms of pedagogy, student issues, and university expectations and oversight that needs to be taken into consideration. Furthermore, working with university colleagues presents its own sets of challenges and opportunities different from K-12 settings. For faculty from culturally and linguistically diverse backgrounds, the challenges can be even greater (Hernandez, Murakami-Ramlho, & Rodriguez, 2015).

**Context and Purpose**

At our institution in the U.S. Southwest, we were invited to design and implement an elective course within the college of education aimed at preparing future faculty to teach in a university setting. Currently, the Graduate School in our University offers support to future faculty through Preparing Future Faculty (PFF) and according to its website, it is recognized nationally for its professional development program for doctoral students, MFA students and postdocs who intend to pursue a faculty position. Admission to the PFF two-semester, one credit per semester course is limited in enrollment (currently 56). Teaching is addressed as one of the roles of becoming a future faculty member. However, it is stated clearly on the website that although teaching is covered, it is only one part of the agenda. Typically in the PFF, only one of 12 sessions focuses on teaching.
The purpose of this project was to study individual’s perceptions of and the processes related to learning to teach at the university/college level with a group of third year doctoral students, this study addressed the following questions: 1) How do participants perceive their knowledge, confidence, and usefulness of constructs around teaching at the post-secondary level? 2) What aspects of a pilot course do students find most and least helpful in their preparation to teach at the post-secondary level?

**Theoretical Framework**

Bronfenbrenner’s (1979) Ecological Systems Theory provides a structural framework for analyzing and understanding how various contexts interact with and influence educators. He delineated various systems (microsystem, mesosystem, exosystem, the macrosystem, and the chronosystem) of influence on an individual’s development. Each system is embedded within the previous system(s). As an educator who is either new to the teaching at the postsecondary level or new to teaching altogether, it is critical to understand how the various systems intersect and influence one another. Our study is grounded in sociocultural theory, which asserts that learning is an inherently social activity (Rogoff, 1990; Vygotsky, 1978). The microsystem that is the university setting presents an environment in which doctoral students’ developing understanding of their roles as educators at the post-secondary level is co-created and negotiated through their interactions with their professors and peers (Bronfenbrenner, 1979).

**Literature Review**

There is a gap in the literature and professional trade books in training education faculty and all future faculty for teaching at the university level. One identified text addresses general teaching practices for all faculty (e.g., Svinicki & McKeachie, 2014); however, it is less appropriate for future faculty with a teaching background. Within our own MLFTC, many of our
doctoral students have experience in the K-12 school system while others enter our Ph.D. program with no classroom experience. Education faculty, in particular, need to learn how to balance teaching time with research time and service time (which is different from K-12 teaching) as well as developing teaching skills/experiences in higher education contexts with diverse student populations and unique challenges. Students and new faculty members may be currently receiving an unintended message (personal communication with ASU LLT PhD student on September 15, 2016) that teaching is less important than other responsibilities of faculty members.

Socialization of graduate students into higher education, the discipline of education in our case, is a useful and commonly used framework for understanding graduate students experiences (Golde, 1998). Socialization, as it applies to graduate students, has been defined by Weidman, Twale, & Stein (2001, p. iii) as “the processes through which individuals gain the knowledge, skills, and values necessary for successful entry into a professional career requiring an advanced level of specialized knowledge and skills.” According to Golde (1998) it spans from moving from a novice to a full-fledged member of a professional community. Furthermore, Tierney (1997) argues that an organization’s culture “teaches people how to behave, what to hope for, and what it means to succeed or fail (p. 5). From the first year in a graduate program, students’ experiences provide important lessons for how they should perform as researchers, educators, and citizens within their institutional communities (Neumann, 2009). The primary means by which graduate students are being socialized is through their interactions with professors and other students (Lovitts, 2001). If graduate students are being socialized into a culture in which teaching should be prioritized behind research and service, this poses a challenge to preparing graduate students for their future roles in the university classroom during a time when their time
and energy is already limited. In order to shift the culture, institutions need to have faculty who are exceptionally passionate about the topic in question (Boden, Borrego, & Newswander, 2011), teaching in our context.

Graduate students and professors established in their academic careers have commented on the lack of attention to their development as educators. Austin and McDaniel (2006) found that graduate students and criticisms of their training generated five recommendations, one of them being the need for developmentally oriented teaching opportunities.

**Methods and Data Sources**

**Participants**

The participants in this study were third year doctoral students at a university in the Southwestern USA participating in the first year of this study and at the onset of their preparation to teach at the university level. Participant demographics included female (n=7) and male (n=3) students who identified as having ethnic backgrounds as Caucasian (n=8), Latino/a (n=1), South Korean (n=1). Four graduate students indicated that they had no K-12 teaching experience, while the other students reported years of teaching experience at the K-6 level as 1, 2, 3, 4 or 20 years (M=4.1, SD=6.5) and at the 7-12 levels of 2, 3, 4, 5, 9, or 10 years (M=3.6, SD=3.6).

**Instruments**

This study employed a mixed methodology design with data collected from four sources.

**Qualitative data sources.** Data were collected through three qualitative sources: (a) four formal semi-structured interviews (spread out across the academic year), each lasting 20-40 minutes (with one participant only completing three interviews); (b) class observations with field notes and (c) document analysis of completed course assignments, in-class presentations, and
other materials (e.g., guest presenters notes and handouts) etc. Interviews were recorded and later transcribed verbatim.

**Surveys.** The fourth data source was pre and post survey based on the Bronfenbrenner Ecological Systems (1977) along with the Knowledge-Confidence-Usefulness (KCU) first used by Barton-Arwood, Morrow, Lane, & Jolivette (2005) and more recently by Lane et al. (2015). The topics covered in the course were identified from the content covered in the two employed textbooks (Gray & Drew, 2012; Svinicki, & McKeachie, 2014) and a course reading (Bain, 2004) to track perceptions related to their knowledge, confidence; and the usefulness of the experiences designed to help prepare them for teaching at the higher education level across the academic year. There were 24 topics identified that were covered in the course based on the course developed from the two aforementioned textbooks including: (a) use of eportfolios; (b) understanding university culture; (c) meeting a class for the first time; (d) understanding academic rank; (e) models of best teaching; (f) teaching styles; (g) coteaching; (h) working with Academic Associations and Teaching Assistants; (i) technology and social media in teaching; (j) online teaching; (k) student engagement and motivation; (l) learning styles and cognition; (m) physical activity breaks/movement differentiation in the classroom; (n) preventing and addressing faculty and student issues; (o) issues of cultural difference; (p) FERPA issues; (q) dealing with controversial topics; (r) balancing research, teaching and service; (s) active learning; (t) balancing work and home life; (u) being a good citizen, (v) negotiating teaching loads and responsibilities; (w) transferring skills; and (x) ethics in higher education. Each of the aforementioned topics had three questions addressing: (1) knowledge, (2) confidence, and (3) usefulness of the perception items (i.e., 24 x 3 or 72 items). The instrument design and use of these three questions on each topic were based on the KCU instrument first developed by
Barton-Arwood, Morrow, Lane, & Jolivette (2005). For each course topic, graduate students were asked the same questions for each of the three outcome areas (knowledge, confidence, and usefulness). For example, “please rate your knowledge using the criteria below: Knowledge: 0 - I have no knowledge of this concept or strategy. 1 - I have some knowledge of this concept. 2 - I have more than average knowledge of this concept or strategy. 3 - I have a substantial amount of knowledge of this concept or strategy.”

Analysis

Qualitative data sources were analyzed using constant comparison and analytic induction methods to identify and extract common themes across participants and data sources during the year (LeCompte & Preissle, 1993). Several techniques were used to support the trustworthiness of the data, including data triangulation, peer review, member checking, and a search for negative cases.

Descriptive statistics were used to analyze all of the survey data (means, standard deviation frequencies). Summative variables were created for the 3 outcome areas of knowledge, confidence and useful for the pre and post results from graduate students.

Results

Our group of graduate students, with the majority having been K-12 teachers, had high self-ratings of their current abilities to teach at the university/college level ranging from 6-8 with 10 being extremely confident [with one student who did not self-rate]. Comments related to their confidence or potential as university teachers. Ester stated, for example, “I don't really foresee any problems with it. I like teaching. I generally have a very good rapport with students and I think as long as I'm teaching some kind of content that I know enough about, I'll be fine.”

Graduate students also talked about their potential to be effective university teachers, Bill
mentioned “…I think I have all the basic building blocks in place, but from being a teacher I know that there's no substitute for experience. I feel confident that I can get up to a 9 or a 10, but it's going to take some time of course, just actually being in the trenches and doing the work…there’s always more to learn.”

One of the major themes that emerged from the qualitative data was a mismatch between expectations of the course and what was accomplished by the end of the semester. Interview data revealed that students had expected to know what specific course they would be teaching the following semester early in the course. Consequently, they assumed that most of the class would be devoted to developing their own course syllabus reviewing and/or developing their own course readings and assignments. As course designers, that was never our intended goal. Scheduling issues did not allow for assignment courses to doctoral students as instructors until very late in the semester. One of the course assignments required that the graduate students shadow an instructor/professor in a course they would be interested in teaching. Nine of ten students expressed that it would have been helpful to know what course they would be teaching in order to determine which instructor/professor to shadow.

The course assignment that was identified as most useful was developing a teaching philosophy statement. In interview 4, after their semester of teaching and one semester after initially writing their philosophy statement, eight of the ten participants stated that their basic philosophies had not changed and that having had time to reflect on their teaching philosophy had made them more effective instructors. Addressing the research question of what student found the least helpful in the pilot course, seven of the ten participants did not find the course readings helpful nor useful and strongly suggested that we eliminate the course texts. This was most strongly expressed by those participants who had substantial teaching experience. In
addition, although the participants generally stated that they had benefitted from the guest
speakers, they expressed frustration at the limited time that was devoted to opportunities to
interact with one another in order to share and discuss course topics and completed assignments.
They also felt that they had not had adequate time to interact with us as seasoned professors with
substantial teaching experience.

Graduate students were also asked opened ended questions about course reflections on
the following topics: their goals, questions they had, additional topics that they would like to see
in the course, changes they recommended for the course and their take away thoughts. Table 1
presents the most frequent responses from students in the aforementioned areas.

<table>
<thead>
<tr>
<th>Goals for the course (pre survey) 6/10</th>
<th>Understand best practices/better understanding of teaching and learning at the university level (e.g., assessment, theories, U.S.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Make syllabus and prepare to teach at the university level</td>
</tr>
<tr>
<td>Questions about the course (pre survey) 6/10</td>
<td>How do I prepare to teach next semester?</td>
</tr>
<tr>
<td></td>
<td>What are strategies for balancing teaching with research and service and tenure issues?</td>
</tr>
<tr>
<td></td>
<td>What makes university teaching challenging compared to other levels?</td>
</tr>
<tr>
<td></td>
<td>What are the trends/theories/teaching like at research intensive vs. private vs. liberal arts institutions?</td>
</tr>
<tr>
<td></td>
<td>What are the common mistakes of new faculty?</td>
</tr>
</tbody>
</table>
What additional topics would you like to see in this class? (post survey) 
5/10

More time spent on the importance of active learning

More time spent on different ways of teaching

What changes do you recommend for this class? (post survey) 
8/10

Shorter guest lectures

Course to better reflect student needs (prepare to teach)

Take Aways (post survey) 9/10

Like discussion boards

Reduce work needed for the course

Great assignments

Examining the quantitative data, graduate students indicated their perceptions of the knowledge, confidence and usefulness of the topics covered in the course were quite positive. For the pre survey, they rated 64% of the items with a 2 or 3 (or better than average or highly for knowledge, confidence and useful). This number increased overall for the posttest to 86%. The topic five items across all three areas were all related to usefulness and included: (a) Negotiating Teaching Loads and Responsibilities, (b) Preventing and Addressing Faculty and Student Issues, (c) Student Engagement and Motivation, (d) Understanding University Culture, and (e) Ethics in
Higher Education. Internal consistency reliabilities for the perceptions items were Alpha=.94 and .96 for the pre and post survey items, respectively.

Figure 1. Graduate Student Perceptions of Teaching Course

![Graduate Student Perceptions of Teaching Course](image)

**Discussion**

We would like to share our thoughts after the end of the fall semester in regard to our co-teaching of DCI 791. Attached in the fall 2015 syllabus for the course and a copy of the fall 2015 Course Evaluation. During the semester, we collected pre and post surveys as well as pre and post interviews (with IRB approval for all) to help us document how our students perceived the course. We hope to have the opportunity to teach the course again and are prepared to revise and improve the course based on the data we acquired and the lessons learned.

**What worked well?**

- Content directly related to helping them teach in spring 2016
- The three major assignments were seen as relevant and helpful by the students
- Time spent on learning how to develop a syllabus
- Exposure to a wide-breadth of MLFTC and ASU faculty
Modeling different types of instructional methods

Modeling co-teaching

What did not work well?

Differing expectations of course content. Both faculty members had understood that the course was to discuss various teaching philosophies, teaching strategies, and other issues that impact teaching at the university level (e.g. FERPA issues, diverse learners, etc.). Students believed that the course was for them to work on their syllabi and prepare for the course they would be teaching in the spring 2016 semester. Students expressed frustration in class, in interviews, and in the course evaluations regarding the late notice about the specific courses they would be teaching in spring 2016. They wanted the class to focus on developing their syllabi, understanding the assignments, and preparing to teach the class. If given the opportunity to teach this class again, we need to rectify this disconnect.

Course textbooks. Given that this is the first time either faculty member had taught a course like this, we conducted extensive research on the texts used in similar courses across the country. The two most popular texts were the ones we adopted for this course. Students, in general, did not find the textbooks useful. This is probably due to the fact that the textbooks assumed very little background in teaching whereas 70% of our students were former classroom teachers. The texts did address topics that they probably had not encountered in their K-12 experiences (e.g. large lecture classes, preparing for university culture, ethics, balancing research, scholarship, and service, etc.). In retrospect, future iterations of this course should include more articles specific to areas that they should know more in depth and include the textbooks as resources for those with limited or no classroom experience. On the course pre surveys, the students indicated that
they were already very confident in their teaching. The readings need to address how K-12 teaching differs from teaching in university settings, with discussions on the overlap of K-12 teaching but an emphasis on transitioning from K-12 classroom settings to university settings.

Restructuring the class. Given that this was only a one-credit class, the syllabus was designed with the goal of exposing the students to as many different types of teaching and to as many faculty that we viewed as excellent university instructor as possible. After outlining the course content for each session, we identified a faculty member to be a guest speaker and address some of the session topics. Although we had asked the presenters to limit their presentations to 45 minutes, all of the presentations ran longer than expected. Given that the presentation were engaging and students interacted positively with the speakers, we let the presentations run longer than planned. This, in turn, impacted the time allotted for class discussions on other topics slated for each session. Students expressed that they had hoped to have more time to work on their syllabi as well as to engage with us as instructors and with our key areas of teaching and research. In retrospect, we should have limited the time of the presentations. In future iterations of this course, we recommend using guest speakers to expose students to various models of teaching but would limit the time used for this purpose. In addition, since this class met once per month, we returned assignments at the following class session. If there was a problem with a submitted assignment, we communicated with the student as soon as the assignment was turned in. However, students indicated that they expected quicker feedback and so part of the restructuring of the class would encompass providing students with immediate feedback.

Additional course development required. Before this course is offered again, the following suggestions should be considered.
The most common concern was the mismatch regarding the course expectations between faculty and students. This issue needs to be addressed. If the course is about preparing students specifically for the course they will teach in the spring, then a streamlined process for assigning students to courses needs to be discussed so that students know which course they will be teaching as early in the semester as possible. If the purpose of the course is to prepare students more in general for teaching at the university level, then we strongly advocate for a 3-unit course that would allow for deeper discussion of teaching philosophies, strategies, and understanding university culture and its impact on teaching. If the course is limited to 1-credit then the course needs to be refined to cover less material in the time allotted than its present iteration. Perhaps the ideal course would cover a balance of these two purposes, in which case, a 3-credit course may be most appropriate. Based on what is decided regarding the purpose of the course, the class time needs to be restructured.

Depending on the agreed purpose of the course, new course readings need to be identified.

Clear processes for assigning students to the courses they will be teaching the following semester.

Given that this was the first time that this course was offered, this was a learning experience for all involved. Both of us would appreciate the opportunity to teach this course again and would welcome any feedback from your perspectives. We look forward to assisting in any way we can to provide our students with this valuable opportunity that not only demonstrates our program’s commitment to quality teaching, but also provides students with mentoring as they begin their journey as excellent university educators.
Conclusion

To summarize, both quantitative and qualitative data sources provide evidence that doctoral students preparing to teach at the university level can benefit from a course focused on teaching. Their preparation in a research-intensive doctoral program should include an opportunity to develop as course instructors given that most tenure-track positions in education include teaching responsibilities that are evaluated as part of progression towards tenure. The results of this study have implications for theory, research, and implementation of school-wide change initiatives.

References


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Role of Form-making Exercises in Design Education for Creative Thinking

Based on analysis of art workshops with primary and secondary school design and art teachers.

**Topic Area:**
Art Education

**Format of Presentations:**
Paper Session

**Paper Description:**
Design Thinking is nowadays widely applied not only in design industry but also in other areas such as business, healthcare and so on. Based on this trend, design is considered as a problem-solver, while role of form-making before concept development is scarcely considered and studied. This paper suggests, under this condition, to explore the possibilities of various form studies and connect form and function in education to extend students’ creativities and applications in professional fields.

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Abstract

Recently people consider design as a problem solving process. Therefore, today’s design approaches and processes are focused mainly in finding out the problems in our daily lives, proposing the necessary design concepts and making the objects to solve those problems. However, looking back how living culture has been shaped around our daily objects, it is far from the design process as we usually think of as mentioned above. At the beginning of human civilization, primitive men found objects around them which fit their purposes and utilized them as tools. That is, people designed the tools by taking advantages of properties of diverse objects around them. These days, however, by taking design as a problem solver, designers try to create a novel form that follows functions assigned by them. Thus there are relatively insufficient studies and practices regarding form-making exercises to build ideas upon naturally shaped forms. Therefore, the purpose of this study is to explore practicability of form-making exercises in design education and professional fields, and suggest a design ideation toolkit to develop further design concepts. We conveyed four workshops with primary and secondary school design and art teachers in order to see how form-making exercises along with the design ideation toolkit can be applied in art classes, as well as a workshop with elementary school students in fifth grade. Throughout the five workshops, we referenced cognitive psychology theory of affordances, to explain actions inherent on natural objects and environments. At the workshops, we tested the design ideation toolkit which take use of 1) Different Viewpoints and Scales, 2) Properties and Functions, to imagine various affordances of forms. By making patterns out of creative thinking processes and outputs of participants from the five workshop sessions, we will discuss how these combinations of form-making exercises followed by the design ideation toolkit have educational effects in schools to develop students’ creativities. Furthermore, we will find possibilities of design education methods that apply abstract forms of objects into solid design concepts which could be used in the professional fields.

keywords: form-making, design thinking, affordance theory, ideation toolkit, creative thinking, design education

1. Introduction

As design has been regarded as a problem solving process, several design thinking methods have been developed and utilized. That is, today’s systemic design approaches and processes are focused mainly in finding out the problems in our daily lives, proposing the necessary design concepts and making the objects to solve those problems. However, tracing back how tools have been designed in human civilization, it is also true that living culture was built upon discoveries of surrounding natural objects. At Triennale di Milano in 2016, Japanese designer guru Kenya Hara and Italian architect Andrea Branzi have co-worked to hold an exhibition called “Neo Pre-History - 100 Verbs.” The show displayed the design history of tools with
verbs describing them from Stone Age till today. And the show has shared the perspective that people designed diverse tools by taking advantages of natural forms of objects around them, and this is the beginning of design. In this context, the purpose of this study is to explore practicability of form-making exercises in design education and professional fields, and suggest a design ideation toolkit to develop further design concepts. To this end, we reviewed the existing design education and toolkits, and cognitive psychology theory of affordances which is to explain actions inherent on natural objects and environments, to set the theoretical foundation. And to imagine various affordances of forms, we suggested the design ideation toolkit which take use of 1) Different Viewpoints and Scales, 2) Properties and Functions, to imagine various affordances of forms. To test the toolkit, we conveyed five workshops with art and design educators of primary and secondary school and primary school students.

2. Theoretical Review

2.1. Design Curriculum

Current design curriculums are comprised of two core courses; one is a foundation course to study three-dimensional form and train five senses to exercise visual relationship of forms in space, and the other is a professional practice course to exercise systemic thinking process of problem recognition and solution in design. Foundation curriculum at Pratt Institute in New York, which became famous by Rowena Reed Kostellow’s revolutionized curriculum to bring abstract elements emulating Bauhaus tradition in 1939, defines three-dimensional form into six presentations as Rectilinear Volume, Curvilinear Volume, Planar Construction, Lines in space, Convexity, and Concavity. Then the presentations are practiced with concepts, ratios, and modules which later are integrated into projects [1]. Charles L. Owen, a Distinguished Professor Emeritus at Institute of Design, the Illinois Institute of Technology (IIT) in Chicago, the incubator of neo-Bauhaus, has taught and conducted research on Structured Planning of design, which emphasizes human-centered creative thinking process. The goal of Structured Planning is to deduct design concepts of more complex product systems by defining, analyzing and reconstructing problems. Furthermore, there are growing interests in design thinking process to become innovative for winning business [2,3]. While there are several toolkits developed to help design thinking process for innovative solutions [4], there are relatively less pursuit in design research in the process of making concepts with form visualization.

2.2. Affordance in Object

Affordance, which explains the relationship of form and function, is a theory that describes information of the perception of surfaces in an object which function the form affords [5]. The information afforded by objects are not only dependent on its properties, but also the experience, knowledge, or culture of the user [6]. In other words, depends on users’ experiences and needs, there are a lot of possible ways that affordance of objects can be interpreted and practiced. Affordance appears when a direct link between perception and action is found and utilized [7]. It can be applied as a methodical frame to draw a design.
concept from two core axes of design curriculum; 1) three-dimensional form, and 2) process of solving problems. This is because affordance provides a fundamental theory to connect the properties of objects and function as a problem solution.

3. ‘Form to Function’ Ideation Toolkit

Based on affordance theory, we have composed the ideation toolkit into three tools (as a form of worksheet) to connect form (unintended product) to function in order to discover new possibilities of the object. With the first worksheet, participants imagine the object from different viewpoints in order to perceive information afforded by its form. Then, with the second, they examine it from anthropometry perspective whether there are other possible functions the object can afford depends on scale changes. At last, in the third stage, participants are able to connect people’s actual daily behaviors and functionality inherent in the form deducted from imagination exercises through previous processes. Thereby, the third sums up the toolkit. By taking use of this ideation toolkit following three stages, we believe that form to function connection link can be made.

3.1. Tools to Generate Ideas with Viewpoint & Scale Tools

Seen from Fig.1 and Fig. 2, viewpoint and scale tools of the ‘form to function’ ideation toolkit is lenses to perceive mundane objects with a fresh look. Viewpoint tool allows us to examine objects from five different viewpoints (bird’s eyes, top, side, cross-side and front view), and Scale tool let us imagine the objects from five different scale-levels (on hands, knee, waist line, eyes and building-height levels). Through these lenses, we are able to discover what affordances could exist on the object when conceived from different views and scales. These tools were suggested in this study to help people to extend their boundaries of imagination on ‘offerings or action possibilities in the environment’ of Gibson[2], and ‘suggestions or clues as to how to use the properties in objects’ by Norman[6].
3.2. Tools to Discuss Properties and Behaviors of Objects

Design is in the process of shaping our daily lives on the basis of the available properties of objects. There may be errors or failures in this process of users interpreting the information afforded by the objects in different ways [8]. For this, in this study, we have provided the Property and Behavior of Object Tool [Fig. 3] to create a link of properties of the objects drawn from previous exercises to actual daily behaviors. Also we asked participants to use this toolkit that a group of two people could discuss and develop concepts together. Having a chance to consider different perspectives of others to discuss about practicability of the product from the workshop has widen views of participants, and each pair completed the form together as Fig.3.

![Figure 3. Property and Behavior of Object Tool](image)

4. Case Studies: Art and Design Workshops

We have conducted five workshops; four with educators and a workshop with primary school students to review availability of the suggested ideation toolkit. Each workshop was delivered for four-hours. During this time, participants produced three-dimensional form using plaster of Paris and ballon to exercise concavity and convexity, referencing form presentations of Rowena Reed’s curriculum for form-making design [9]. As a result, we tried to seek a possibility of the ‘form to function’ ideation toolkit into use. Fig. 4 shows a production process of three-dimensional balloon plaster form that we did as an easy-and-quick form-making exercise in workshops.

![Figure 4. Production Process of Plaster Balloon Form](image)
4.1. Workshops for Educators

During four workshops with primary and secondary school art/design educators, we have led them to produce free forms as many as they want without imposing any purposes on them. This was to help them focus in the form itself rather than how it could function. Many of them made two to three three-dimensional forms within the time. The first and second workshop were done in 19 January and 15 February 2016 respectively. Fig.5 is a final image presentation of what participants had created during the workshop.

Although we asked them to create forms freely without putting any intentions ahead of creating, different approaches of participants were observed. These could be categorized into three directions; Group A focused in making spontaneous forms excluding any intentions, and Group B concerned to shape objects which deliver creator’s intentions. Group C utilized objects around them to shape a form. One of them designed a form that could support her smart phone, functioning as a smart phone stand. Seen from Fig.6-1., of workshop 1, #16 (B and C combined) shows a shape of a phone that a maker pushed and hardened on a balloon plaster. The maker described that she wanted to create a form that could be only shaped with a single tool (her smart phone) without putting any other artificial forces. Also she wanted to produce a form that assembles a bean bag chair. She already set several boundaries of her own before generating ideas with the object. We asked her to examine her object with the ‘form to function’ ideation toolkit so that she could break her rules and extend her creativity. With Viewpoint and Scale tools applied on her object, she could think of an artificial ski slope design (“Building-height Level” Scale) or a public furniture design (“Eye Level” Scale) for a rest inspired by a big slopy form looks like a back support. Meanwhile, Fig. 6-1. #19 participant wholly focused in creating a form that shows asymmetric structure. Through the toolkit application on her object, she described it as a dumb bell (“On hands” Perspective) that her father uses when exercising at a gym, or a ride on playground (“Eye Level” Scale) that children can climb up and play. # 27 and # 33 shown on Fig. 6-2. of workshop 2 belong to Group C using scissors and hairband to shape
their forms. It was interesting to see several different forms being created when participants use objects around them not only their hands to shape the form.

Fig. 7 is the result of the third and fourth workshop conducted in 2 July. We suggested them to use watercolors to mix them with liquid plaster as seen from the left image of Fig.8. Furthermore, we added a new manufacturing method to use a second balloon to blow into the mixture of plaster [Fig.8; center image] which created a vessel shape [Fig.9]. In these workshops, some created their own way of producing a form. Seen in the right image of Fig. 8, one of the participants used a hardened plaster mold to shape the form. Through these workshops of which a couple of tools of expression were added, we discovered there are more possibilities to generate creative ideas than just proposing a toolkit composed of guideline worksheets.

Fig. 8. (Left to Right) Mix Color and Liquid Plaster, Blowing Second Balloon into the Mixture, use a Hardened Plaster as a Mould

Fig. 9. Outputs of Double Blown Balloon Manufacturing Method with and without a Mixture of Watercolors
4.2. Workshops with Primary School Students (5th grade)

In 28 May 2016, we had an art workshop with 5th grade students. The results are shown in Fig.10. They were allowed to use their watercolors and brushes to draw on their plaster form. This was an attempt to provide a new tool besides their hands and objects around them (mostly smart phones which is most adjacent to our body) to express their ideas and display their imagination. However, in the end, this tool limited down their creativities resulting into only illustrating characters they like or coloring the form that instantly inspire them with their organic shapes [Fig. 11].

![Figure 10. Students with their own work of art](image)

![Figure 11. Donuts and Character Illustration by Students](image)

5. Conclusions

This study proposed a ‘form to function’ ideation toolkit which is composed of three parts to connect and show directions for 1) form-based design education, and 2) problem recognition and concept driven-based design education. The toolkit was explored in its practicability through five workshops with educators and primary school students. Through examining workshops, this paper suggests that the toolkit could show the way for design education to create a link between form-making and people’s daily life. Namely, this is a method to turn problem finding, analyzing, abstract conceptualizing into a solid design concept. However,
the toolkit and facilitation guide have to be more specified to reflect the process of perception for interpretation and utilization of information inherent in the object affordances. Furthermore, by exploiting various forms, we need to conduct more researches on form production and composition that extend availabilities of design.

References
Designing Experiences: Connect Yourself to Everyday Surroundings to Discover the Place a new
- Based on analysis of the stairway redesign project with the Haesong Local Child Care Center in Korea -

**Topic Area:**
Art Education

**Format of Presentations:**
Paper Session

**Paper Description:**
What is the main purpose of design? Authors believe that it is to connect users to their surroundings and objects to create a sustainable relationship between them so they experience long lasting design. Through the process of building an intimate relationship with the space through acts of playing, users become self-motivated participants. In order to illustrate this, the paper analyzes a project at the Haesong Local Child Care Center in Seoul, South Korea.

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Abstract

With rising interests on design thinking methods in resolving social and environmental problems, there have been many experimental practices with human-centered design approaches in solving problems in our local communities. However, in April 2016, the mural of Ewha Maul (Village), which was considered as a successful example of collaboration between local residents and external design experts, was vandalized by residents themselves. In the meantime, new discussions on the role of design in overcoming social issues have started. In this paper, we aim to draw implications of human-centered design for social issues through studying a case redesigning the local “stairway” with Haesong Local Child Care Center, located in Changsin-dong, Jongno-gu, Seoul, in which surrounded by sewing factories. Initially, this project aimed to improve the environment of unorganized neighborhoods with help of the center’s children. We took notice on the “stairway” leading up to the center as our object of design. To scout the spot and look for loopholes of this place to improve, we planned to hold workshops with children using design thinking toolkits every second week over the next 10 weeks from April until June, 2016. However, we soon came to realize that how inconsiderable and lack of understanding we were on children, the main user of the place. After experiencing errors and failures to communicate with these children, we decided not to use design guidelines for the remain workshops, but to play with them. Drawing beautiful murals on the walls or cleaning the staircase was not a solution, but a temporary installation or an event. Hence, our goal for the project had changed to make children feel connected to the space through designing games that could imprint their fun memories on the place. Based on this project with the Haesong center, we also conveyed a design thinking workshop with educators to seek applicability of the experience toolkit we developed in schools.

The outcome of this project was a process of activities, the intangible experiences. The lesson we got from this study was that we were able to discover “true user experience design” by which practiced with self-motivated users. Namely, user experience is not given by external experts nor designed by technology-driven products, but it is designed by sharing experiences and memories of the users of the space.

**Keywords:** experience design, intangible design, self-motivation, public design, design education

1. Introduction

Rittel and Weber (1973) defined social, environmental, and cultural issues intermingled together as ‘wicked problem’ [1] because those issues are interconnected and that complex relationship make them hard to solve with a single approach, although they are worthwhile to resolve. In the recent times, as many put efforts on these hard-to-solve problems, design thinking with human-centered approach received attention as a champion for those projects. Many of recent design projects tackled problems of education, water shortages, lack of daily necessities, and environmental improvement of the third world. However, many questions on how sustainable the outputs of those projects are with local people and surroundings.
In May 2016, the mural of *Ewha Maul* (Village) in Seoul which was considered as a successful example of collaboration between local residents and external design experts, was vandalized by residents themselves [Fig. 1]. Due to this event, critics started to talk about validity of public design. One of the main reasons for the conflict in *Ewha Maul* is that routine life of local residents whom the main stakeholder of the design, was violated by the change of their living environment as many tourists visited their community and even their front yard.

In this paper, we would like to raise a questions, if then, how should design approach be to consider various stakeholders of different interests and sustain well within the context of use in terms of design education. Based on reflection from a term project to redesign the long curvy stairway leading up toward the *Haesong Local Child Care Center* [Fig.2], an after-school located in Changsin-dong, Jongno-gu, Seoul, with their students, this research aims to discuss issues of human-centered design approaches and search for an answer for the previous question. In this regards, we will reflect on how the project aim and process had changed with three phases through the course of conducting five workshops with them. As a result, we will review implications of the output of this project compared to existing design thinking toolkits for educators.

![Figure 1. (Left) Before and (Right) After of Ewha Maul](image1)
![Figure 2. The Haesong Local Child Care Center and the curvy Stairway](image2)

2. Process of “Stairway Redesign Project”

2.1 Phase 1: Initiative

The long curvy stairways, our design target, is the path to school, main streets, and the old fortress, and has many passers-by. At the same time, however, it was the place that nobody cared for. Therefore, we found it was important to make participants to have a sense of ownership to the place to solve the problem. This project initiated from ideas to develop ‘Design Thinking Toolkit for Children.’ The aim was to practice methods in the toolkit with children and redesign the stairway from solution discovered from toolkit workshops, and as a result develop a design thinking toolkit to fit the eye-level of children like *Khandu* [2]. *Khandu* is a kid-centered design thinking toolkit in the form of card game which kids ultimately share their solutions and other resources on online community, designed by *Seven Thinkers*, a Madrid based service design and design thinking studio.
Most of the parents who sent their children to Haesong Center, are working in sewing factories until late at night so that they have little time to spend with their children. In that context, these children lacks outdoor experiences to stimulate their creativity unlike their peer-group in school. This redesign project started coincidently when we met a teacher who is in charge of the center while we were roaming around the area in search of inspiration. In the beginning, our ideas for the project was not that much different from Ewha Maul Project, to clean off dirty garbage bags and place a nice installation on the wall of the staircase with children to make it look more attractive.

In the first workshop, we played icebreaking game and built a tower with marshmallow in order to be friend with them as well as to see their creative possibilities [Fig.3]. Then in the second workshop, to discover problems of the staircase, we put a map on the wall and handed out post-it to children to write down troubles they have with the place and stick them on the map[Fig.3; right image]. Our approach using post-it just like grown up design thinkers were not successful, although we found that these children have negative impressions on the staircase and would like to escape from the space as soon as they could. We soon realized that this 2 hours of workshop without playing any games just killed their interest on the project and left them as passive viewers to the situation.

![Figure 3. (Left to Right) Ice Breaking, Marshmallow Tower, and Map Tree with Post-its](image)

### 2.2 Phase 2: Empathy with Users (Local Children)

After two workshops, we realized how inconsiderable and lack of understanding we were for children to deliver our ideas, the main user of the staircase. From the previous workshop, children received this problem finding approach using post-it as an another boring and dull classwork which has do be done under control and step-by-step instructions. Accordingly, we decided not to follow existing design thinking approaches, instead we prepared tools and games that children could play in the stairway in order to build fun memories at the place. And throughout the play sessions, we expected them to feel connected to the place. We believed that designing positive experiences for the children is the ultimate goal of this project. In this regard, we tried to understand the stairways from their perspective for the following workshop. As a
result, we have concluded that letting the children to play at the site is the best way to overcome this situation[Fig.4]. It will make them naturally feel comfortable with the space, therefore become to like it. One of those games we played was paper-rock-scissor at the stairway without rules but only guidelines so that children could create their own. We brought dozens of washable sidewalk chalk to help children to draw rules, but first express their thought about the stairway on the wall. Before the third workshop, we were excited to bring this new game and play it with children. However, these children, unlike our expectation, went crazy with the chalk in their hands.

Through this experience, although we did not complete what we have prepared for, children by themselves discovered new patterns of the space as they were examining and observing it with a new given tool. In this workshop, children created their own game, like a map on the bottom to the secret place of which led us to his friend’s home. That is to say, with self-motivated act of playing, they were able to discover unknown aspects of this space. They even fully enjoyed cleaning off time playing with water sprays and smashing a mop on the floor as a new way of cleaning. From this example, we have learned it is more important to design a right platform that users could start playing rather than lock them up in the fixed processes of design. In terms of design education, educators should not push students to follow a certain guideline, because it will only kill their creativities.

2.3 Phase 3: Design a Toolkit to ‘Be a Friend with Stairway’

With lessons from the third workshop, the object of this project have changed to design a playing experience toolkit that children to ‘Be a Friend with Stairway.’ The experience toolkit is to connect users to their surroundings by helping them to see the place with a fresh look through exploiting the space. Through this journey, we were finally able to search for a meaning of the space and design from users’ perspective. In fourth and fifth workshop, we conveyed other play sessions at the stairways to deepen children’s attachment to the space. In order to help children to have a fresh look on the space, we brought rubbing tools that children could print any hidden patterns they found interesting [Fig.4; pattern 1,2,3]. On our last day with the Haesong Center children, we simulated as if the day is a rainy day with a water spray gun, and children played with decorated poly vinyl umbrella with markers, color velcro, and kitting wool [Fig.4: bottom lane]. In the end, the outcome of the project was not an installation that could be easily seen from other
public design examples, but a process of activities and intangible experiences that will be remembered for a long time. And this is how we defined sustainability of design. By experiencing this whole workshop process, children had grown affection and created an attachment relation to the space which was the ultimate goal of the project. For children, the experience at the stairway became a chance to discover various possibilities of expressing their selfness. For us, we experienced the power of self-motivation in design education for extending creativity. While reviewing the project and process we have been through with children, we were able to summarize the project into five steps and three phases as arranged in this section [Fig.7].

![Pattern 1, Pattern 2, Pattern 3](image)

Figure 5. Discover New Patterns of the place, and have Playful Experience on Rainy Day at the stairways

3. Workshop with Educator based on Activities : ‘Play with Your Surroundings’

Based on the Haesong project, we conducted a design thinking workshop for educators in 25 June 2016. One of the main goal of this workshop was to design a new game to play after experiencing icebreaking and pattern seeking to help them to see the classroom(a routine space for teachers) with a new perspective. Differences between this workshop and the Haesong project were that the workshop was an indoor activity with educated grown-ups who can be easily controlled while those children at the center had freedom to do many activities outside such as smashing a color ball to the floor to tear up paper and draw murals as much as they want on the wall (since they used washable chalk) and they were also way more wild in reaction which we found as their hidden possibilities for creativeness.

This workshop with educators were conveyed with four steps which are 1) Icebreaking, 2) About myself (Create a Manual of oneself), 3) Discover the Place a new, 4) Design a Game based on Activities. Since it was the first day of 10 days of workshop, icebreaking game was a great tool for participants to be familiar with each other. We did the classic paper-scissor-rock train play in the classroom as the first icebreaker, and as the second we played ‘Guess my Number,’ the game 5% Design Action [3] of Taiwan developed
[Fig.6: first two images]. After then, we asked people to draw each other’s faces (5 faces within 5 minutes) on post-it without looking at the drawing paper [Fig.6; third image]. With these quick drawn portraits, people created a self-introduction manual of themselves to classmates.

The third step to discover the routine space a new was to find new possibilities for art and design education which was the main purpose of this workshop. From the experiences with children, we applied this curriculum to seek new patterns of the classroom environment by rubbing them on paper with watercolors [Fig 6; fourth image]. Participants were excited to discover new patterns, signs and textures of the indoor space, and imprint them on a paper. After this exercise, we asked them to design a game based on activities and objects discovered in space. As a result, we found that there are new possibilities for this kind of art/design classes based on activities and processes to foster active and self-motivated students(users).

![Figure 6. Icebreaking Game to become Friend with each other, and Rubbing Game to seek Sew Patterns of the Place](image)

4. Conclusion

Current design education is mostly focusing on presenting decent looking results or superficial outcomes. Hence, in this paper, through sharing the experience with the Haesong center children with educators, wanted to bring up those problems of current art education in Korea to discuss practicabilities of connecting students and their surroundings as a new possibility for creative education.

The outcome of the Haesong project was a process of activities, the intangible experiences. Through analyzing this project, we learned about the power of “true user experience design” based on self-motivated participations. Namely, user experience is not given by external experts nor designed by technology-driven products, but it is designed by sharing experiences and memories of the users of the space. Furthermore this principle can also be applied on current art and design education. As a result, this study suggests that the essence of human-centered design is to build design concepts and designing action plans to create shared memories with users. Otherwise, it has no meaning.
Reference


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Figure 7. Three Phases of the Project
Title: Transforming underserved youths through study abroad.

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Abstract

Given the developments of recent times it has become a widespread educational goal to make students more globally orientated. Opportunities such as: study abroad programs and student exchange programs are part of this process and attract many university students every year. It has been shown that study abroad programs can widen students’ horizons, promote self-confidence and develop their career paths. However, the bulk of research so far has been conducted on university students. Additionally, these studies suffer from a disproportionate over representation of certain ethnic, racial and socioeconomic groups who have been able to participate in international education. The situation is even more pronounced at the secondary level where high school students of underserved communities are severely under-represented in study abroad programs.

As such, this paper examines the study abroad experience of a group of underserved youths in a transfer high school in New York City. Preliminary findings from our research show that study abroad participation builds students’ confidence, expands their world view and changes their perception of self as global citizens. It can also enhance their interest in academic study and empower them to dream of new career paths. Further, it can increase their understanding of their own cultural biases and prepare them to work more effectively with diverse groups of people. In providing a discussion of the personal growth/ transformation of students who have studied abroad, we hope to promote early international education awareness for minority groups while advocating for an education system with inquiry learning and expeditionary learning at its core.

Keywords: Study abroad, underserved youths, transfer schools, expeditionary learning
Title: Calling all Nurse Educators! Addressing Challenges Associated with Recruitment and Retention of Participants in Nursing Education Research

Topic area: Higher Education

Presentation Format: Paper Session

Description: The purpose of this presentation is to discuss recruitment and retention issues related to nurse educator participants in research studies. First, we present a review of pertinent literature. Secondly, we share the challenges experienced while undertaking our research study and possible reasons for these. Thirdly, based on our experiences, we offer potential recommendations, solutions, and suggestions to guide further research. The audience will be engaged in a discussion based on their respective experiences.

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Title: Nursing Students Critical Thinking and Research Utilization

Topic area: Higher Education

Presentation Format: Paper Session

Description: Our presentation will focus on Critical Thinking Dispositions and Research Utilization (RU) of undergraduate baccalaureate nursing students enrolled at a university in Western Canada. We will also present qualitative findings related to RU which we categorized using the PARIHS framework’s evidence, context and facilitation elements. Findings disclose some key facilitators barriers to students’ use of research in practice. Finally, we will share some of the key challenges in using a mixed methods research design.

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"As Long as You Teach One Minority Group’s Story, You’re Good”: Issues to Consider When the Goal is Cultural Empowerment

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Topic Area: Other Areas of Education (Multicultural)

Presentation Format: Paper Session

Presentation Description:
Through the use of testimonio methodology, a young scholar and a senior researcher examine their involvements with educational experiences with cultural empowerment as a central tenet. Experiences teaching in various educational programs as a young educator are examined through a critical lens. The senior researcher shares her experiences teaching in a charter middle school designed to empower Latino/a youth. Challenges and strategies for addressing those challenges using a community wealth framework are addressed.

Introduction
It is important to note that educational attainment among U.S. Latinos/as has been changing in recent years (Fry & Krogstad, 2014). According to the Pew Research Center (2014) the Latino/a high school dropout rate has dropped significantly from 32% in 2000 to 14% in 2013. Furthermore, the number of Latinos/as enrolled in two- four-year colleges has more than tripled since 1993 (Pew Research Center, 2014). Despite these important gains, a gap in educational attainment persists for this student population. The high school graduation rate for Latino/a students for the 2013-2014 school year was reported at 76% compared to 87% for White, 73% for Black, and 89%
for Asian students (U.S. Department of Education, 2016). SAT scores, critical to the college admissions process, show a gap between various Latino groups and White students. Furthermore, Latinos continue to lag behind White, Black, and Asian students in obtaining a four-year degree. When looking at Latinos/as between the ages of 25-29, only 15% of Latinos/as have a bachelor’s degree or higher compared to 40% of Whites, 20% of Blacks, and 60% of Asians in the same age group (Pew Research Center, 2014).

As Latina scholars, activists, and first-generation college students, we have chosen to work in various educational settings that show promise for addressing the achievement gap for Latino/a youth. As a junior in college, Melody has worked in several settings that seek to engage Latino/a youth through empowerment. In some cases, the cultural empowerment has been the goal. In others, exposure to STEM content has been the target. Although all of these programs have targeted inner-city socio-economically disadvantaged youth from culturally and linguistically diverse (CLD) backgrounds, the majority of her colleagues in these programs have no shared backgrounds in terms of ethnicity, language, or socio-economic backgrounds with the students they serve. Melody, on the other hand, would have qualified as a participant for any these programs. Margarita has been teaching for over 25 years in K-12 and university settings. Twenty years ago she was part of a group of teachers who established the first bilingual charter middle school in California. A central tenet of the school was cultural empowerment. Although the school served 99% Latino youth from an inner-city, the vast majority of teachers were white, monolingual, and from socio-economically advantaged backgrounds. As part of a college of educational faculty at the
present time, Margarita now finds herself as part of several projects focused on CLD students in which she is the only minority faculty involved.

Cultural empowerment can be defined by Freeman and Cohen (2001) as the following and describe the process in detail:

the procedures through which a group of people develop a belief system in their capabilities—that is, their ability to achieve. Individuals who are culturally empowered first and foremost understand the importance of history and heritage of their culture. Next, they take pride in those contributions made by ordinary individuals as well as individuals of their culture who have made significant accomplishments. Being culturally empowered creates a sense of psychological well-being that enables individuals to take pride in their culture, clearly understanding that there are varying views and actions among individuals who make up the cultural group. Being culturally empowered is enormously important, particularly for groups who are underrepresented in a society (i.e., smaller populations), because not to feel empowered culturally can create feelings of inferiority, hopelessness and despair, entrapment, and disenchantment among members of the group (p. 587)

Although cultural empowerment is most often used in African American communities, there are implications for other represented communities. The most direct way in which the process of cultural empowerment to occur is through education (Freeman & Cohen, 2001).

Related to the concept of cultural empowerment is the idea of culturally relevant pedagogy. The importance of culturally relevant pedagogy in education is a topic long discussed by educators who work with underserved and marginalized groups. It is projected that by the year 2050 minorities will constitute around 54% of the population in the U.S, yet the histories of people from historically underrepresented groups are consistently left out of many mainstream curriculums (Edmin, 2016). By teaching students from underrepresented backgrounds about their own culture and histories we can help to cultivate a society founded on principles of, “Social justice…crucial to the
long term survival of participatory democracy,” (Osborne, 1996). Statistically, students are more likely to be engaged in classroom content and perform higher academically when they are presented with material they can relate to (Edmin, 2016). For instance, when Latino high school students in Tucson, Arizona were presented with a new cultural studies program that touched on the histories and cultural relevance of Mesoamerican groups like the Olmec, Aztec, and Maya, test scores and graduation rates dramatically increased as students were engaged with the lessons being taught in class, and excited to pursue their studies (Romero, 2008).

Furthermore, students who are not exposed to curriculum content that they can relate to may interpret the omission of their histories to mean that their cultures or traditions are not as important as the traditional Anglo-Saxon histories included in mainstream curriculums. For instance, by omitting the cultural relevance of Native American history in curriculums, not only might Native students interpret this to mean that their traditions and ancestors were not important, but it denies students from mainstream backgrounds the opportunity to, “deepen their knowledge,” of cultural groups other than their own (Milner, 2010). The inclusion of culturally relevant pedagogy in curriculums allows for students to develop their critical thinking skills and, “Challenge the status quo of the existing order,” leading students to feel important, and empowered in the classroom (Osborne, 1996).

In this paper and presentation, Melody and Margarita share their experiences in their various educational settings using testimonios. According to Delgado Bernal, Burciaga, & Flores Carmona (2012), testimonio is a methodological tool that “incorporates political, social, historical, and cultural histories that accompany one’s life
experiences as a means to bring about change through consciousness-raising (p. 364). It goes beyond oral history or autobiography. The explicit goal of testimonios is to elicit social change. Benmayor, Torruellas, & Juarbe (1997) emphasize that testimonios link “the spoken word to social action and privileges the oral narrative of personal experience as a source of knowledge, empowerment, and political strategy for claiming rights and bringing about social change” (p. 153).

Data collection and analysis took place simultaneously and was a collaborative process using grounded theory methods (Corbin & Strauss, 2015). We met six times to write and analyze our testimonios. As we wrote our testimonios, we identified areas of focus. These included (1) understanding how we view our roles as educators, (2) describing how our own educational experiences have shaped our roles as educators, (3) identifying challenges faced in our various educational contexts, (4) identifying strategies for addressing those challenges, (5) how we have been mentored and how we mentor others, and (6) future goals. After writing, we coded our testimonios using open coding (Saldana, 2013), then placed codes in categories, meeting to discuss and continue with analysis.

Preliminary analysis of our testimonios suggest that our own educational experiences have influenced how we engage professionally and personally. One consistent strand is the pull between developing and growing within the culture in which we were raised and negotiating the cultural capital (Bourdieu, 1987) valued within mainstream society. In examining the themes that arose, we found Yosso’s (2005) concept of community wealth helpful for understanding and discussing our experiences. Community cultural wealth identifies six types of capital that students possess:
aspirational, linguistic, familial, social, navigational, and resistant (Yosso, 2005). For example, we discuss the challenge of straddling our culture at home and the cultures of the various institutions in which we work using Yosso’s concepts of social and navigational capital. Our work as activists is grounded deeply in the resistant capital we possess, much of which we have acquired through valuable mentoring. Furthermore, we have often found ourselves as the sole minority teacher in settings that serve minority youth. This has made us feel the pressure to speak up and question pedagogical and curricular choices. In one instance, Melody raised questions about using African-American literature to empower Latino youth and was told, “as long as you teach one minority group’s story, you’re good.” Other themes that emerged from the data will be further discussed in the presentation and forthcoming paper.

Our testimonios are discussed in the context of community cultural wealth. Community cultural wealth identifies six types of capital, or resources, that students possess: aspirational, linguistic, familial, social, navigational, and resistant (Yosso, 2005). Community cultural wealth values the cultural knowledge, abilities, skills, and contacts that individuals in socially marginalized individuals possess. This is in contrast to the deficit view often applied to these individuals. Figure 1 displays the various components of Community Cultural Wealth.

Figure 1. Community Cultural Wealth Components
Findings and Discussion

A number of important themes emerged from our testimonios and will be shared and discussed below. A more complete set of findings and further discussion will be shared at the HICE 2017 conference presentation.

Our Roles As Educators: Privilege, Impact, and State of Mind

When examining how we understand and view our roles as educators, three themes emerged 1) our acknowledgement that we have been privileged in our own education, 2) impact as a personal and professional goal, and 3) seeing our roles as a state of mind.

As first generation college students, both Melody and Margarita stated that they acknowledged that their opportunity to go to college was a privilege not afforded to many of their peers from their neighborhood. Furthermore, Melody discussed how her
participation in a research-intensive university impacts her approach to being an educator.

As an educator, I first have to acknowledge that it is a privilege to be able to attend a large research university, and access the information and opportunities that are at my disposal as a result. I view being an educator as a two part methodological approach. As a self-identifying member of the subaltern, I find it my responsibility to go back and share the knowledge that I’ve acquired in professional settings with members of my community that may not have access to the same educational resources. However, I find it just as important to educate members outside of my community and outside of the subaltern by bringing awareness to issues marginalized people and underserved communities face by starting discussions, posing questions, and documenting narratives that bring about consciousness raising for the purpose of collective economic, social, and political growth.

Margarita talked about the responsibility to being afforded the privilege of having attended Harvard’s Graduate School of Education.

I applied to seven graduate programs and was accepted to six. When I received the acceptance to Harvard, I felt very honored and privileged to be given this opportunity but also a great sense of responsibility. Nobody from my high school had ever attended an ivy league institution. As far as I knew, no one at the college where I graduated had ever gone on to Harvard. As the only Latina in my graduating class in high school and one of only a handful of Latinas in my graduating class in college, I felt like this was an opportunity that I could not pass up - both for myself and as a Latina representing my cultural community.

Both Melody and Margarita repeatedly used the word “impact” to describe how they saw their roles as educators. Melody described the importance of developing cultural empowerment in regard to impact as follows:

Elementary and middle school students are still at a point in their education where the mentors in their lives can have positive impacts on how they see themselves and navigate the world around them. By sharing stories and literature they can relate to and exposing them to their culture and history in curriculums, educators can empower students to achieve their goals and take pride in their
cultural histories. They can create lasting impacts that extend far beyond the facts and figures students memorize in the classroom.

Margarita described her reasons for being part of a group of teachers that started a charter middle school with a focus on cultural empowerment in this manner:

For many of the middle-school students in the community, I was the first teacher they had seen who shared their language and culture. We wanted to impact these students beyond their three years in the middle school. By helping them become culturally empowered through education, we were not only impacting individual students, but also their siblings, their parents, and the community.

Furthermore, another interesting theme that emerged was that the role of being an educator is not simply a job, but rather, a state of mind. Melody comments:

I’ve heard far too many teachers in my time say things like, “It’s not my job to be liked. I’m there to provide information, it’s up to the students to listen to me.” Ultimately, being an educator is not some 8-5 job, and tutoring is not some part time gig someone picks up on their down time. Being an educator is a way of life, it is the way you see and interact with the world. It means seeing a student struggle with a specific problem and trying to get at the root of what they don’t understand rather than blaming the student’s intellectual ability. It is being a mentor to peers that want to give up mid way through college because they feel defeated. It’s sharing theories and complex thoughts with those around you, and life experiences and understanding and love.”

Margarita feels similarly:

Throughout my 25 years of teaching, I have been accused by white administrators and peers of being too much of a mother to my students. It’s true, I worry about and advocate for my students 24/7. I can’t - won’t - turn off my role as a teacher when I leave the classroom. When students accidentally called my mom, it always made me smile. I think that’s why it hurts so much when issues related to bilingualism are dismissed - this isn’t about the latest buzz words or funding sources for me. What I do is who I am.

Paying It Forward: Examining Our Own Educational Experiences
When sharing past educational experiences, both Melody and Margarita shared their lack of mentors and how they are both committed to “paying it forward” by mentoring others. Melody notes:

As a Latina, I’ve always found it difficult to find role models who looked like me and had similar experiences. Even in college it seems I’m only ever exposed to male professors of color, or white female professors—but I’ve yet to have a Latina professor (even in courses specifically about Mesoamerican and Latin American culture). In high school, I had a similar difficulty finding mentors and administrators I could look up to. Most of my high school counselors left after a year or two of working there—always using our high school as a springboard for some better educational opportunity. We were temporary. Transitional in their quest for something better paying and permanent. In order to look up to mentors, students must first be able to trust them. A very difficult endeavor in my school district knowing that our superintendent stole money from the school district and fled to Africa, and that our high school’s principal was accused of molesting multiple girls on the volleyball team. The biggest part of the issue was that half the time, I didn’t know what I did not know. As a result, it was always really difficult to ask questions even when there was a mentor around.

Melody approaches mentoring in the following way:

More than providing important knowledge, I’ve come to realize that in an American society where political figures like Donald Trump constantly belittle Hispanics, and film and the media still lag behind empowering representations of minorities, one of the most important things I can do as a mentor is make sure my students know their potential. A lot of my students will be first-generation college goers with parents that don’t really know how to navigate the college admissions process. As a mentor, I help my students realize that college is attainable for them, and that their voices and contributions to our society are relevant and beautiful. Knowing that administrators, campus security, and a lot of teachers tend to be interrogational, condescending, and dictatorial on inner city campuses, some of the most powerful things I can show my students is kindness, respect, and trust. I aim to show them that there is someone out there who will listen to their opinions, who cares about how they feel on certain issues, who shows them the importance of their own voice.

Margarita also described her experience lacking mentors but has found ways to create a “patchwork” of mentoring for herself.
In middle and high school, I never had a Latina/o teachers. I actually became a Teacher in large part because I felt like no teacher had never understood my struggles learning English. In college, I also didn’t have any professors who were Latina/o, not even my Spanish teachers. Through the years, I have created a patchwork of mentors who I go to for specific advice. One of my Latina colleagues is who I go to about balancing being a mom with helping with my parents and sandwiching my career in-between. I have a white colleague that I go to for advice about building in writing time into my hectic schedule. I have an African-American colleague that I go to when I need to discuss the micro-aggressions that are all too common in my workplace.

Margarita runs several mentoring programs in part due to her own lack of mentoring:

I meet with new professors regularly to support them in their teaching, service, and scholarship. Especially for those who are mom, who are from minority groups, who are first generation themselves trying to navigate through the world of academic -- I make myself available 24/7, on weekends, over breaks. Sometimes they just need someone to listen and sometime I can provide professional advice. I currently run a writing group for non-tenure faculty who are not supported at our college in terms of their scholarship. I run another group for Latina scholars who want support as they try to raise their children as Spanish/English bilinguals. For students, I run a Spanish club for students like myself who grew up speaking Spanish but need to develop their academic Spanish.

“People Will Always Tell You Can’t. Smile and say ‘Watch Me’”: Challenges Faced and Overcome

One of the most common themes throughout the prompts was that of challenges faced. Numerous times, strategies for overcoming those challenges were also shared.

Melody described “disconnects” as one of the challenges:

Both with my work at JEP (the Joint Educational Project) during the school year, and Freedom School during the summer, I’ve had to work in settings where the majority of employees/interns are from dominant (middle class/Caucasian) backgrounds working with students from lower middle class, Latino backgrounds. They constantly spoke about how to refer to the students in a “politically correct” way and reinforced a “color blind” mentality to the student’s education. The notion here is that lower middle class Latinos can achieve just as much as middle class whites because they are “no less capable.” As progressive as this seems, it reminds me of the “myth of meritocracy” where the implication is that hardworking students of any background can achieve their goals if they are intelligent enough and hard working. The problem with this “myth” is that it does not recognize a lot of the systematic oppression
minorities still go through in society regardless. Studies have shown that even if a Latino has the same educational background and opportunities available to them as a Caucasian candidate/employee, they still tend to be paid less and face workplace discrimination.

There is a constant push to treat our JEP and Freedom School students the same way one would treat Caucasian students, but no push to teach our Latino students about their own culture or history. In sum, this problem stems from a disconnect between the school administrators, the teachers/interns, and the students themselves. At Freedom school, the mentality was that “As long as you teach one minority’s story, you’re good.” During my time at Freedom School, I began to stray away from the required reading list, incorporating some of my own books from home into lesson plans. Each of these books dealt with complex issues that were relevant to the background of my Chicano students. Instantly, I could see that they would get excited at the site of Spanglish sentences (especially when I pronounced the words correctly) and pictures of flautas and sopes on the pages of my poetry books. One of my students pointed to the cover of my copy of, “How Tia Lupe Came to Visit/Stay,” and said, “Hey, I have a Tia Lupe too! And she kind of looks like that too.”

Margarita described her recent work with preservice teachers who are seeking elementary education certification with an endorsement in bilingual education or in English as a second language. She views her role in that work as one of culturally empowering future teachers in this group, many of whom are first generation college students and come from culturally and ethnically diverse backgrounds.

I see such a disconnect between the students I have in this program and those in The regular elementary education program. Many of my students want to serve in Title 1 schools that are highly diverse. They want to be role models for their students and work with the families by helping them navigate the educational system. They want to help them overcome language barriers that exist. But that program keeps shrinking in part due to the disconnect that exists between administration and the those students. Our program requires a full school year of student teaching and that is a serious hardship especially for my students. I had to balance student teaching and working nights but only had to do so for one semester. I am not sure I could have done it for a year. They have to balance the responsibilities they have with their families and those at school. For my students that come from border communities, this is especially challenging. They feel the pressure to keep going home. And some professors make them feel bad about going home. I try to help them balance the many role in their lives. I want them to see their families as a strength and not a deficit. They have community wealth that they need to tap to help them be successful.
Looking Ahead

Both Melody and Margarita spoke extensively about future plans. Melody was recently accepted for a study abroad program and wants to pursue graduate degrees.

Moving forward, I’m really looking forward to comparing the education system in America to New Zealand when I study abroad in the Spring of 2017. Specifically, I’d like to take a look at how they incorporate indigenous studies (Maori culture and pedagogy) into their curriculums. I’d like to pursue a Masters degree in Education in the near future and hopefully go into educational administration after working in the classroom for a few years. My role as an educator is constantly in flux, molding and catering to the most pressing needs of my community whether it be through activism, constructing narratives, mentoring the youth, or teaching in traditional academic settings. Being an “educator” is not merely a job title or something someone does across one summer, it is a state of mind and a way of life.

Margarita is in the process of applying for new academic positions.

I have put myself on the market for a new position. I would like to have more of a role in designing academic programs. I want cultural empowerment to be considered as we design curriculum. I want to work with populations that I can mentor through the system. My present institution doesn’t use words like social justice, addressing the needs of first generation students seems to be done Out of pity, not from perspective of community cultural wealth.

Our testimonios addressed each of Yosso’s (2005) types of community cultural wealth: aspirational, linguistic, familial, social, navigational, and resistant. In sharing their own stories, we see how each of these areas has played out in their roles as educators who seek to culturally empower their students.

Conclusion

There are a number of implications for various policy areas as well as teacher educators, community activists, and other key stakeholders in the education of Latino/a
youth. For example, recruitment and retention of culturally and linguistically diverse educators needs to be addressed from multiple parties. As stated previously, the goal of testimonios is to bring about social change. By critically analyzing our own experiences, we hope to address the achievement gap that still exists for many of our community members through the concept of empowerment. The concept of cultural empowerment holds promise, but it begins with us as educators feeling culturally empowered to speak up when we may be the only voices who share linguistic, ethnic, and socio-economic backgrounds with the students we serve from a community cultural wealth perspective.

Reference


Preparing Counselors for Electronic Counseling Records:

Lessons Learned & Future Needs

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Abstract

This paper/presentation addresses one small segment of a larger and more complex technology / privacy issue in the counseling profession – the use of electronic (mental) health records (eMHRs) in the counseling profession and preparing future counselors to use them. The counseling profession now faces a challenging balance: How can the counseling profession remain on the cutting edge of technology while still protecting clients’ privacy? And, how can counselor educators prepare new counselors to fully understand this balance of privacy and technology in their day-to-day practice when technology is so common place that it is often overlooked? This discussion paper is based on a review of the literature about electronic health records, and nearly three decades experience as a professional counselor and counselor educator. This conceptual paper discusses important aspects of transitioning to eMHRs and raises potential questions for counselors and counselor educators to consider in this process and into the future.

Keywords: technology, counseling, recordkeeping
Introduction

The age of digital information continues to shape the counseling profession in all aspects from how counselors recruit and contact clients (American Counseling Association [ACA], 2014); to on-line and technology-assisted treatment options (e.g., Aguilera & Munoz, 2011 as cited in Lawley, 2012); to recordkeeping and reimbursement procedures (e.g., Wilkinson & Reinhart, 2015). This paper addresses one small segment of this large and complex technology / privacy issue in counseling – the use of electronic (mental) health records (eMHRs) in the counseling field and preparing future counselors to use them. This conceptual paper discusses important aspects of transitioning to eMHRs and raises potential questions for counselors and counselor educators to consider in this process: How can counselor educators prepare new counselors to fully understand the balance of privacy and technology in their day-to-day practice?

Nearly all counseling internship sites now use some form of electronic mental health records (eMHRs) for scheduling clients, documenting case notes, and/or documenting supervision. After graduation, new counselors are further expected to use and fully understand the impact of technology on counseling and client privacy as most clinical practice sites now use eMHRs for billing and reimbursement. Acknowledging the digitalization of the counseling profession can be seen in Federal and state guidelines like the Health Insurance Portability and Accountability Act (HIPAA), the Health Information Technology for Economic and Clinical Health (HITECH) Act, and state laws such as Texas House Bill 300 (HB 300; HIPAA, 2009; HITECH, 2013; Browning, 2011). Now 20 years post-HIPAA and eight years post-HITECH, the counseling profession still struggles to address the potential impact technology is having on the counseling profession (e.g., Hill, 2013; many common ethical violations involve privacy and
technology-related issues). Unfortunately, there a gap between the training that counseling students receive about recordkeeping and technology in the counseling field and what is expected of these same counseling students in their internship sites and in their post-degree clinical experiences.

So, why has the profession of counselor education failed to robustly address the need to prepare students to meet these technology expectations? While little empirical research exists to specifically address this issue within the counselor education field, similar experiences in other helping professions can inform the process of implementing and embracing technology in the counseling profession. There is now extensive research in the medical profession (including psychiatry) about the use of electronic health records and digital records systems and this body of research may provide important insights for the counseling profession (e.g., Palma, 2013; Tsai & Bond, 2008; Madden, Lakoma, Lu, & Soumerai, 2016).

Counseling culture – is it anti-technology or just slow to adapt?

It might be helpful to look at some aspects of the culture of the counseling profession and consider how this counseling mind-set might be positively and negatively influencing the advance of technology. For example: How are counselors trained compared to other clinical practitioners? How might this information inform the acceptance and implementation of technology in the counseling profession? What might the counselor education training process say about how counselors are trained? As a group, perhaps counselors are not as interested in technology as other professions? Perhaps the very desire to work closely with individuals in the therapeutic milieu makes counselors less likely to desire or appreciate the unique benefits of technology in the workforce? How might this “counselor identity” or mind-set influence the culture of the counseling profession? Or, perhaps counselors prefer human interaction over
 While we may never fully know the answer to these questions, it might be helpful to consider each of these questions in better understanding why the profession of counselor education has not robustly addressed the need to prepare counseling students to embrace technology more forcefully because the inclusion of technology without forethought and planning opens the door to haphazard implementation.

An examination of several aspects of the counseling culture or counselor identity may shed light on the possible impact these might have on technology within the profession: (1) Counselor education as separate sub-profession; (2) diversity within the counseling profession; (3) counselor-training emphasis; and (4) funding within the counseling profession.

(1) Counselor education as separate sub-profession

There are many pathways to education and licensure in the helping professions (e.g., counseling, social work, psychology, marriage and family therapy), but in many states counseling has dominated at the master’s level in the last decade (see state licensure websites for details). While most counselors practice at the master’s level, the profession of counselor education is accredited only at the doctoral level (the Council for Accreditation of Counseling and Related Educational Programs [CACREP], 2016). Counseling is the only helping profession which considers (counselor) educators as a distinct sub-profession rather than merely an extension of the (counseling) profession. The profession of marriage and family therapy similarly accredits educators at the doctoral level (see AAMFT.org for additional detail), but doctoral level marriage and family therapists do not hold the title of “educator” within the profession as counselors do. In comparison, the field of social work credentials at the doctoral level, but still allows master’s level professionals to train and educate social work students (see NASW.org for more detail). The field of counselor education has a separate code of ethics,
separate professional affiliations, separate professional journals, etc. Perhaps this is due to the unique development of the counseling profession having come from the profession of education and guidance? It may be helpful to consider how this history may be impacting the profession today. While there are differences between master’s level and doctoral level training in counseling, the differences may not be as great now as in previous decades with a growing number of students going straight through master’s and doctoral level training (e.g., ACA.org). However, this growing trend may be creating other unknown challenges within the counseling profession. What might this indicate regarding a unique mind-set in counseling and counselor education?

Even with training standards documented at two differing educational levels, the profession of counseling does not mandate counselor educators to remain active in clinical practice skills or seek clinical licensure (CACREP, 2016). While clinical licensure for counselor educators is certainly desired, it is not mandated of all counselor educators, and similarly there is no mandate in CACREP for counselor educators to maintain practice skills. Could this lend to an increased likelihood that counselor educators are not as current on changing needs or expectations in the counseling field as they could/should be?

(2) Diversity within the counseling profession

The counseling profession is often described as an inclusive profession – welcoming students from a variety of undergraduate training programs and backgrounds (e.g., psychology, social sciences, and even professions such as business and military). Training students with such diverse educational backgrounds is challenging for any profession and the length of counselor training programs (now generally 60 graduate credits; CACREP, 2014) makes this even more challenging. This diversity within the counseling profession is even more complicated because
of the wide variability of potential counseling settings and expectations – counselor educators must maintain a wide scope of training to ensure counselors are well-rounded and ready to practice as generalists within a variety of settings in the helping field. Today, counselors are placed everywhere from elementary schools to prisons to nursing homes. Perhaps the lack of specificity in focus has hurt the flexibility of the counseling profession? The responsibility to train broad-generalists to independently treat cradle-to-grave mental health issues is a very heavy burden on any profession.

On a positive note, inclusiveness translates into a very diverse group of professionals within the counseling profession – hopefully able to address issues and challenges from multiple perspectives. However, at a policy-making level, this diversity may make it more challenging for the profession to agree to potentially needed cultural changes such as advances in the ethical code or training practices to address technology needs/changes. For example, the most recent revision of the American Counseling Association’s (ACA) ethical code included an entire new sub-section devoted to the use of technology in counseling (Section H: Distance Counseling, Technology, and Social Media, ACA, 2014); however this addition was primarily focused on the delivery of counseling services through technology and failed to adequately address technology in each of the sub-sections of the ethical code (e.g., B.6. Records and documentation – which still generally assumes the profession is using paper records). Additionally, the counseling profession’s premiere accrediting body, CACREP, made only a minimal attempt to address the need for technology-driven curriculum in counselor education programs in their most recent revision of accreditation standards (e.g., Standards F.1.j., F.5.d., and F.5.e.; CACREP, 2016).

(3) Counselor-training emphasis

On an entirely different issue, in general clinical documentation including case notes has
not been a priority in many counselor education programs (evidenced by the lack of emphasis on recordkeeping in popular counselor education textbooks and the limited focus on recordkeeping within accreditation standards). Unlike social work training programs which can focus on administrative responsibilities, counselor education programs emphasize licensure preparation or intervention skills and de-emphasize administrative duties such as recordkeeping (CACREP, 2016). Perhaps the lack of emphasis on technology in counseling recordkeeping is merely a result of this more narrowed focus on intervention skill-building? If clinical case documentation was of greater importance in counselor-education programs, this would be reflected more in the CACREP standards and in sample course syllabi for core courses such as practicum and internship.

(4) Funding within the counseling profession

Finally, the profession of counselor education is not as well-financed as many other helping professions. Has a lack of money kept counselor education from smoothly moving into the digital world? Other helping professions (such as social work or psychology) have historically had a stronger connection to government policies and institutions and therefore more access to lobbying and federal grant opportunities. In general, counseling is not a well-researched profession because there is limited opportunity to monetize the counseling process. Many who access counseling or mental health services in community-based agencies do so without insurance reimbursement and those who access counseling services within governmental agencies may not require payment or billing services (e.g., the Veteran’s Administration, or the prison system – two of the largest mental providers in the country). Overall, there are no deep-pockets with interests in counseling and therefore modernizing the counselor education
profession has also been slow. Because of this, there are often limited grant funds available to counselor educators to help modernize or update counselor training programs.

Why transition to eMHRs?

One might ask, if there is a sluggishness to embrace eMHRs in the counseling profession and no funding to support this change, why even bother to make this technological leap? Or, more aptly stated, why transition to eMHRs? While some states are requiring this type of transition (e.g., Minnesota; Lawley, 2014), most states are not currently interested in mandating this process. How should a specific agency or counseling clinic make a decision about the choice to move to digitizing counseling records? The answer to this question can be informed by the literature about digitalizing health records in the medical profession over the last two decades. Four major selling-points have come from the body of research available on digitizing health record including: (1) cost savings, (2) advances in safety or quality; (3) increased access to records; and (4) increased research opportunities.

(1) Savings

First, the move to electronic health records was driven primarily by a desire for cost savings (e.g., Quality Technology Services [QTS], 2013; Palma, 2013; Madden, Lakoma, Lu, & Soumerai, 2016). Many of the potential cost benefits sought by digitizing (health) records would be comparable with the introduction of eMHRs in the counseling/mental health profession. The use of digital records reduces the cost of physical labor to file, move, and store charts; reduces the need for record storage space; and decreases the number of lost or misfiled records (Palma, 2013; Madden, Lakoma, Lu, & Soumerai, 2016) - all potential benefits that would easily transfer to counseling records. Space is often at a premium in counseling practice offices or community-
based counseling agencies, and reducing the need for personnel to handle records clearly saves money.

(2) Safety or quality advances

The use of a digital record system also allows for electronic, in-house referrals and contact between providers, allows for electronic prompts and reminders for contact (which can improve prevention and early intervention), and allows records to be quickly reviewed and co-signed (digitally) by a supervisor/licensed provider (Palma, 2013; Madden, Lakoma, Lu, & Soumerai, 2016). Again, all of these are potential benefits for counselor education programs and counseling agencies where supervision needs to be documented. For example, this would allow for faculty supervisors to access records of their counselors-in-training perhaps from their offices or elsewhere on campus, as well as field-placement site supervisors to access records from their offices which may not be physically collocated where the counseling occurs.

(3) Access to records

Digitizing records has been shown to improve accessibility to records – without a physical record or chart, important data can available at all times and at multiple locations (Palma, 2013; Madden, Lakoma, Lu, & Soumerai, 2016). In counseling, this would be helpful for managing client data across multiple sites (e.g., county mental health agencies in rural areas).

(4) Research opportunities

Finally, the opportunity to improve research in the field can also be seen as a potential benefit of eMHRs (Palma, 2013; Madden, Lakoma, Lu, & Soumerai, 2016 discuss this phenomenon regarding medical records). Even simple digitization of counseling records can create informative data about client demographics, the number of sessions required for differing presenting problems, client no-show rates, and a host of other issues that could save clinician
time and agency monies. As described, the profession of counseling lacks adequate research funding so any ability to document and track data trends could make it easier to implement changes in staffing and intervention to improve measurable outcomes in the field. However, before eMHR data can be used for any secondary purpose such as research, informed consent must be considered. Counseling clients should ethically have the option to opt-out of research using their data without losing the opportunity for counseling services.

Over the last couple of decades, clinical recordkeeping quickly went from hand-written notes to typed notes, then computerized notes, and now case management systems or eMHR systems. Based simply on potential cost savings, counseling will continue to move towards wide-spread use of eMHRs and therefore counseling students and practitioners will require more and more training in this area to adequately address this changing and developing need in the profession. While change is constant, it is sometimes overlooked when those changes which seem a part of daily life or normal progression. In some ways, technology has become so infused in everyday life, that without considerable thought, it is challenging to fully understand how technology has changed nearly everything counselors do. This is especially true in the area of clinical recordkeeping and the potential impact digitalization has on counseling and client privacy (Wilkinson & Reinhart, 2015).

Lessons Learned

Unfortunately, very little empirical research is available to fully describe the increase in eMHRs and how this has affected the profession of counseling to date. There have been multiple large studies documenting the process of instituting electronic health records (including one study of more than 5,000 records [Madden, Lakoma, Lu, & Soumerai, 2016]). Based on this body of research, in some ways digitizing health records lived up to expectations and promises
made, but in other ways the process of digitizing health records has failed to meet expectations e.g., (Palma, 2013; Madden, Lakoma, Lu, & Soumerai, 2016; QTS, 2013).

(1) Savings

Research is clear that there has been a cost savings in lowered labor and storage costs associated with digital charting systems (Palma, 2013; QTS, 2013). Tsai and Bond (2008) conducted a small study involving less than 200 client records of mental health care. Tsai and Bond reported that “documentation in electronic records was found to be significantly more complete and faster to retrieve than paper records” (2008, p. 138). However, this must be counter-balanced with significant increased costs associated with starting a new digital record system (purchasing, implementing, maintaining, and training employees to use digital record systems; [Palma, 2013]).

Overall the body of research regarding the digitization of health records is very positive regarding cost savings. While this medical record research may be helpful in informing the digitization of mental health records, it still should be examined closely before making assuming transferability to the counseling profession or potential cost savings for any specific counseling agency. For example, a quick digital search will reveal that much of the research documenting the positives aspects of taking recordkeeping digital are supported or funded by companies that sell digital recordkeeping systems or similar support (e.g., QTS, 2013). This could create a hidden conflict of interest that could easily be overlooked. Additionally, other “hidden” costs may outweigh potential cost savings. For example, Palma (2013) found that there was a 25-33% drop in initial productivity when instituting a digital recordkeeping system and that this significant decline in productivity might continue beyond initial training and if the system is not used regularly or if digital recordkeeping is considered an “added” duty. This loss of
productivity can be even greater when clinicians are required to enter data that is not related to their counseling work or using systems that are not intuitive or cumbersome.

Finally, despite the promise of potential cost savings, some aspects of recordkeeping may not be well-suited to the digital format. For example, a treatment plan or process that requires multiple updates (e.g., documenting each phone call attempt or email sent) may require duplicative and repetitive digital entry motions. All digital entry can be much more time consuming in a system that requires logging on, waiting for an encrypted system to open. Also, on-line systems may be slow when there are multiple users accessing one database. The process of converting paper documents or signatures to a digital footprint can also lead to unique challenges as some reimbursement processes mandate a hard-copy original signature thus requiring two storage processes (Palma, 2013). Additionally, digital notes may actually increase practitioner workload as hand-written notes tend to be briefer than typed notes and if the system used for documenting the note is time consuming (logging in, etc. as described above), this may lead to a greater time lag between the time of the service and when the note is entered – which has long been known to decrease accuracy of notes (Palma, 2013).

(2) Safety or quality advances

The jury is still out regarding potential improvements to patient/client care created by implementing electronic records. While digital records may allow the recordkeeping system to prompt prevention and follow-up appointments, this may not be as helpful in mental health as it is in medical care where multiple providers treat one patient. Palma (2013) warned that any digital recordkeeping system is only as good as the thought and planning that went into its original design and the quality and responsiveness of the tech support after implementation. While one might assume that larger case management or digital recordkeeping systems (such as
those used by state or federal agencies) are beyond reproach in terms of design and support, this may not be the case. For example, one national eMHR system currently being used to serve the mental health record needs of a population of more than one-half million was not even designed for counseling records. Additionally, while some case management systems may have been designed to meet national HIPAA and HITECH requirements, but they may not have taken in to account state laws in this area which can be more stringent (e.g., Minnesota law, and Texas HB 300). Finally, the institutionalization of checklists and “copy-and-paste” cheat sheets, thought to make digital records more accurate and useful, have actually been proven to decrease the accuracy of individual records (Morrison, 2016).

(3) Access to records

According to the research done on electronic health records, there are typically fewer lost or inaccessible records when using a digital recordkeeping system, but the risk remains in some systems to save records to a “wrong” system making them unlikely to ever be found (Palma, 2013; Madden, Lakoma, Lu, & Soumerai, 2016). In the mental health profession, this would open the potential for HIPAA and HITECH violations.

As mentioned above, despite the fact that large governmental agencies have adequate funding to create and maintain digital counseling record systems, they can easily fail to do so because counseling is not generally considered a core competency but rather a secondary or supporting service thus tech support for these systems can be in adequate or lacking. In the example described of a digital record keeping system currently being used to serve the mental health record needs of a population of more than one-half million, there are significant access issues - for example, allowing clinicians at multiple sites to access records for clients they are not currently serving.
(4) Research opportunities

The jury is also still out regarding the potential benefit of digital records to inform research and improve interventions (Palma, 2013). In trying to apply research opportunities to the counseling profession, one might consider the strict privacy regulations that require informed consent for use of most counseling records - even descriptive data (HIPAA, 2009; HITECH, 2013). Counseling records, even more so than similar health data, can contain information that if published could cause shame and embarrassment to clients as well as potential negative life consequences (e.g., loss of relationships, loss of jobs, income, or prestige). Privacy of counseling records is essential to the very process that allows therapy and growth to occur. There is a potential to misuse newly acquired digital counseling data without properly considering the potential ramifications of doing so. For example, even when client data is aggregated to protect clients’ rights to privacy, clients may not have opted to seek services if they fully understood that any data would be used for research.

Finally, an area not widely discussed in the literature of digitizing health records is the potential for ethical dilemmas to arise and the need to better train practitioners to address these potential problems more effectively. Any change in counseling recordkeeping not only brings the potential for HITECH violations (and similar state regulations) but this kind of change also brings up a plethora of informed consent issues. In counseling and other mental health fields, it is assumed that the practitioner is responsible for the safety of the record (see extensive notes on this topic on APA.org). But how can counselors fully be responsible for the safety of a client’s record if they do not fully understand how it is being stored or how this process makes it vulnerable. Over time, this would likely lead to unknowing violations of HITECH-type regulations or a shift in what counselors document (in an effort to make records safer). But in a
system using checklists or required fill-in-the-box systems, counselors don’t have as many choices as they might think.

What does this mean for counselor and counselor educators?

Whatever the reason, culture, fear, or lack of funding, there remains a growing need to train future counselors to better understand the impact of technology and digital mental health records on counseling and client privacy. The counseling profession needs to better train future clinicians to be ready and prepared to use electronic health (and mental health) records upon graduation (Wilkinson & Reinhart, 2015). However, before this topic can be adequately addressed across the counseling profession, counselors and counselor educators must fully consider what is potentially gained and lost by digitizing counseling records. As described, the counseling profession is quite varied and diverse; therefore, not all counseling organizations will benefit from the same path to implementing digital counseling records. The following questions may be helpful in identifying some of the issues that need to be considered in this very complex process.

What is the desired outcome for digitizing counseling records in this specific counseling agency/working with this agency’s population?

What is the benefit of pursuing this technology now?

What portion of records will be digitized? If not all portions of records will be digitized, will this change continue to require storage of paper files/records?

If all portions of a record will be digitized, how will client signatures be addressed? How might this process need to be scrutinized by legal (for example, to ensure viability of reimbursement later)?

How will data be encrypted and how will security of records be ensured?

How will digitizing records specifically benefit the clients served by this agency?

What does the research suggest about similar (health) records in a comparable system?
Will check-lists or forms be instituted/allowed in the digital records? Will there be portions that are required to fill/complete (e.g., DSM diagnosis, etc.)?

Will providers be able to copy and paste from eMHRs to other documents (such as writing treatment summaries)? If so, what additional security issues might this create?

Will providers be able to cut-and-paste from other sources or documents or will they need to create a unique entry?

How will client assessment results be documented?

Will there be a process to include other “scanned” documents such as client art work?

How will informed consent need to be updated to ensure clients are fully informed the digitalization of their records?

What other legal liability issues may come up with the digitization of records?

How will records be shared when a copy of a record is requested?

Will printing from records be possible? What added privacy issues or HITECH issues will this involve? (Lawley, 2012).

Are there any issues related to vulnerable populations and a greater sensitivity to protect their rights/privacy that need to be considered?

How might a digital record be more or less likely to lead to unintended disclosure of client information?

What resistance might there be within this system to moving to a digital platform for records? (resistance to change, resistance to technology, loss of administrative support jobs, etc.)

What specific costs are associated with this kind of technology change? (added hardware and software, support, cloud storage, etc.). For example, wiring may need to be upgraded and added digital storage space may be needed.

How will access to records be structured?

Will multiple clinicians be able to access the same record? Concurrently or consecutively? In less complex recordkeeping systems (e.g., glorified data bases) it may not be possible to determine who accessed or changed a record as easily as in a system specifically designed for multiple users or systems designed to track a digital footprint.

Who will be responsible for the process of researching available technology and support systems? Which system meets this agency’s specific needs best? How can this be
determined? Will the system be adjustable to meet the changing needs of this agency? (think about how many times paperwork has changed to address differing needs in the counseling profession).

Who will be responsible for preparing and training staff regarding this endeavor? Even if a recordkeeping system is dictated by outside sources such as an institutional or headquarters element, the providers and staff in each office will need to be trained and each location will need personnel to serve as a point-of-contact with expertise on the new system.

Who will be responsible for updates and support issues after moving to a technology-based recordkeeping system? This adds a differing skill requirement to supervisory and management duties.

How will these added costs be funded moving forward? (For example, at a university training facility, the recordkeeping system purchased was nearly $10,000 initially but required nearly $2,000 a year in perpetuity for upgrades and maintenance).

In light of the reliance on tech support, what must counselors do differently to mount an adequate defense against possible malpractice in the event of a data breach? (For example, in some states such as Texas, admin and tech support staff must be trained annually on privacy laws). Agencies must be careful to choose tech and support companies who can change and grow with their agency needs and who are likely to be in business over time to support their products.

Who will be responsible for destroying digital records? How can one be assured there isn’t a digital footprint left behind even after a digital record has been destroyed?

Counselor education and training facilities may need to ask additional questions such as:

Is there a need to implement eMHRs in counselor training facilities that do not use third-party billing? (e.g., some states are moving towards requiring digital records in counseling; Huggins, 2014).

What about counseling records created by counselors-in-training? Are they legally different in this jurisdiction? Will they be treated as educational records of the counseling student or eMHRs of a client?

Will records need to be able to support assessment data? How might this complicate recordkeeping needs? (For example, test security and need for multiple data entry points may require added user-licensing and resulting in added expenses.)

What added level of complexity is needed in a system that is needed to document supervision of unlicensed students or practitioners?
What added screening and capacity is needed in a system where supervisors may change frequently? (such as an educational system where differing adjunct faculty are used).

How can the counselor education curriculum be changed to support this new emphasis on technology in counseling recordkeeping? What added training and expertise might be needed on this faculty/in this program?
Will this institution adequately fund and support this technology into the future?

How will issues of ownership of “research” data be described? (often multiple faculty supervise or work in on-campus training facilities and there may be competition between faculty for research and publication opportunities.)

Summary

These questions only begin to scratch the surface of the complexity involved in implementing technology into counseling recordkeeping. Ironically, many institutions and agencies fail to consider these and other complexities and jump into digitizing counseling records without fully understanding how this change can impact legal liability or client privacy (Huggins, 2014). The best strategy for adding technology to an individual counselor’s private practice, a counselor training facility, or a large agency, is definitely proactive - planning before going digital can save resources, time, and headaches (e.g., Wilkinson & Reinhardt, 2015).

Clearly, there is a need for all counselors to be aware of how technology can benefit the counseling profession, but there is also a need to be wary of implementing technology without fully processing the potential benefits and risks involved for clients and the agency. The profession of counseling lacks best practices in this important area. Counselor educators must make time in the curriculum to fully address technology issues and adequately prepare trainees for the digital world in which they will work. However, this is not as easy as it sounds as most counseling programs are already lengthy. Counselor educators must prepare counseling students for electronic case management systems but they must still train counselors to be proficient at writing case notes “the old fashioned way” as counselors will always need critical
thinking skills. As a profession, counseling must fully embraces technology in its Code of Ethics and accreditation practices. Counselors must take the lead and advocate for and research how adding technology into their training programs can benefit their students and the clients they will serve. No recordkeeping system is perfect. When going digital, there is always a compromise between cost and efficiency and client privacy - each counselor or institution must appropriately understand the risk to clients’ privacy and restrain the desire to monitor and track data that oversteps on client privacy. All counselors, as professionals who are trained to advocate for clients’ rights, must steadfastly guard this right to privacy. Privacy should be afforded to all – not only those who can pay to receive services that safeguard it.
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Preparing Counselors for Electronic Counseling Records: Lessons Learned & Future Needs

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Discussion Paper

• Large/complex issue: Technology and its impact on privacy in the counseling profession.
  o Implications for counselor educators

• Based on a body of research on the call for and implementation of digital recordkeeping in the health profession (and other allied health professions).

• Presenter’s experiences in counseling and counselor education (nearly 3 decades in private practice, governmental counseling agencies, and various private and public universities).
Introduction

• HIPAA
• HITECH
• Texas House Bill 300 (and other state laws)

• Changes in the ACA 2014 Code of Ethics
• Changes in the CACREP accreditation standards

• Where are we as a profession in digitalizing counseling records?
Counseling Culture/Identity

Is the counseling profession anti-technology or just slow to adapt? Or, has counseling adapted too quickly without understanding the ramifications?

Aspects that may impact the culture of the counseling profession and how flexible counseling is towards technology and digitalizing records:
1. Counselor education as a sub-profession;
2. Diversity within the counseling profession;
3. Counselor training emphasis;
4. Funding within the counseling profession.
Why transition to eMHRs?

- “Everyone else is doing it…”
- Mandated in some jurisdictions?

What have we learned from the health field?
1. Significant cost savings;
2. Improved safety or quality advances;
3. Improved access to records;
4. Increased research opportunities.
eMHRs: Significant cost savings?

• Reduced physical labor costs (accessing, moving, storing files);
• Reduced number of lost or misfiled records;
• Reduction in the space needed to store files;
• Increased up-front costs to digitization;
• Significant loss of provider productivity while making changes;
• Decreased provider productivity for training.
eMHRs: Improved safety/quality advances?

• In-house referrals can be optimized;
• Digitization allows for electronic prompting and reminders;
• Increases ease in supervisor record-review;
• Drop-down menus and decision-making trees for differential diagnosis.
eMHRs: Improved access to records?

• Significantly improved accessibility to records;
• Data can be available at multiple sites or locations and viewed by supervisors more easily;
• Misfiled digital records are “easier” to find;
• Allows for counseling/mental health records to be integrated into health records.
eMHRs: Increased research opportunities?

• Creation of “new” data to track trends and needs in faster time;
• Digitization has not increased the quality or amount of research in other professions;
• Increased privacy concerns for sensitive client information
Summary:

Where does the profession of counseling go from here?

Need to advocate for more research in counseling and counselor education to:

• Be proactive in fully assessing the cost of implementing digital recordkeeping and other new technologies.

• Adequately prepare counseling students to be ready to work with technology in the field; and

• Fully examine the loss of client privacy when technology is added to the counseling process.
Submission of an Accepted Paper (ID # 408) for Publication in the Proceedings of the 15th Annual Hawaii International Conference on Education

Title: Narrative Analysis as a Research Methodology An Effective Model for Mining Personal Interviews

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Abstract and full paper:

Abstract

This paper presents a comprehensive framework for mining personal interviews using the powerful techniques of qualitative literary analysis, an interpretive approach to research. The ability to identify and evaluate the underlying concepts contained in a set of personal narratives can provide important insights for researchers studying a wide range of educational issues. Researchers who follow this model will be able to employ the full complement of narrative strategies to mine, organize, synthesize and interpret the rich material contained in personal interviews. The tools and strategies used in this research methodology are fully explained, and a model is presented to demonstrate how to apply them to a full range of educational concepts and audiences.

Introduction

Every personal interview contains a story, and the ability to find and analyze both the basic concepts and the nuanced ideas contained within these stories can provide abundant data to educational researchers. Professionals who learn to use the framework
presented in this paper will be able to successfully evaluate personal interviews on a variety of levels using the powerful techniques of qualitative narrative analysis, an interpretive research methodology. The comprehensive framework will enable researchers to mine the data from these rich resources, then organize and interpret them fully through applying a very clearly defined and dynamic set of sequential strategies.

This proven framework, developed through a study undertaken for my doctoral dissertation, can be applied to research in all areas of education, including those aimed at discovering new processes and programs, creating policies, evaluating the effectiveness of existing procedures, and shaping new proposals. It is fully effective in analyzing the interviews of students, teachers, parents, administrators, policymakers and members of other interest groups contained within the educational milieu.

What is Narrative Analysis?

Narrative analysis, also called literary analysis, is a popular research methodology containing a powerful set of techniques and strategies that enable researchers to effectively mine data in interviews (May 2002). It is centered on the basic tenet that every personal interview revolves around a story, and that parsing that story will enable the researcher to fully understand the multi-layered meaning of the interview. Personal interviews are recorded first-person accounts of life experiences, and these individual narratives, whether studied singly or in a collection, contain overarching concepts that can be effectively understood through this type of analysis, which can easily be applied once it is mastered.

Because many critical concepts and meanings are often embedded within the interviews rather than stated directly, researchers need to know how to find them, order them, and analyze them, both individually and collectively, before patterns can be detected and effective insights, inferences, and conclusions drawn. This study shows them how.

It is important to understand what narrative analysis is and what it is not. Primarily, it is a methodological system that searches for meaning, both literal and symbolic, by probing deeply into various aspects of narrative, including the elemental structure, style, setting, and plot in a given interview, and also by analyzing the characters who both tell about and take part in the drama as it unfolds (Reissman 1993). This type of literary analysis is basically a structural analysis of an interview, which is defined as a sequence of events that is constructed to form a story (May 2002).

Finding the Story within the Story

Because interviews provide a voice for human experience and emotion, narrative analysis focuses on the way in which people use stories to make sense of the world and interpret their experiences, as Richter (1996) explains. To do so effectively, narrative analysis includes reading between the lines to draw out the drama inherent in the words, the plot, the structure, and the characterizations contained within the story of the interview.

Frohmann (1994) considers this type of analysis to be especially useful in probing interviews of non-professional individuals, such as students and parents, who constitute
two of the most interviewed groups in educational research. This is because narrative analysis provides a means to investigate spoken communications using both the structures and functions of language to describe their experiences and also to reveal their deep feelings. The reason it is effective is often that the material comes from the unsophisticated and untrained voices of real people, voices that speak from the heart (Labov and Waletzky 1997).

Narrative analysis has been used as a qualitative research method since the 1960s and is based on a reworking of Russian formalism and the work of the French scholar Roland Barthes (Jensen and Jankowski 1991). It can provide a method of defining the grand narrative or meta-narrative that undergirds the structure of a set of interviews. Bringing together this set of attributes into a unified whole is one of the most effective ways of understanding the plight of the people whose stories are told in the interviews. This is the basic purpose of the model presented in this paper.

Creating the Methodological Framework

The investigation in which this model was developed was undertaken with the objective of creating a useful set of tools for educational researchers. The methodology used to develop this model was based on a tried-and-true research framework that brings together a very old method of gathering historical data -- the person interview -- with the newest digital technology and communications media for preserving and presenting it.

The model was created by analyzing a set of personal interviews from the world-renowned Shoah Visual History Archives, the largest digital video collection of Holocaust testimonies in the world, and then testing and evaluating a variety of methods and strategies to determine which were most effective, most powerful, easiest to use, and most widely applicable to the diverse set of voices, media, and materials in today’s educational world.

The outcome of the investigation demonstrated clearly that qualitative narrative analysis can add a vital and human dimension to research studies containing personal interviews, and that educational researchers could gain significantly by learning how to apply these principles to their own studies.

How Does Narrative Analysis Work?

Narrative analysis is successful because it allows researchers to delve beneath the surface of an interview to glean the underlying meaning of an interview, helping them understand what the interviewee is saying on a variety of levels (Reissman 1993). It does this by enabling them to find the essential story that gives the interview shape and structure and provides a vehicle for the expression of their emotions.

In this way interviews become a powerful tool for understanding human experience and thus the world we live in. As the American poet Muriel Rukeyser put it (1968), “The world is made up not of atoms, but of stories.”

Thus by pulling out the story in the interview, researchers can get to the root of the issue that the interviewee is discussing, bringing them into his or her world and allowing them access to feelings and facts that will enlighten them and point to the solution to the problem that gave rise to their collecting the interviews in the first place.
The Natural Force of Narrative

To learn how to apply narrative analysis successfully, it is helpful to understand not only why stories matter so much in our world today, but also why they have always done so. When human beings in the ancient world told each other stories, they were engaging in one of the first known forms of information exchange. These stories, or narratives, provided a way for people to create and express their individual identities and join them together into a culture that was uniquely their own (Spaulding 2004).

By analyzing the stories through looking at the elements that structure them and those that are contained within, we are able to comprehend more deeply those components of the uniquely human information-sharing experience that transcends time and place (Richter 2007).

What Makes a Story?

All people need some form of organizing principle to turn their thoughts into action, and stories serve that purpose. These narratives enable us to group consequential events from the past in such a way that they provide a structure for us to tell about our lives. This structure grants meaning to our lives. Taking past events and actions and turning them into stories out of which we create our identities enables us to see who we are and understand those around us (Reissman 1993). In this way we impose order on our thoughts and thus make sense of our experiences.

Meaning is constructed in a variety of ways -- through plot, imagery, symbolism and style, to name just a few. Because narrative is the way this is accomplished, this mode of discourse contains the singular power to touch us in the ways that make us uniquely human (Burghardt 2011).

The word narrative comes from the Latin verb narrare, which means to recount or tell, and is closely related linguistically to gnoscere or noscere, to know, according to the Oxford English dictionary. And personal narratives are based on how the narrators or the interviewees interpret the events in their lives and are “rooted in time and place and personal experience and in their perspective-rich characters -- that’s why we value them” (Reissman 1993, 5). This type of qualitative research methodology embraces the personal and the subjective, and embodies a particular perspective that concerns perceptions of the nature of truth. Personal statement of this kind is often based on the emotional truth of a person’s experience and therefore carries significant weight for educational researchers who want to base their decisions on the real and truly felt experience of the group under study.

The movement in a story is always from disorder to order. One of the tenets of narrative analysis that the act of telling a story, the whole flow of the story being created, is a movement from a disorderly world to an orderly one (Reissman 1993). The events move from disorder to order in the telling itself. It is simply through the act of organizing the events in the teller’s mind and then as they flow out of his or her thoughts into a story that they become arranged and ordered.

Building the Framework, One Step at a Time
While in the past, narrative analysis was used primarily for literary study, today it is utilized in a variety of academic disciplines, including education, history, medicine, law, anthropology, psychology, and socio-linguistics (Snowdon 2002). This is because it uses interpretation as a means of understanding events told from the point of view of an individual. Personal narrative has a special power that transcends most other kinds of stories, because the honesty of the speaker sweeps the reader or listener into his or her world, adding layers of meaning to the actual text.

These layers become visible when interviews are dissected and analyzed through the narrative analysis techniques I created in my own study. My research using the Shoah Archives was done for a doctoral program in Information Science and sought to determine the relationship between information and survival in the Holocaust. Personal narratives in the form of interviews in the Shoah Visual History Archives were accessed and analyzed to provide data to help explore whether any such links existed, and, if so, what they were and how they operated.

Based on procedures that were successful in my own study, I created a framework for mining personal narratives that is explicated in this paper. There is a logical set of steps in narrative analysis, and researchers using this sequence of steps follow a process in which these elements are identified, data is gathered, ordered and analyzed, and conclusions are then drawn based on a rubric and a set of rules established early on in the study. This is the basic flow of my narrative analysis model, each step of which will be fully explained.

There are twelve building blocks or steps to this framework, and I will go over each on in its own section, but first, here is an overview of all of them together.

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**Table 1: The 12-Step Model for Using Narrative Analysis to Study Personal Interviews**

We will now look individually at each step in the model so that researchers will be able to follow them one at a time to successfully mine the data in their interviews.

**Step One: Determine the Ideal Study Population**
How many interviews can you effectively analyze? This is often the first question researchers must answer after the narrative analysis methodology has been selected. The answer to this question depends on the resources you have available, the length of the interviews, and the time you have to complete your study. While it is always tempting to analyze everything you have, it is critical that you not take on more than you can handle, as you can become so bogged down in collecting and analyzing the data that you never reach the important part of your study, the one in which you determine conclusions and make action recommendations, and thus never finish your task.

The way to avoid this sad end is to find the right size for your study population. In my study, my search through the Shoah Archives identified 244 interviews that met my criteria and qualified for my investigation. Each one was about two hours long. I determined to study 10% of them -- 24 -- in depth. But which 10%?

The method I used to draw a sample for analysis from the full population was systematic random sampling, a typical probability sampling method. This works by selecting every \( n \)th person from the full list; the value of \( n \) is determined by the number of names needed for the sample (Berg 2007). For the purposes of my study, that number was 24, which comprised 10% of the full population. This meant selecting every 10\(^{th} \) name on the list.

**How to Select the Starting Point**

But where to begin? If I simply chose the first name, I would be introducing bias into the method, and thus I used a computerized random number generator to make the decision for me. I simply logged onto a recommended research integer randomizer website (http://www.random.org/integers), administered by the Social Psychology Network and highly respected by research professionals, and entered the number range that was correct for my study -- one to ten, in this case, since ten is the interval between names -- thus instructing the program to select one integer at random.

The number that came up was four. This meant that I was to start with the fourth testimony on the list, then the 14\(^{th} \), then the 24\(^{th} \), and so on. In this way I came up with the 24 names by the time I reached the end of the list of 244. These represented the 24 interviews that I would analyze, and they became my sampling units.

For a smaller study, with a tighter deadline or fewer resources, you could select ten interviews using the same method, or even five. Even though these are considerably smaller groups, you will still be able to generalize your results across the full population, since if used a scientific systematic random sampling method to choose the interviews.

**Step Two: Transcribe the Interviews**

Because the Shoah Archives interviews are preserved on videotape and on the archives’ servers but do not exist as words on paper, the selected interviews needed to be transformed into text before a narrative analysis could be performed on them. Narrative analyses require fixed sets of sampling units in an accessible form that can be mined consistently and referred to easily when necessary (Berelson 1971). Only when the sampling units are stable is it possible to see how the contents of the interviews relate to
each other, so that relationships become clear and plot, character, and style can be identified. In order to accomplish this, the interviews need to be transcribed.

Whether you use an established archive as I did or plan to analyze your own homegrown interviews, you will undoubtedly work from a video- or audio-taped interview, as this type of recording is necessary to insure accuracy, and transcription into words on paper will be necessary.

Deciding how much or how little of each testimony to transcribe is the first step in this process. To do this correctly, Schilling (2006) recommends considering whether the content should be summarized or the words transcribed literally, and he suggests weighing the amount of time it would take to do a literal transcription against the need for a high degree of specificity. Riessman (1993) points out that attempts to turn talk into text always involve a certain amount of reduction and choice, and recommends an initial or preliminary transcription to capture the broad strokes and a more detailed one on the second pass through the material.

In addition, it is important to decide whether to include non-words such as ah and um, and sighs, tears, or pauses. Some researchers use professional services to do the transcriptions, as the work can be lengthy and tedious; others find that software programs can help speed up the process enough to enable them to do the transcriptions themselves. In either case, a firm, solid transcription is the key to getting started with the narrative analysis.

**Step Three: Define the Elements of Analysis**

I then turned to the next task of defining the components of the interviews that I would analyze. This is accomplished by looking at how to define narrative in a way that is most applicable to the interviews that will be assessed. To do this well, it is helpful to understand literary structure and the parts of narrative that make an interview a story.

One very effective way of defining narrative is as a set of stories about a particular event that contains a protagonist, movement or conflict, and a culminating event (Reissman 1993). Another way is that a story is a narrative structure containing a beginning, a middle, and an end (Richter 2007). But the simplest way is to look at the three most basic characteristics as outlined by Aristotle in his *Poetics*, written in the 4th century, B.C.E. (Richter 1996). These characteristics are plot, character, and style. These are the three components that I used in my study and the ones I recommend for researchers following the model I developed from it.

**Step Four: Create an Organizational Structure**

Most likely your transcriptions will be many single-spaced pages long, perhaps even ranging into the hundreds of pages, as mine were. The tasks of identifying, collecting, assessing, culling, arranging, and grouping the data require an organizational structure firm enough to guide the process. This begins with the development of a set of rules -- the organizational structure -- that outlines the goals of the data search and the manner in which it is to be conducted.

Development of this organizational structure begins by defining the narrative elements or categories which you selected in Step Two: usually plot, character, style and
form. It states the number of interviews you will analyze. Will you study all of them, or have you selected a number from the overall pool of interviews? You will state what reading method you plan to use to help you identify examples of the components in each of the four narrative categories. For example, will you read each interview for one component at a time, or will you look at all the components in each interview in one pass?

Since narrative analysis is qualitative research, you will want to look through the interviews several times, as each time you do you will find something new that might change your perspective (Nachmias and Nachmias 2008). Next you need to consider how you will organize the list of elements once you have identified them. Finally, you will determine how the data, once it is collected, will be analyzed, and how you will look for common themes, patterns, and concepts from a literary or narrative point of view (Eagleton 2008).

Don’t get too bogged down in creating this structure, as it is only a guide and not a hard-and-fast rulebook. Since this is qualitative research, you are permitted to go back and change aspects of it as you do your research if you find it is too constraining or too loose.

Step Five: Develop an Efficient Data Collection Instrument

Alongside the organizational framework, and closely aligned with it, is the form on which data is gathered. This is created to utilize the techniques and strategies of qualitative research most effectively (Busha and Harter 1980). The data collection instrument must be open and flexible enough to accommodate several passes through the data, passes in which new material might be discovered and added to the form. Simplicity and fluidity are key in creating this instrument, and the one used in my study reflects those critical values.

You will need a separate page for each interview, and on each page you will require a place to note each narrative element you find. Later these will be grouped and analyzed, but for now your task is to create a form on which to enter the data. You will need space for each of the element categories -- plot, character, and style -- and room for a summary for the overall story. In addition, it is good to create an area in which to note any additional sub-stories you find that might prove useful later, just in case there is an intriguing sub-theme that you identify after reading several of the interviews.

Step Six: Create the Narrative Elements Rubric

In order to identify and evaluate the narrative elements you find, you will need a narrative rubric that is developed around the core interview story. A rubric is simply a listing of a set of literary components that are common to all the interviews, with a selection of the levels at which a particular piece of text exhibits them and a way to organize the information you find (Richter 2007).

For example, in my study, I created a rubric with three categories within each literary component. My goal was to grade each interview for richness, texture, and effectiveness plus a well-told story, based on my three primary narrative elements -- plot, character, and style. To do so, I developed a spreadsheet with several rows and columns.
My plan was to have an interactive and readable table so that I could use to evaluate and compare the elements.

I thought about each component and came up with appropriate categories for each one, based on my study. I did this by reading through all the interviews and listing the elements I found, then organizing them under each heading. For example, I noticed that the interviewees nearly all mentioned an awareness of danger, several action/turning points in their story, and a resolution that ended the tale. All three of those went under the first component, plot elements.

**A Useful List of Categories**

Under character elements, the next entry, I listed point of view, internal resources, and the insight and change that came about through the interviewees’ experiences. Several items grouped naturally together under the style element, which I labeled imagery, use of language, and symbolism, as these elements were mentioned most often in the interviews.

I then assigned three levels of use of each of the elements: high, medium and low, to signify how fully each was represented in the interview. I created a point system so that the use of the elements could be rated and compared: three for high, two for medium, and one for low.

Finally, I created a box at the end of each row so the scores for each criterion could be noted. Along the bottom of the page I wrote the scoring values: 19-27 was excellent, 10-18 was very good, and 1-9 was good.

**Step Seven: Collect the Data**

Next I gathered the data from each interview. I went through them one at a time, looking for examples of each of the nine types of narrative material I had laid out in the rubric. As I had determined in the organizational structure, I had a separate page for each interview. When I found a plot element, I marked it on the data collection sheet. I did the same when I located a character element or a style element.

With qualitative research, it is always a good idea to read through each interview at least three times, as new data becomes apparent with each pass through the material (Berg 2007). I found it easier to go through each interview looking for only one narrative element, say, plot, than for all three at once. After one deep reading, I found that markers often told me that a plot element was about to take place; the same was true when looking for character elements.

In studying the interviews for style, I found it best to try to keep a sense of the language, the imagery, and the symbolism together as they tended to reinforce and deepen each other, and this helped me find the areas of vividness and color in the interviews. I also found it useful to visualize the events as I read them, as this enabled me to tease out the story more easily and watch as the characters and events blossomed and bloomed into life and allowed me to become immersed in the data.

With this process I made my way fully through the testimonies. When I felt I had identified all the narrative elements on each data collection form, I wrote up a short summary of the action of the story and entered that on the form.
Step Eight: Apply the Rubric

Once I identified and organized the narrative elements on the data collection instrument, I then took out one copy of the rubric form and laid it side by side with the first interview. The rubric was organized along two lines -- one, the narrative elements that were to be assessed, and, two, the criteria for evaluation. The same nine areas that formed the main areas of the data collection instrument constituted the rubric. This was intentional, as it served the purpose of enabling me to directly relate one set of data to the other.

I went through the interviews one at a time, assessed each element and filled out the rubric form for each one. I scored each of the nine categories of every interview -- three for plot, character elements, and style -- on a point scale of one to three, with three for high effectiveness, two for medium and one for low. Once this was accomplished, I added up the total score and applied the scoring values. A score of 19-27 points was excellent, 10-18 was very good and 1-9 was good.

Step Nine: Analyze the Data and Draw Conclusions

The first step in analyzing the data is to look at the overall distribution of the scores and count how many are in each group (Franzosi 2010). Are most in the excellent category, or the very good? If so, you should be pleased. A tight distribution like this says that the interviews were effective as stories and that the major narrative elements were of high quality. Next, look at the distribution within the specific categories. Are the score numbers within the plot and character elements similar? If so, this can be interpreted to mean that the interviewees were successful in using plot and character elements to their advantage.

You should also compare the numbers of elements in each of the three major areas (plot, character, and style), and determine what it means if there are a higher number of elements in one group than another. For example, did your interviewees concentrate more on plot than character growth? Were the numbers highest in the style area? Does this speak in any way to the level of verbal ability among the narrators?

Using style elements well requires a higher level of sophistication than expressing plot and character elements in the telling of a story, and these numbers are likely to be lower. The ability to understand how to use imagery and symbolism, for example, usually only develops in adulthood, so it is critical to keep in mind the age and educational level of the interviewees when determining the success of these two elements. The same holds true for the language category, as it is difficult to use language with flair and richness without sufficient education (Richter 2007).

Synthesizing the Data Effectively

Putting the data together and drawing valid conclusions requires the ability to reason from the part to the whole (Nachmias and Nachmias 2008). Here are some questions to ask to accomplish this: Does the data in one interview when coupled with
another show a similarity? Does insight gleaned from looking for comparisons and contrasts within ten or twenty interviews come to light?

Are there several plot elements that tend to repeat themselves over and over?
Grafted together, do all the interviews tend to contain one strong story line or one specific type of character that grows in a particular way? Are there similar action points in several of the interviews? Do these turning points tend to lead to the same results, or are they significantly different?

Another important area to clarify is the way the interviews ended, as a strong resolution is a necessity for any story; without it, the reader is left unsettled and unsatisfied. Ask yourself: Did the interviewers show strong storytelling power? Do the interviews end in a way that feels finished? Did the emotional power of the story hold sway over your feelings up until the very end of the interview, or did the story start out strong and then fail to follow through with a satisfying conclusion? If the conclusions are muddy, can you identify where on the narrative arc the story stopped moving properly?

Next you might determine this: Is there a type of symbolism that you found recurring from one interview to the next? If so, can you determine the meaning it has to the speaker? Does it answer any of the questions that are likely to be swimming below the surface of the actual words the interviewee uses? Are there images that surface time and again?

Themes, Patterns, and Motifs

You will want to determine if there a meta-narrative or grand story that comes clear when setting several stories side by side (Gorman and Clayton 2005). This core feature of every narrative exists on a higher plane than the story itself, and often contains the common structure that unites all narratives of the same type. It is an over-arching story that is situated behind or beyond the narratives, transcending them but joining them together at the same time (Eagleton 2008). Finding this one element that binds the interviews together can be a key part of the analysis, as it helps the researcher find the underlying meaning of the material, often revealing new dimensions that can imbue the investigation with significant weight.

Finally, it is useful to search for the underlying themes, patterns, and motifs embedded in the interviews. Are there dominant or central ideas that keep recurring? How do they drive the content of the interviews? Do these themes taken together form a conceptual scheme that provides additional meaning to the personal narratives? Once you have identified the themes, you might be able to group them based on their common ideas. These ideas and themes, taken together, sum up what the interviewees were trying to express, and thus form the conclusions of the study.

Step Ten: Present the Findings

Once you are done with the analysis, it is time to figure out how to most effectively offer the findings to your readers. Synthesizing data into narrative can be challenging, but this is arguably the most important part of the study -- and concomitantly the one in which researchers struggle the most.
Most likely, your findings will take several forms, from exposition to charts, graphs, tables, and diagrams. It is good to aim for a multi-layered, integrated set of ideas and concepts that is diverse yet cohesive and shows that you have a dynamic group of conclusions that work together as well as individually (Jensen and Jenkowski1991).

Different types of conclusions lend themselves with more or less effectiveness to different formats. For example, inferences drawn from the data analysis are generally best presented in expository or narrative form, while items that lend themselves best to visual interpretation need to be expressed in graphic form.

Charts, Tables, and Diagrams

Ask yourself this: Do your themes influence each other? If so, you might want to present them as a diagram with arrows between them identifying which ones have an effect on the others, or perhaps in a central drawing showing them all moving among each other in a circular pattern. You should also include your rubric in the findings, either in the text of the work or as an entry in the appendix.

Numbers are best understood when expressed as a table with an accompanying narrative to explain them. Even though this is qualitative research, it is helpful for the comprehension process of your readers if you discuss the numeric relationship of the various narrative elements and their subsets based on how often each area was identified in the interviews.

In order to integrate the research results into a meaningful presentation, keep in mind the basic goals of the study and the original questions you set out to answer, and let them be your guide in presenting your findings.

Step Eleven: Establish Validity, Reliability, and Authenticity

All scientific studies, including qualitative ones, need to be evaluated after they are done to make sure they are valid, reliable, and authentic (May 2002). Various techniques exist to help insure these qualities in your study and boost the chance that it can be replicated correctly. This will significantly increase the prestige of your study and add weight and gravity to its conclusions.

The first step is to go back to the original research questions to see if they have been fully answered. Next, consider whether the study has been grounded; you can do this by looking to see whether the findings are cross-validated through the study itself. Do any of the results or conclusions contradict one another? If so, why might that be? Contradictions need to be compared and addressed and the cause determined.

Check if all the sources that relate to the material are reported accurately. Finally, it is necessary to determine if there are other studies on your topic and, if so, whether they support or contradict your major findings.

Step Twelve: Create a Path to the Future

It is a common maxim in qualitative research that what comes after your study affects what went into it (Ritchie 1995). Although this may sound counterintuitive, it is a valid point. This is because your research will be much more impressive if you find a
way to carry it forward into the future. To do so, you should always try to end your projects with fresh ideas for future studies. This way scholars and students who find your investigation intriguing will have a way to become involved in the research and extend it, sometimes even bringing it a higher level.

This also grounds the research in the larger conversation about the specific topic you have been studying and enables other researchers to further mine the rich cache of data that you have gathered. Other researchers might find another perspective on the conclusions that were reached or another way to present the results in future studies. Possibly you yourself might be the researcher who follows it forward, finding within this research project the seeds of your next one. This is how new knowledge grows, and how to become – and remain – a part of it.

Conclusion

Implementing these twelve steps in studies which rely on mining personal narratives or individual interviews will go a long way toward creating a strong, positive research project and provide meaningful insights that you can apply toward developing your educational policies, programs, and processes.

Once you master the techniques and strategies of narrative analysis, you will find them useful across a broad range of goals and with a wide variety of research subjects, whether you are gathering opinions about a new curriculum or trying to figure out how to implement a series of format changes in a popular program. In virtually every case, using personal interviews to gather data and analyzing them using literary techniques will bring you insightful conclusions and worthwhile results.

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3. University of Idaho Extension
4. 
Julie Buck
Bannock County Extension
10560 N Fairgrounds Rd. Bld A.
Pocatello, Idaho 83202

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5. Julie H. Buck jhbuck@uidaho.edu
   Lori Dye ldye@uidaho.edu

6. Consumers turn to friends, family, online resources, food based television and major food publications for information on nutrition, food safety, recipes and other food information. The quality, safety and accuracy of these sources may be deficient. In order to introduce consumers to the healthy, safe and quality information available through University of Idaho Extension, Mealtime Inspirations was created. The Eastern Idaho Extension District Family and Consumer Sciences Working Group began hosting the annual event in 2011.
Title of Submission:
Predictors of Success for Successful Transition from Eighth-grade to Ninth-grade in a Hispanic Serving School District

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Abstract

Eighth-grade students experience significant difficulties as they transition into a high school setting (Weiss & Baker-Smith, 2010). To ease the transition to high school, many districts offer solutions such as freshman academies and an emphasized focus on 8th grade students, such as additional counseling and parent meetings (McCallumore & Sparapani, 2010). However, with average freshman graduation rate (AFGR) at 80% for all students and 75% for Hispanic students, the inadequacies among freshmen academic achievement in the United States is evident (Stetser & Stillwell, 2014). In addition, the disparity between the AFGR for Hispanic students is more prevalent when compared to the 84% AFGR for White students. Therefore, this quantitative study intended to add knowledge to current literature by statistically testing data from a predominately Hispanic South Texas rural school district. The purpose of this pre-experimental research study was to determine a set of predictors that related to the criterion of the 9th grade English I STAAR EOC exam. The independent variables were 8th grade data: Reading test scores as measured by STAAR, overall grade point average, attendance, socioeconomic status, and English proficiency status. The dependent variable was the 9th grade English I STAAR EOC exam. To measure the predictability of the independent variables on the ninth grade English I EOC exam, a multiple regression analysis was conducted. Descriptive statistics and gender differences would also be evaluated. All the data analyses were conducted using SPSS version 22.

In testing the three null hypotheses, the regression equations indicated significant predictions toward the STAAR ELA EOC exam scale scores among all students: F(5, 350) = 83.88, p < .001, among female students: F(5, 173) = 47.50, p < .001, and among male students: F(5, 171) = 37.52, p < .001.
### Table 1

**Simultaneous Multiple Regression Analysis Summary for, Attendance, GPA, Language Proficiency, SES, and STAAR Reading**

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$ (combined)</th>
<th>$\beta$ (Female)</th>
<th>$\beta$ (Male)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>-.070</td>
<td>-.023</td>
<td>-.090</td>
</tr>
<tr>
<td>GPA</td>
<td>.500</td>
<td>.500</td>
<td>.480</td>
</tr>
<tr>
<td>Language Proficiency</td>
<td>-.330</td>
<td>-.350</td>
<td>-.300</td>
</tr>
<tr>
<td>SES</td>
<td>.020</td>
<td>.030</td>
<td>.003</td>
</tr>
<tr>
<td>STAAR Reading</td>
<td>-.140</td>
<td>-.003</td>
<td>-.210</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GPA added the most to the prediction of student success in all three areas of investigation (.50, .50, .48) whereas Language Proficiency was the area that devalued the score the most (-.33, -.35, -.30).

Specifically, Olmedo (2009) denotes a linguistic phenomenon, code switching, as a common occurrence among border town residents such as those from the Valley. In this case, bilingual education, in its true sense, becomes more of a challenge. The unyielding concern in this matter is the fact that students are not sufficiently developing either of the two languages. The data gathered from this study may provide school leaders with the needed inquiry to create or enhance the necessary transition systems that could ensure that social, procedural, and academic concerns are minimized.
1. Title: Conversion of a Language Based Course for Online Learning

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6. Abstract:

   This presentation will focus on current methods of instruction most commonly used today for healthcare professionals. Discovering ways to teach medical terminology online that keeps students interested, attentive, and highly engaged can be a challenge. Previously, students studying medical terminology had communicated using text-based synchronous and asynchronous discussion only. This is why the Quality Matters Rubric Standards were implemented into the course. A common criticism of text-based media is the lack of non-verbal communication.
This research was supported through funding provided by Alberta Education and the Canadian Career Development Foundation.

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Abstract

Career Education is meant to foster the development of critical skills imperative to attaining a meaningful future career. Encouraging self-exploration at an early age is critical to effective career education. Early intervention can be successfully implemented through integration of a career planning unit. This article includes a detailed description of how a Career Planning unit can be integrated into the current Alberta Health and Language Arts curriculum, as well as student feedback on the effectiveness of the activities. Student feedback indicated the following: 70% reported that unit helped them learn more about themselves; 90% reported that the unit helped them learn more about different careers; 90% felt excited about future possibilities in their life as a result of the unit; 90% were eager to learn more about different careers. The large majority of written feedback from students stated that they particularly enjoyed learning about different jobs and were eager to choose a specific career as a research topic. Students were also quite interested in learning about the jobs their peers chose to research. Nondirective, socially-oriented activities were a marked success in the unit’s activities.

Keywords: career development, curriculum and career integration, elementary school
Career Exploration at the Grade 5 Level: Introducing Career Planning Skills Through Curriculum Integration Into Health and Language Arts

Introduction

Career Planning is an important skill in achieving future career goals. Effective Career Planners are individuals who are highly self-aware, sensitive to the dynamics of their environment, open to exploring career possibilities, have the ability to attain and utilize valuable life/work information, seek to continue their education, uphold a positive self-image, effective time managers, and are purposefully goal-oriented (Borgen & Hiebert, 2006; McMahon, Patton, & Tatham, 2003). Introducing these skills to students at an early age can--with a sufficient amount of time--lead to mastery of these skills (Magnusson & Bernes, 2002; Magnusson & Bernes, 2004; Palladino Schultheiss, 2008). Many individuals may remain unaware of the personal dimensions that govern the possibilities of attaining a meaningful career. It is not uncommon for these individuals to frequently change occupations and as a result, remain personally unfulfilled. Introducing career planning skills could effectively alleviate--or at the very least--decrease the uncertainty and confusion for this generation of students by building self-awareness and encouraging career exploration at an early age (Bardick, Bernes, Magnusson,
& Witko 2006). Early intervention through career education allows for greater reflection and skill-building over a greater period of time regarding the student’s choice of potential careers that most appropriately suits his or her personal strengths, interests, and values; this can be done by integrating a Career Development unit into the existing curriculum (Harkins, 2000). The following intervention is a unit based on a cross-curricular model that accomplishes successful integration by fulfilling learning outcomes within the Health and Language Arts curriculum.

**Context of the Teaching Environment**

**Student Demographics**

The career planning unit was implemented within a grade 5 classroom of 23 students over the span of two weeks. The elementary school was located in a rural community in Central Alberta. The classroom contained a fairly large range of children of diverse learning abilities, ranging from students that required continuous aid, to highly advanced learners. Two students were considered to have a developmental disability; both students were assigned a full-time educational assistant. The large majority of the grade 5 class came from middle-class caucasian families.

**Learning Objectives of the Unit**

The learning outcomes of the career planning unit are as follows.

- Students will:
  1. Identify their interests, skills, and attitudes.
  2. Discover a variety of possible career choices available.
  3. Understand how individuality relates to career choices.
  4. Discover a potential career ideally suited to their individuality.
Language Arts Objectives Achieved by the Career Planning Unit

The following objectives as outlined by the Alberta curriculum were effectively met by the Career Planning unit.

• General Outcome 1: Students will listen, speak, read, write, view, and represent to explore thoughts, ideas, feelings, and experiences.
  1.1 Use appropriate prior knowledge and experiences to make sense of new ideas and information.
  1.1 Read, write, represent, and talk to explore personal understandings of new ideas and information.
  1.1 Use own experiences as a basis for exploring and expressing opinions and understanding.

• General Outcome 2: Students will listen, speak, read, write, view and represent to manage ideas and information.
  2.1 Comprehend new ideas and information by responding personally, taking notes and discussing ideas with others.

• General Outcome 3: Students will listen, speak, read, write, view and represent to manage ideas and information.
  3.3 Organize ideas and information to emphasize key points for the audience.
  3.3 Combine ideas and information from several sources.
  3.3 Connect gathered information to prior knowledge to reach new conclusions.

• General Outcome 4: Students will listen, speak, read, write, view and represent to enhance the clarity and artistry of communication.
4.3 organize ideas and information in presentations to maintain a clear focus and engage
the audience.

4.3 use effective openings and closings that attract and sustain reader or audience
interest (Alberta Learning, 2000).

Health and Wellness Objectives

The following Health and Wellness outcomes were met through the implementation of the
intervention:

- Life and Learning Choices: Students will use resources effectively to manage and explore life
  roles and career opportunities and challenges.

  5.2 affirm personal skill development.

  5.5 relate personal skills to various occupations.

  5.6 assess how roles, expectations, and images of others may influence career/life
  interests (Alberta Education, 2002).

Detailed Description of the Lesson Plans

Lesson 1: Career Profiles--School Subjects Directly Related to Specific Careers

This lesson served as an introduction to the career planning unit. Every student received
the Career Profiles handout that contained the names of various careers which were divided
among, and listed under associated school subjects (see Appendix A). Prior to the
commencement of a subject, the teacher directed the students’ attention to the Career Profiles
handout. The teacher took the time to explain the job descriptions of every listed career that was
relevant to the subject they were about to study. Students were also given the opportunity to
discuss how a particular school subject was important to becoming successful in one of the listed
professions. This lesson introduction was to help students understand how their proficiency in a subject could lead to success to a certain career.

**Lesson 2: Skill Stars--Identifying Skills and Interests**

The purpose of this activity was for students to employ their self-reflective skills in order to identify personal skills and interests. The teacher emphasized and discussed the importance of self-knowledge when finding a suitable career. The activity sheet contained a large star where students were to write their name, and list as many personal qualities, skills and interests that they could fit inside (see Appendix B). The star was then coloured, and displayed upon a bulletin board.

**Lesson 3: The Best Job in the World Ad--Integrating Themes From Lesson 1 and 2**

The purpose of this lesson was to combine information learned from Lesson 1 and 2 to create an ideal job that reflected the student’s individuality. The job was allowed to be completely imaginary, and was to complement the student’s skills and interests. The lesson’s main task was to create a newspaper job advertisement that provided specific details about the student’s “perfect job” (see Appendix C). The advertisement was to include the job title, and a description of the job’s responsibilities, working environment, perks, hours, and an explanation of why the job was “perfect.” The students were told to be as persuasive as possible in their descriptions, in order to attract someone like themselves to respond to their advertisement.

**Lesson 4: My Career Research Project--Exploring Careers Through Research and Inquiry**

This lesson’s activity served as one of the major activities of the entire unit. The teacher provided each student with a list of websites on a handout (see Appendix D) and an Exploring
Careers booklet (see Appendix E1). The booklet contained step-by-step instructions that outlined the tasks for each section of the booklet (see Appendix E2).

**Step One: Planning.** The students were to explore the websites provided on their handout and find three careers they were interested in. Upon choosing three career interests, the students were to write down a job title and job description within the given fields in the handout (see Appendix E3). The students were then to narrow down their three choices to two favourites, and explain why they favoured the two careers.

**Step Two: Retrieving.** A graphic organizer was utilized by the students to help them find and organize information about each chosen job. The organizer had blank fields containing questions pertaining to the career’s job description (see Appendix E4). All of the fields had to be completed by the student. This activity was similar in nature to the newspaper ad (Lesson 3).

**Step Three: Processing.** The two careers were to be compared and contrasted by drawing a venn diagram with Microsoft Word’s *shapes* and *textboxes* feature. This step necessitated continuous monitoring and assistance from the teacher, and required the teacher’s approval before the students were allowed to print out their diagram. Once the students received their printed venn diagrams, they were to highlight information they believed was important, and circle any facts that attracted them to the job. Finally, the diagram was to be stapled and included into their career booklet.

**Step Four: Creating.** Each student was to narrow down their career choice to one career, and pick a particular method of presenting his or her collected information on their chosen career. The suggested mediums were: a powerpoint presentation, a brochure, a short story, a short essay, or a medium of the student’s choosing that was approved by the teacher. The child’s presentation required the following criteria to be fulfilled (see Appendix E5):
• Why the career was picked. The child was required to defend his or her reasoning by appealing to personal skills and interests.

• Relaying discovered information from the effective use of the graphic organizer.

• How the career was similar or different from the second career choice (hence the use of a venn diagram)

• An explanation of the student’s perception of the career

• If the student believed he or she would enjoy the career

• Additional information not covered by the aforementioned criteria

**Step Five: Sharing.** Every student was allotted a date and time to share his or her presentation with the class. A rubric was created and provided for the students so that they knew how they were to be graded and what was expected of them (see Appendix F).

**Step Six: Evaluation.** The students assessed their peers through the provided rubric (see Appendix F). Each student also completed a self-evaluation of their performance and participation in the unit (see Appendix E6). Lastly, a summative evaluation of the unit was conducted and completed by the students (see Appendix H).

**Method of Evaluating the Effectiveness of the Career Planning Unit**

**Formative Assessment Method**

Information provided through formative assessment was used to effectively modify the unit to the students’ learning needs. The following methods were used for the purpose of gauging levels of student interest, and not used to determine the students’ grades.

**Job Journal.** Students kept a daily logbook where they were able to record their thoughts and feelings about the content of the unit (see Appendix G1). Evaluations of some of the activities, as well as responses to Career Profiles was the focus of the journals.
**Self-Reflective Survey.** This evaluation was specific to the research project in Lesson 4 (see Appendix G2). The purpose of this survey was to provide the teacher with insight on how the students felt about the research project and reveal if the activity’s methods achieved the desired goal.

**Summative Evaluation Method: Student Evaluations**

Upon completing the unit, the students were asked to rate the usefulness of each lesson as it applied to career planning. The evaluation consisted of three segments (see Appendix H):

**Part 1.** The first segment of the student evaluation asked whether or not each activity was completed. The participating student was to check a box under the column “I did it” if he or she completed the activity, or the check the box under the column “I didn’t do it” if the activity was yet to be completed.

**Part 2.** The second segment of the student evaluation required the student to rate the helpfulness of each activity. Helpfulness was defined as how personally relevant and useful each activity was. Students were to circle either a sad face for “Not good at all,” a neutral face for “Good,” or a happy face for “Great.” Moreover, Part 2 contained open questions that asked for written feedback.

**Part 3.** The third segment of the student evaluation asked students whether they believed they had achieved the learning outcomes by responding to each statement by circling a sad face for “I Don’t Agree,” a neutral face for “I’m Not Sure,” and a happy face for “I Agree.”

**Summative Evaluation Results**

Of the 22 participating students, 20 students completed the summative evaluation. Two students who were unable to complete the evaluation due to disability.

Table 1
Part 1: Completion of Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>I didn’t do it</th>
<th>I did it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill Stars</td>
<td>1 (5%)</td>
<td>19 (95%)</td>
</tr>
<tr>
<td>Best Job in the World Ad</td>
<td>2 (10%)</td>
<td>18 (90%)</td>
</tr>
<tr>
<td>Career Research Project</td>
<td>0 (0%)</td>
<td>20 (100%)</td>
</tr>
<tr>
<td>Career Presentation</td>
<td>1 (5%)</td>
<td>19 (95%)</td>
</tr>
</tbody>
</table>

*Note: Overall on average, 95% of the students completed all of the activities.*

The following table displays student feedback on the perceived helpfulness of each activity.

**Table 2**

Part 2: Perceived Helpfulness of Each Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not good at all</th>
<th>Good</th>
<th>Great</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill Stars</td>
<td>1 (5%)</td>
<td>11 (55%)</td>
<td>8 (40%)</td>
<td></td>
</tr>
<tr>
<td>Best Job in the World Ad</td>
<td>3 (15%)</td>
<td>3 (15%)</td>
<td>13 (65%)</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>Career Research Project</td>
<td>0 (0%)</td>
<td>4 (20%)</td>
<td>16 (80%)</td>
<td></td>
</tr>
<tr>
<td>Career Presentation</td>
<td>0 (0%)</td>
<td>4 (20%)</td>
<td>16 (80%)</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Overall on average 94% of the students rated all of the activities either Good or Great.*

The majority of students commented on the written portion of the evaluation that they especially enjoyed learning about different careers and being allowed to pick any career they wished.
Moreover, many students also enjoyed learning about the skills and interests possessed by their peers.

Table 3

Part 3: Objectives Fulfilled as Determined by the Student

<table>
<thead>
<tr>
<th>1. This unit plan helped me to learn a lot about myself.</th>
<th>I Don’t Agree</th>
<th>I’m Not Sure</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 (5%)</td>
<td>5 (25%)</td>
<td>14 (70%)</td>
</tr>
</tbody>
</table>

2. This unit plan helped me to learn a lot about careers.

<table>
<thead>
<tr>
<th></th>
<th>I Don’t Agree</th>
<th>I’m Not Sure</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 (0%)</td>
<td>2 (10%)</td>
<td>18 (90%)</td>
</tr>
</tbody>
</table>

3. This unit plan made me excited about what I could do with my life.

<table>
<thead>
<tr>
<th></th>
<th>I Don’t Agree</th>
<th>I’m Not Sure</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 (0%)</td>
<td>2 (10%)</td>
<td>18 (90%)</td>
</tr>
</tbody>
</table>

4. This unit plan made me want to learn more about different careers.

<table>
<thead>
<tr>
<th></th>
<th>I Don’t Agree</th>
<th>I’m Not Sure</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 (5%)</td>
<td>1 (5%)</td>
<td>18 (90%)</td>
</tr>
</tbody>
</table>

Note: Overall on average 85% of the students agreed that this unit met all of the objectives.
Written feedback on how the unit could have improved revealed fascinating comments. Many students requested more writing projects to be included within the unit. However, there was also a sizable amount of negative feedback regarding the job journals. This dichotomy was especially notable because it indicated that the students were eager to learn but only if the material was amenable to their learning needs. We will expound on this dichotomy further within the subsequent discussion of our findings.

**Discussion of Effectiveness and Future Directions**

Introducing each subject with the Career Profiles was notably effective, particularly for students who typically struggled with staying attentive. Every student at one point either raised his or her hand to ask a question or share a story relating to the career that was being discussed. The students’ level of engagement and eagerness to learn about careers may have been due to the novel idea that proficiency in a particular school subject could lead to a successful career. The students were already naturally curious about possible future careers, and relating these possibilities to school subjects was an unfamiliar but readily welcomed interconnection. Discussions were lively and enthusiastic, and made for easy transition into the school subject as well as the Career Planning unit.

The research project and presentation was well-received by a large majority of the class. The students looked forward to researching their careers on the internet and easily stayed on task. The teacher encouraged the students to talk to one another and help fellow classmates in their research. A cooperative but self-directed learning environment was thus fostered by providing students the opportunity to freely explore career paths of their choosing and allowing them to combine their efforts in retrieving resources. The students were especially interested in their fellow classmates’ careers of choice and comparing others’ choices with their own.
The job journals did not achieve their desired outcome. Many students were largely apathetic towards their journals, most of whom did not complete them due to a lack of time. The teacher was able to gather greater information for her formative assessment by simply observing and holding individual conversations with every student. Daily job journals were viewed as a redundant task due to disinterest. Student disinterest can also largely be attributed to the nature of the questions asked by the job journals. Most of the journal questions did not ask the students to creatively synthesize new information, but simply asked the student to discuss why a certain dimension of the unit was considered to be his or her favourite. Due to the intimate nature of the classroom’s social climate, the journals did not foster a more interactive atmosphere that would have been both socially and creatively amenable to the children’s learning needs as previously exhibited when the students were engaged in their research projects. Should job journals be implemented again within a similar unit, the journal’s content should be far more explorative in its desired content by requiring more from the child’s imagination, self-reflection, and even abstraction.

One journal activity suggestion would be to have students imagine an ideal day set in the future, where they could describe how they pictured themselves 15-20 years from the present. For example, they could envision and write about what personal qualities they possessed, what job they were employed in, what hobbies they enjoyed, what their family looked like etc. The teacher could also encourage the students to share their imagined information with each other, as they similarly did with their research projects and presentations. This sort of journalling activity would have addressed the students’ request for more writing activities. Requests for more writing activities certainly suggests that the students enjoyed learning the subject material, but their eagerness to learn was dependent upon the medium by which the subject material was presented.
As previously observed in the students’ research projects, activities that required creativity, imagination, dreaming, and self-reflection were highly amenable to their learning needs. More importantly, this type of exercise makes the writing activity more personally meaningful, thus enhancing student engagement.

**Conclusion**

Despite the fact that grade 5 students are not at an age where they must decidedly commit to a career path, it does not diminish the need to impart career planning skills at an early age. Early intervention within the curriculum (of this unit) was successful because the school subjects were made personally relevant by integrating career education into the subjects’ content. As evidenced by this intervention, career education can foster a love for learning because the subject material is perceived as useful. Subjects should also be infused with activities that can allow students to harness their imagination to creatively generate new information that will satisfy their imaginations. As evidenced by the success of the research projects and presentations, students are eager to share new-found information with each other, and are intently curious to receive such information from their peers. Furthermore, natural curiosity at a young age should thus be nurtured and directed to building critical skills that can equip this generation of students to be successful adults who make well-informed decisions regarding their futures. Over a sufficient amount of time, our hope is that students can eventually come to master these skills. A career planning unit can be easily integrated into almost any curriculum for the purpose of teaching students the strategies and techniques that will be conducive to their future career success. The key to effective teaching is to find what is personally meaningful for students so that they are personally motivated to practice what they believe is immediately useful in the present and is of eminent value to their futures.
References


**Appendix A**

**Career Profiles:**
### Arts:
- Illustrator
- Photographer
- Fashion Designer
- Dancer
- Actor
- Songwriter
- Interior Designer
- Painter
- Graphic Designer
- Musician

### Language Arts:
- Copywriter
- News Reader
- Librarian
- Author
- Courier
- Community Health Representative
- Paralegal
- Land Surveyor
- Reporter
- Administrative Assistant

### Social Studies:
- Marriage and Family Counsellor
- Correctional Peace Officer
- Demographer
- Psychologist
- Teacher
- Social Worker
- Geologist
- Historian
- Tour Guide
- Life Skills Coach

### Math:
- Accountant
- Market Research Analyst
- Data Administrator
- Financial Planner
- Real Estate Associate
- Systems Tester
- Television Camera Operator
- University Professor
- Vending Machine Technician
- Instrument Technician

### Science:
- Airline Pilot
- Astronomer
- Animal Health Technician
- Audiologist
- Chemist
- Optometrist
- Conservation Officer
- Pest Control Operator
- Power Engineer
- Farm Worker

### Phys. Ed.:
- Reflexologist
- Radiological Technician
- Chiropractor
- Physiotherapist
- Professional Athlete
- Sport Official
- Sports Instructor
- Kinesiologist
- Firefighter
- Security Guard

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### Appendix B

**Skill Stars Activity:**
Appendix C

‘The Best Job In The World’ Ad
You are a newspaper writer working for The Townsville Logbook. Your boss has just come to you and given you your next assignment for the paper. You have two classes to complete your assignment and have it in to your boss so it can be printed in next week’s paper. Here is your assignment:

**The Townsville Job Assignment:**

**Role:** Newspaper writer.

**Task:** to write an ad for the best job in the world.

**Requirements:**

1. the job title
2. the duties and activities that the job requires
3. the working environment
4. any perks that come with the job
5. the hours that the job requires you to work
6. an explanation of why this is the best job in the world

Remember, this is what YOU think the best job in the world would be. Not only do you have to give the required information, but you have to do so in a way that convinces the readers of The Townsville Logbook that this truly is the BEST JOB IN THE WORLD!

Are you up for the challenge?

**Appendix D**

**WEBSITES:**


Government of Alberta - ALIS:

Appendix E1
Exploring Careers

Name:
Appendix E2

Exploring Careers Project

BIG QUESTION: What types of careers are out there that I might be interested in?

Step One: Planning
You will begin by choosing three jobs that you think you may like based on your interests. You will then use the internet to research the jobs and find out some interesting information about each of the jobs. Then, narrow your choices down to your two favourites. State why you chose those careers as your favourites.

Step Two: Retrieving
Next, you will use graphic organizers to research more information about the two jobs that you chose. This will help you find out more details about each job and if they are really something that you can see yourself doing in the future. It is OK if you find out that you may not enjoy either of these jobs – remember, finding out what you don’t like can help you find out what you do like.

Step Three: Processing
Then, you will use the information that you found about your two career choices to compare (what is the same?) and contrast (what is different?) the jobs. You will make a Venn Diagram to show what is the same and what is different about these jobs. Print out your final product AFTER it is checked by a teacher. This will be handed in with your project. On your copy of the Venn Diagram, highlight the important information about each job, circle any facts that make you really like either job.

Step Four: Creating
Next, you will be choosing a method to share the information with your classmates. You may choose one of the choices on your “Creating” page, or you may ask a teacher if you have any other ideas. Make sure you are following all instructions so that you have all of the information that you need to be able to share these careers with your peers.

Step Five: Sharing
You will present your career information to your classmates and teachers. More information about the presentations will be given closer to the date of the presentations.

Step Six: Evaluating
Once the whole process is complete you will do a self-reflection about your participation in the Exploring Career Process. You will also be evaluating a peer while they do their presentation so that they can have feedback on how they presented their information. This means that you will be getting evaluated by a peer during your presentation! We will end the whole project by doing an evaluation for Miss Brewer about how you think the project helped you start to think about the different careers that are out there.
Appendix E3

**Planning:**
Exploring Career Choices

Choose three careers that you think you might enjoy doing. Think about your skills and interests when you choose these careers. If you need help thinking of some job titles, talk to your classmates or ask a teacher.
On the internet, find out one or two things that you would have to do if you had this job. Write a one or two sentence summary of the job. Next, narrow your choices down to the

<table>
<thead>
<tr>
<th>What type of duties does the job involve?</th>
<th>What type of working environment does it have? (office, outside, travel, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What types of hours are required?</th>
<th>What type of skills and education are needed for the job?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Career Choice:
________

What do you like the most about this job? What do you like the least about this job?

<table>
<thead>
<tr>
<th>What do you like the most about this job?</th>
<th>What do you like the least about this job?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What are some interesting facts about the job?

<table>
<thead>
<tr>
<th>What are some interesting facts about the job?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
Creating and Sharing Our Career Exploration

Choose one of the following ways to present the information that you have found on the careers that you chose to explore:

Powerpoint, poster, brochure, short story (a day in the life...), short essay,
However you choose to present your information, you must include the following:

1. Why you picked this career. Defend your reason by linking it to your interests and skills.

2. The information that you found out about your career. Use the information from the graphic organizer.

3. How it is similar and different from your second choice career.

3. If the career was what you thought it would be. It is OK if you found out that it might not be the job for you, but explain why.

4. If you still think this is a career that you would enjoy.

5. Anything else that you may have found out during your research, you can be creative!

Good luck and have fun!
Appendix E6

Exploring Careers: Self-Reflection

Fill out the following survey on how you felt the career project helped you. Circle the phrase that best reflects your feelings to the statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that I put a lot of effort into the project, both on the research and the presentation.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I feel that the project helped me learn about different kinds of careers.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I feel that the project helped me learn about some careers that might be right for me.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I feel that I was encouraged to link my interests to a career, rather than skills or other factors.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I feel that going through a number of different activities helped me look at my career choices more carefully.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I thought that narrowing careers down made me look at what I would really like about a career.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I thought that comparing careers helped me think about what I would really like about a career.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
<tr>
<td>I know more about careers now that I’ve looked closely at some of my top choices than I did before we did this project.</td>
<td>Yes</td>
<td>No</td>
<td>Not Sure</td>
</tr>
</tbody>
</table>

Feel free to add any other comments that you might have about the career project.

Comments:
### “Exploring Careers Using the Inquiry Process” Rubric

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
<th>Section 1</th>
<th>Section 2</th>
<th>Section 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>(You could be the boss!)</td>
<td>Thought was clearly put into choosing the career based on interests and skills.</td>
<td>Career choice was a good fit based on interests and skills.</td>
<td>Does not appear to have thought put into choosing the career based on interests and skills.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All of the research questions were answered fully.</td>
<td>Almost all of the research questions were answered completely.</td>
<td>Very few of the research questions were answered completely.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The final decision made about the career was clearly based on interests and research information.</td>
<td>The final decision made about the career appeared to be based on interests and research information.</td>
<td>The final decision seemed to lack thought and connection to interests and research.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presentation was done in a creative way to display all information.</td>
<td>Information was presented in an appropriate and interesting way.</td>
<td>Presentation did not appear to show effort.</td>
</tr>
<tr>
<td>3</td>
<td>(Just got a promotion)</td>
<td>There may have been careers that would have fit interests and skills more accurately.</td>
<td>Many of the research questions were answered completely.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(First day on the job)</td>
<td>The final decision made about the career could have shown a clearer link to interests and research.</td>
<td>The final decision made about the career appeared to be based on interests and research information.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Maybe this job isn’t for you)</td>
<td>Does not appear to have thought put into choosing the career based on interests and skills.</td>
<td>Very few of the research questions were answered completely.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

Appendix G
Job Journal

Do you think finding a special skill that you are good at helped you think about what kind of career you might be able to use that skill for? Why or why not?

________________________________________________________________________________________________________________________________________

________________________________________________________________________________________________________________________________________

________________________________________________________________________________________________________________________________________

________________________________________________________________________________________________________________________________________

________________________________________________________________________________________________________________________________________

Do you think it helped to be able to explore a career of your choice to find out if it might be something you would want to work towards? Why or why not?

________________________________________________________________________________________________________________________________________

________________________________________________________________________________________________________________________________________

________________________________________________________________________________________________________________________________________

________________________________________________________________________________________________________________________________________
Do you think that being able to create the perfect job helped you to discover the types of things that you might look for in a job in the future? Why or why not?

Of all the careers we talked about today, which one was your favourite and why?
Of all the careers we talked about today, which one was your least favourite and why?

Of all the careers we talked about today, which one was your favourite and why?

Of all the careers we talked about today, which one was your least favourite and why?
Of all the careers we talked about today, which one was your favourite and why?

Of all the careers we talked about today, which one was your least favourite and why?

Of all the careers we talked about today, which one was your favourite and why?

Of all the careers we talked about today, which one was your least favourite and why?
Of all the careers we talked about today, which one was your favourite and why?

Of all the careers we talked about today, which one was your least favourite and why?

Of all the careers we talked about today, which one was your favourite and why?
Of all the careers we talked about today, which one was your least favourite and why?
Of all the careers we talked about today, which one was your favourite and why?

Of all the careers we talked about today, which one was your least favourite and why?

Of all the careers we talked about today, which one was your favourite and why?
Of all the careers we talked about today, which one was your least favourite and why?

Of all the careers we talked about today, which one was your favourite and why?
Appendix H

Career Coaching Across the Curriculum: Student Evaluation Form

I hope you enjoyed this unit! Please complete this evaluation form.

**Part 1: Please let me know if you did the activities.**

<table>
<thead>
<tr>
<th>Activity</th>
<th>I didn’t do it</th>
<th>I did it</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Skill Stars</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>B. Best Job in the World Ad</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>C. Career Research Project</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>D. Career Presentation</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
Part 2: Please let me know if you thought the activity was helpful by circling whether you thought it was “not good at all”, “good” or “great”.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not good at all</th>
<th>Good</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Skill Stars</td>
<td>☹</td>
<td>☻</td>
<td>☻</td>
</tr>
<tr>
<td>B. Best Job in the World Ad</td>
<td>☹</td>
<td>☻</td>
<td>☻</td>
</tr>
<tr>
<td>C. Career Research Project</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Career Presentation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What did you like about this lesson, unit plan or school wide intervention?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

How could this lesson, unit plan or school wide intervention be made better?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Part 3: Please tell me how much you agree with the following statements by putting a checkmark in the box that best tells me how you feel:

<table>
<thead>
<tr>
<th>Activity</th>
<th>I Don’t Agree</th>
<th>I’m Not Sure</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This lesson helped me to learn a lot about myself. 😞 😞 😊

This lesson helped me learn a lot about careers 😞 😞 😊

This lesson made me excited about what I could do with my life 😞 😞 😊

This lesson made me want to learn more about different careers 😞 😞 😊

Thank-you very much for your help!
1) **Title of the Submission:** Career Education In a Multicultural Classroom: Integrating Self-exploration and Goal-setting Lessons Into the Curriculum Through Artistic Mediums at the Grade 5/6 Level

2) **Names of the Authors:** Jamie Douglas, Kerry B. Bernes, and Jonathan Roque

3) **Affiliations of the authors:** Faculty of Education, University of Lethbridge

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   T1K 5C6

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Abstract

The following article presents the effectiveness of a Career Education unit integrated within the Art, Language Arts, and Information and Communication technology curriculums at the grade 5/6 level. The unit was delivered to a classroom largely comprised of students who demographically belonged to an ethnic minority group. Many of the students had just recently immigrated to Canada and were learning English as a second language. Overall on average, 95% of the students reported the unit’s activities to be helpful, personally relevant, and conducive to attaining personal career goals. Approximately 92% of the students stated that the unit was effective in helping them learn more about available careers, and 92% of the students were eager to learn more about different careers. Despite the enthusiastic reception to the unit’s activities, 67% agreed that the unit helped them learn a lot about themselves, and only 50% indicated that they were excited about what they could do in their life; the rest were mostly unsure. Career Education is shown to be most successful in culturally diverse classrooms when employing artistic mediums compared to language-heavy activities.

Keywords: elementary career planning, curriculum and career education, multicultural classroom education
Career Education In a Multicultural Classroom: Integrating Self-exploration and Goal-setting Lessons Into the Curriculum Through Artistic Mediums at the Grade 5/6 Level

Introduction

The process of Career Education is a lifelong initiative characterized by the development of critical skills which can begin in early childhood and take fruition in adulthood (Magnusson & Starr, 2000). Furthermore, the conception of a meaningful, lifelong career should not be defined upon whence an individual has concretely formulated a career path, but rather when an individual begins to explore and reflect on personal strengths for the purpose of finding a career amenable to his or her personal strengths and individuality (Kosine, Steger, & Duncan, 2008). Individuals who have attained a considerable level of self-knowledge, particularly in the area of metacognition, are also more likely to be vocationally decisive (Symes & Stewart, 2007). The overarching premise of the following unit plan posits that Career Education begins from an understanding of oneself. This foundational dimension of understanding can be introduced at an early age through artistic activities integrated into any curriculum. Artistic mediums are particularly effective in discovering facets of personal identity, and one’s value within a community (Pöllänen, 2011). The importance of self-knowledge, knowledge of available career
options amenable to one’s individuality, and discovering meaningful life-goals are the primary objectives of the proposed unit plan. The processes of envisioning, dreaming, and imagining through artistic mediums are integrated into various dimensions of the following unit plan in order to facilitate the exploration of thoughts, ideas, feelings and experiences. Correspondingly, goal-setting facilitates in the management of these thoughts, ideas, feelings, and experiences obtained from the artistic processes.

**Context of Teaching Environment**

**Student Demographics**

The unit plan was implemented in a combined grade 5/6 classroom comprised of 13 grade five students and 10 grade six students located within a small inner-city elementary school within a large urban populace. The school serves families within the surrounding community, most of whom belong to ethnic minority populations and low-income groups. Naturally, the student population was culturally diverse. Approximately half of the school’s population was comprised of newly-enrolled students that had recently immigrated to Canada. A school-wide census was conducted prior to the commencement of the unit-plan implementation, and revealed that 39% of students learned English as a second language, 24% were special needs, and 7% were First Nations.

**Learning Outcomes of the Proposed Unit**

The Proposed unit endeavoured to attain the following objectives:

1. **Self-discovery:** recognize, appreciate, and understand personal qualities, thoughts, ideas, feelings, interests and experiences in oneself and others.

2. **Career-discovery:** explore and understand various career options available that will complement one’s individuality.
3. Goal-setting: effectively manage and aggregate thoughts, ideas, feelings, and experiences to create realistic and meaningful goals relative to one’s future career.

**Language Arts Objectives Achieved by Proposed Unit**

The following learning outcomes as per outlined in the Alberta Language arts curriculum were attained by the proposed unit:

Within the Organization of the program, it is expected that students will listen, speak, read, write, view, and represent to:

1. Explore thoughts, ideas, feelings, and experiences.
2. Comprehend and respond personally and critically to oral, print, and other media texts.
3. Manage ideas and information.
4. Enhance the clarity and artistry of communication.
5. Respect, support, and collaborate with others. (Alberta Learning, 2000)

**Information and Communication Technology Objectives Achieved by the Proposed Unit**

The teacher operated under the assumption that technology is best learned within the context of applications, activities, projects, and problems that replicate real-life situations. The Information and Communication Technology (ICT) curriculum seemed to be an ideal fit for career exploration. The following objectives were attended to within the proposed unit. The ICT objectives addressed by the unit include the following:

Students will:

1. Access, use and communicate information from a variety of technologies.
2. Seek alternative viewpoints, using information technologies.
3. Use organization processes and tolls to manage inquiry.
4. Use technology to aid collaboration during inquiry.
5. Electronic research techniques to construct personal knowledge and meaning.

6. Understand the role of technology as it applies to self, work and society. (Alberta Learning, 2003)

Art Objectives Achieved by the Proposed Unit

As previously mentioned, artistic activity was the primary medium employed to offer students a creative outlet to express their views, and visions. The specific art objectives accomplished by the proposed unit are as follows:

1. Reflection: responses to visual forms and artwork

2. Depiction: development of imagery based on observation of the visual world

3. Composition: including organization of images and qualities in the creation of unified statement

4. Expression: use of art materials as a vehicle or medium of saying something in a meaningful way. (Alberta Education, 1985)

Detailed Description of Proposed Unit Plan

Lesson 1: Career Journal--Personal Edification Through Reflective Writing

Students received a career journal where they were to record dreams, poems, or events that made them happy or unhappy. The journals could also include entries that addressed what they learned about themselves throughout the course of the unit. The purpose of having a journal was purely for the advancement of self-knowledge and personal edification for the students, and thus the journals remained in the students’ possession and were not collected for marking. The efficacy of maintaining journal was evaluated by the students themselves at the conclusion of the unit. Students were to share entries only if they were willing. They were also allowed the opportunity to decorate and personalize journals. Five to ten minutes, three times a week, over
the course of 9 weeks, were allotted to complete each entry. Upon completing the entire unit, students had the opportunity to review and compare each of their entries in order to recognize and observe their own personal growth.

**Lesson 2 Task 1: Interest Inventory--Discovering Meaningful Career-related Activities**

Each student was provided with an Interest Inventory worksheet, retrieved from the Saskatchewan Education (1995, Module 3, Activity 6) website. The worksheet consisted of various common career-related activities that the students were possibly interested in. Students were instructed to complete the worksheet by writing “Yes” if they believed the listed activity was interesting, and “No” if they were disinterested in such an activity. The purpose of completing the worksheet was to initiate a self-explorative process for the students and examine why such an activity would be appropriate to their individuality.

**Lesson 2 Task 2: Adjective Checklist, and Interview--Attaining Knowledge of Oneself and Others**

The teacher provided each student with an Adjective Checklist and Interview worksheet. On one side of the worksheet was a checklist of descriptive words that were grade-level appropriate (see Appendix A1), while the opposite side contained blank fields to be filled for the purpose of conducting an interview (see Appendix A2). An additional worksheet containing only the Adjective Checklist (identical to the aforementioned checklist) was also provided. The purpose of this lesson was not only to promote self-discovery but also to appreciate the qualities in others.

**Adjective Checklist.** Every listed adjective on the checklist was reviewed in a class discussion prior to the commencement of the activity. Once the students were familiar with the definition of each word, they were to complete the worksheet (containing only the checklist, not
the interview form) by placing a checkmark beside the words that they believed were accurate
descriptions of their character. Students were also provided with a dictionary if they needed
further clarification on, or struggled to recollect the meaning of a particular word.

**Interview.** The students were instructed to find a partner they did not know well or did
not regularly associate with. Once the students divided themselves into pairs, the teacher then
facilitated a brainstorming activity that required students to generate meaningful questions to ask
their partner regarding his or her strengths, interests, and personal qualities relative to the
aforementioned adjectives. Question-ideas provided by the students were discussed and written
on the board. Students were then instructed to complete their double-sided worksheets by
choosing five questions from the board to ask their partner, and writing their chosen questions
onto their interview worksheet. Upon completing their interview, the students were to turn to the
reverse side of the worksheet and check-off the words they believed described their partner.
Once the second checklist was completed, the students could then compare both checklists to
determine if their perception of their partner accurately reflected their partner’s self-perception
(and vice versa). Discussion of findings amongst partners was also encouraged. Furthermore, the
teacher demonstrated how a Venn diagram could be employed to compare and contrast their
partners’ list of adjectives with their own, as relative to the words on their completed checklists.
The purpose of the Venn diagrams was to reveal how individuals were uniquely different, but
also shared similarities. This lesson was concluded by having each pair present their partners to
the class by describing what they had learned about their partner’s personal characteristics.

**Lesson 3: Perfect Day Timeline--Conception of Goals Through Imagining and Dreaming**

Students were to develop a timeline that represented a “perfect day” set 20-30 years into
the future. The purpose of this activity was to encourage further self-exploration and to begin the
process of conceptualizing and formulating goals. The teacher instructed the students to close their eyes and get comfortable in their desks as she read aloud a guided-imagery script to aid them in envisioning their perfect day (see Appendix B). Once the visualization had ended, the students were to construct a timeline that depicted the events they imagined during the guided-imagery exercise. Small drawings and short descriptions were to be included on the timeline. The students were also to colour and decorate their timeline as they wished with provided art materials. On the reverse side of the timelines, the students were to answer the following questions: “Explain what your favourite part of the day was and why”; “Why did you enjoy doing those activities?” and “What does that say about what is important to you?”

**Lesson 4: Personal Puzzle Piece--Combining Previous Themes**

The Personal Puzzle Piece was an art project that sought to aggregate learned material through visual representation. Each student was provided with a Jigsaw cut-out (see Appendix C) that was to be decorated and personalized. Using the information from the Interest Inventory, Adjective Checklist, Interview, and Perfect day activities, students were to personalize their puzzle piece so as to accurately represent their individuality. One side of the puzzle piece contained only visual representations of their individuality; magazine pages, construction paper, colouring tools, and various art supplies were provided for this purpose. The other side of the puzzle piece was for the students to write a short paragraph that described why they chose specific images, colours, and cut-outs to represent themselves. The overall purpose of the lesson was to review and reinforce previous lessons. Lesson 4’s content was thus not included as part of the summative evaluation administered at the end of the unit.

**Lesson 5: Tests on Work Habit--The Importance of Work Ethic**
In order to emphasize the importance of strong work ethic and understanding of what it means to “work”, two quizzes retrieved from the Labor Market and Career Information (n.d.) website were employed: a True/False quiz (p. 38) and a Work Habits questionnaire (p. 33). The quiz consisted of a list of statements of which the students were to determine was either true or false. If they believed the statement to be false, they were to justify their reason for their answer on the reverse side of the quiz. Once every student completed the quiz, the teacher reviewed every statement and elicited discussion from the class as to whether or not each statement was true or false. Following the quiz was the Work Habits Questionnaire, which required students to evaluate themselves on a scale of 1-10 on statements that included various tasks indicative of the students’ conscientiousness and sense of work ethic. Lastly, students were to identify and write down two personal areas in need improvement as revealed by the questionnaire.

Lesson 6: Looking Into a Crystal Ball—Envisioning the Future

Similar to the Perfect Day Timeline activity, this activity sought to aid students in further formulating their future goals and aspirations. Every student was provided with a worksheet that contained an image of a crystal ball, divided into three sections (see Appendix D1). Each section of the crystal ball was to contain a picture that represented the student’s life at a certain point in time. The first, second, and third sections were to depict how the student envisioned their lives 5, 10, and 20 years into the future, respectively. A complete set of instructions, including questions to ponder, was also provided to the students (see Appendix D2). Students were asked to share their thoughts and views in a class discussion following the completion of the activity. The teacher paid special emphasis to the idea that different people possess different values, personal strengths, and goals, therefore everyone’s future will naturally vary as depicted by the crystal balls.
Lesson 7: Goal-setting Strategies

Discussion on the relationship between goal-setting and self-knowledge. The lesson began with a class discussion on how individuals change, and grow over time. The teacher had the students examine how their interests, ideas, and values have changed and evolved since kindergarten. The teacher then explained how this evolution of character would continue, and would profoundly affect the goals the students would form throughout their lives. The purpose of the discussion was to convey the idea that long-term goals—similar to interests, ideas, and values—can change or become more salient over time as a result of greater self-knowledge. Additionally, the teacher explained that in order to achieve these goals, effective goal-setting skills must also be developed and improved upon over time.

Implementing goal-setting strategies. The students were to create a personal goal, and create a plan of action for achieving it. The teacher provided an outline of how a goal could be achieved and facilitated a discussion on achieving goals (see Appendix E1). Additionally, the teacher provided the class with an example of a specific goal that could be achieved using the provided outline, as a template to follow (see Appendix E2). Finally, the students were then tasked to formulate an action plan in achieving a particular goal of their choice, by following the provided template.

Lesson 8: Career Exploration Through Research

Exploring careers by using internet sources. Students were to explore the City of Calgary Youth Employment Centre (1997) website (www.nextsteps.org) and browse through the video section by clicking on the link titled “Career Planning”, and then explore either the “Career Videos” or “Career Profiles” section of the website. These webpages included a lengthy list of careers with accompanying job descriptions and/or videos. Each student was required to select
from the list, three occupations they desired to learn more about. Students were also given the option to work with a partner who had similar career interests. The students were to narrow down their careers of interest to a single career by determining which of the three they felt were most suitable to their individuality. The teacher provided each student with a worksheet that asked questions pertaining to the research that the student conducted (see Appendix F).

**Exploring careers by interviewing community members.** Students were tasked to interview a family member, friend, or member of the community whose profession they thought was particularly interesting. An interview template with a list of questions was provided (see Appendix G); interviewee answers were to be recorded onto the worksheet by the student.

**Unit Conclusion: Presentation**

The final task required each student to create a presentation of their chosen career that was to be shared with the class. Students were given the freedom to present their information in any format they wanted, so long as the format was approved by the teacher. Presentation formats included PowerPoint slideshows, brochures, and posters. Some students even had a community member assist in their presentations.

**Evaluating the Effectiveness of the Unit Plan**

**Student Evaluation Form Results**

Students were to complete an evaluation form (see Appendix H) consisting of three parts:

**Part 1: completion of activities.** The student was to simply report whether or not a particular activity was completed by placing a check in either the column “I did it” or “I didn’t do it.” All of the unit’s activities were included in this checklist.
Table 1

Part 1: Completion of Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>I didn’t do it</th>
<th>I did it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Journal</td>
<td>0 (0%)</td>
<td>24 (100%)</td>
</tr>
<tr>
<td>My Perfect Day Timeline</td>
<td>2 (8%)</td>
<td>22 (92%)</td>
</tr>
<tr>
<td>Look Into a Crystal Ball</td>
<td>1 (4%)</td>
<td>23 (96%)</td>
</tr>
<tr>
<td>Interest Inventory</td>
<td>0 (0%)</td>
<td>24 (100%)</td>
</tr>
<tr>
<td>Work Habits</td>
<td>0 (0%)</td>
<td>24 (100%)</td>
</tr>
<tr>
<td>Goal-setting Strategies</td>
<td>1 (4%)</td>
<td>23 (96%)</td>
</tr>
<tr>
<td>Career Interview and Research</td>
<td>0 (0%)</td>
<td>24 (100%)</td>
</tr>
</tbody>
</table>

Note: Overall on average, 98% of the students surveyed completed all of the activities

Part 2: perceived helpfulness of the activities. The student was to indicate whether he or she believed a particular activity was helpful by circling a sad face for “Not good at all,” a neutral face for “Good,” and a happy face for “Great.” Helpfulness was defined by how personally relevant the activity was, and if they felt the activity was conducive to attaining future career goals.
Part 2: Perceived Helpfulness of the Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>No Response</th>
<th>Not good at all</th>
<th>Good</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Journal</td>
<td>0 (0%)</td>
<td>1 (4%)</td>
<td>4 (17%)</td>
<td>19 (79%)</td>
</tr>
<tr>
<td>My Perfect Day Timeline</td>
<td>2 (8%)</td>
<td>0 (0%)</td>
<td>2 (8%)</td>
<td>20 (83%)</td>
</tr>
<tr>
<td>Look Into a Crystal Ball</td>
<td>1 (4%)</td>
<td>2 (8%)</td>
<td>0 (%)</td>
<td>21 (88%)</td>
</tr>
<tr>
<td>Interest Inventory, Adjective Checklist, &amp; Interview</td>
<td>0 (0%)</td>
<td>3 (13%)</td>
<td>8 (33%)</td>
<td>13 (54%)</td>
</tr>
<tr>
<td>Work Habits</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>3 (13%)</td>
<td>21 (88%)</td>
</tr>
<tr>
<td>Goals-setting Strategies</td>
<td>1 (4%)</td>
<td>0 (0%)</td>
<td>6 (25%)</td>
<td>17 (71%)</td>
</tr>
<tr>
<td>Career Interview and Research</td>
<td>0 (0%)</td>
<td>1 (4%)</td>
<td>4 (17%)</td>
<td>19 (79%)</td>
</tr>
</tbody>
</table>

Note: Overall on average, 95% of the students rated the activities as either good or great.

Part 3: accomplishing unit outcomes. The final portion of the evaluation required students to indicate whether the overall unit accomplished its learning objectives by circling a sad face for “I don’t agree,” a neutral face for “I’m not sure,” and a happy face for “I agree.”

Table 3

Part 3: Evaluation of Career Planning Unit

<table>
<thead>
<tr>
<th>I Don’t Agree</th>
<th>I’m Not Sure</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. This unit plan helped me to learn a lot about myself.</td>
<td>1 (4%)</td>
<td>7 (29%)</td>
</tr>
<tr>
<td>2. This unit plan helped me to learn a lot about careers.</td>
<td>0 (0%)</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>3. This unit plan made me excited about what I could do with my life.</td>
<td>2 (8%)</td>
<td>10 (42%)</td>
</tr>
<tr>
<td>4. This unit plan made me want to learn more about different careers.</td>
<td>1 (4%)</td>
<td>1 (4%)</td>
</tr>
</tbody>
</table>
Note: Overall on average, 75% of the students agreed that this unit met all of the objectives.

Discussion of Results and Future Directions

Challenges in language and comprehension were quite evident due to language barriers since many of the students had just recently immigrated to Canada. Students responded rather favourably in regards to the helpfulness of the given activities despite their apparent language difficulties. Lessons were required to be continuously modified for students with special learning needs relative to language, reading ability, and developmental level. Naturally, such modifications required the teacher to spend substantial amounts of time in preparation. Intimate knowledge and understanding of every student’s learning needs and language competencies should be gained as soon as reasonably possible within the context of a highly diverse classroom.

Despite the students’ warm response to the provided activities, only 50% of the students felt excited about their future career prospects. Similarly, despite the inclusion of a number of self-exploratory activities and the students’ enthusiastic engagement in completing them, only 67% of the students felt they learned a lot about themselves. These surprising results may be due to the language difficulties and cultural barriers present within the classroom. It may very well be that the students simply did not understand the purpose behind the activities—that is, to gain an understanding of oneself—despite having successfully completing the self-exploratory activities. It is not surprising then that most students did not indicate that they were not excited or did not learn much about themselves—many were simply unsure. This finding suggests a rather interesting implication for teachers who wish to undertake a culturally diverse classroom with significant language barriers: what constitutes as self-knowledge in one culture does not necessarily translate comparably into another culture. Similarly, in a broader sense, the
objectives of learning and education in general differs from culture to culture. Thus, teachers in culturally diverse classrooms might expect that students may not actually know that they have attained the learning objectives. This may certainly have been the case in this classroom, considering the activities were warmly received and perceived as highly useful. Moreover, the teacher’s formative assessments indicated evidence of students gaining ample amounts of self-knowledge, and that students were successful at connecting their self-knowledge to their career goals. Furthermore, Students were eager and excited to learn about careers, yet they were unsure about their own career prospects. This sense of uncertainty be due to the fact that most of the students were very recent immigrants, and were still largely apprehensive of living and working in a new cultural context. Overall, these aforementioned findings further suggest that career education be continued, particularly for newly immigrated students.

Activities involving artistry and the engagement of the imagination were noticeably far better-received in comparison to activities that involved quizzes, questionnaires, and inventories. Students were continuously engaged when undertaking artistic activities but found the various test-like worksheets to be somewhat difficult to understand. For the future, such language-heavy lesson material should be minimized in classrooms that contain a high number of students still learning the language.

**Conclusion**

Artistry, dreaming, imagination, and creativity are exploratory processes that do not require any sort of spoken language in order to be used effectively. The artistic mediums employed in the proposed unit plan were particularly effective in transcending cross-cultural barriers and language limitations. It is thus important that we as educators foster this sense of wonder when promoting a greater realization of the inner workings of the students’ self and the
world they live in. By doing so, school subjects can be made more personally meaningful, long-term goals can be made more salient, and excitement over future life prospects can take hold. Selecting a suitable career requires that students channel their natural curiosities effectively to both their inner world and outer world. For the new, immigrant child still largely unaware of the strange world they have recently come to inhabit, nurturing his or her curiosity and creativity is of profound importance. Effective communication is imperative to a child’s education--but communication need not be transmitted in words, but through a child’s hopes and dreams for the future. Career Education endeavours not only to encourage these hopes and dreams, but turn them into reality.
References


Appendix A1

**Adjective Checklist**

*Check the words that describe who you are. If you do not know the word look it up in the dictionary or thesaurus.*

<table>
<thead>
<tr>
<th>Active</th>
<th>Affectionate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artistic</td>
<td>Daring</td>
</tr>
<tr>
<td>Confident</td>
<td>Clever</td>
</tr>
<tr>
<td>Dedicated</td>
<td>Eager</td>
</tr>
<tr>
<td>Determined</td>
<td>Friendly</td>
</tr>
<tr>
<td>Healthy</td>
<td>Helpful</td>
</tr>
<tr>
<td>Honest</td>
<td>Individual</td>
</tr>
<tr>
<td>Kind</td>
<td>Leader</td>
</tr>
<tr>
<td>Loyal</td>
<td>Mild</td>
</tr>
<tr>
<td>Neat</td>
<td>Open-minded</td>
</tr>
<tr>
<td>Outgoing</td>
<td>Polite</td>
</tr>
<tr>
<td>Positive</td>
<td>Quiet</td>
</tr>
<tr>
<td>Relaxed</td>
<td>Serious</td>
</tr>
<tr>
<td>Thoughtful</td>
<td>Unique</td>
</tr>
</tbody>
</table>


Appendix A2

**Interview**

*Time to interview your partner. Exchange papers. From our brainstorming ask your partner five questions that will help you get to know who they are. Once you have completed the questions, turn the sheet over and check the words that you feel describe your partner.*

<table>
<thead>
<tr>
<th></th>
<th>Question:</th>
<th>Answer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Guided Imagery Script

Instructions:
1. Think about your perfect day.
2. Close your eyes and picture your perfect day as I read a script to guide you.
3. Open your eyes and think about what was most important to you about that day.
4. Choose 3-5 activities that are very important to you.
5. Make a timeline of when those activities happened during your perfect day.
6. Draw the activities on your timeline.
7. Think about…
   ▪ why were those activities so important to you?
   ▪ what does that say about you?

Answer the questions above on the back on the timeline.
Appendix C
Appendix D1
Appendix D2

**Looking In to A Crystal Ball Activity:**
1. We are going to have the opportunity to look into a crystal ball today and see what our lives will be like.

2. Think about your life in 5 years. 10 years. 20 years. How old will you be then? Write those ages in the three squares on the worksheet.

3. Fill in the space above the age with a picture of what you see yourself doing when you are that old.

4. Complete your crystal ball for all three ages.

5. What is different about yours from others? What is the same?

Appendix E1

Instructions:
Students will review goal-setting steps to create a goal developed from ‘Work Habits’ activity. Once student have created a goal following the following steps, they will input
goal into their electronic portfolio. Students will reflect on this goal once a month and document thoughts in ‘Career Journal’ and/or through voice recordings within the portfolio.

**HOW TO SET GOALS**
1. Define the goal.
2. Outline the steps needed to achieve it.
3. Consider possible blocks and ways of dealing with them.
4. Set deadlines.

Not every wish can be a goal. For instance, you may wish you could live and stay young forever, but since there's nothing you can do to make that happen, it could never be considered a goal.

In order for something to be a goal:
• It has to be important to you, personally.
• It has to be within your power to make it happen through your own actions.
• It has to be something you have a reasonable chance of achieving.
• It must be clearly defined and have a specific plan of action.

**DISCUSSION QUESTIONS**
- Do you ever set goals for yourself? What are some goals you have right now (short term and long-term)?
- Agree or disagree: It's better to set lower goals than to risk failure by setting higher ones.
- What's the difference between a wish and a goal?
- How do you decide what your goals are?
- Have you ever set a goal that was unrealistic? What happened? What did you learn from that?
- Is it ever okay to take risks? What kinds of risks are okay? What kinds of risks are not okay?
- Have you ever gone out on a limb and risked failure in order to achieve a bigger goal? (describe) Are you glad you took that risk?
- Has there been a time when you turned a failure into a success? (describe) What did you learn from that?
- What's the difference between failing and being a failure?
- If you don't accomplish all your goals does that make you a failure?
- What are some good ways to deal with disappointments?
- What is your personal definition of success?
- Is it a good idea to set goals? Why, what do goals do for you?

Appendix E2

Goal Example:

1. Define the goal.

I want to finish a 10 km marathon.

2. Outline the steps needed to achieve it.
• Take a class on running
• Exercise daily
• Eat nutritious food
• Buy running gear
• Run with a friend
• Get advice from someone who has done a marathon
• Obtain a gym membership

3. Consider possible blocks and ways of dealing with them.

• The weather might be too cold to run outside
• Buying gear costs money
• A gym membership costs money
• Exercise is can be difficult
• Eating healthy food can be difficult
• You may not have a friend to run with

4. Set deadlines.

Ten months from now. Every month I will run one extra kilometer.
Appendix F

Career Research

Use the Internet and the library to help you answer these questions.

1. What kind of schooling do you need to get this job? (Example: High School Diploma, College Degree, University Degree)

2. On average, how much money would a person in this career or job make? Be sure to include if this amount is hourly, monthly or yearly.

3. Where can you live if you have this type of job or career? Is there a certain city, area or region? Would you have to live in a rural community or urban?

4. Would this job be a good fit for you? Tell us why you think so. What have you learned about yourself that might make you think this?

Prepare to present this information from the Career Interview and your Career Research to the class. Include all your answers and conclusions. Tell us about the person you interviewed, what they do for a career, then explain the information you uncovered in your research. Finally, tell the class if this is a career for you and why or why not.
Appendix G

Career Interview
I would like to do a career interview. It is easy—just answer these questions.

1. What is the name of your job?
   ______________________________________________________
   ______________________________________________________

2. Do you work inside, outside, or both?
   ______________________________________________________
   ______________________________________________________

3. Do you work with people, information, and/or machines?
   ______________________________________________________
   ______________________________________________________

4. What do you do on your job?
   ______________________________________________________
   ______________________________________________________

5. What do you like about your job?
   ______________________________________________________
   ______________________________________________________

6. What do you dislike about your job?
7. What kinds of tools or equipment do you use on your job?

8. What school subjects help you in your job?

9. Do you have other comments about your job?
Appendix H

Career Coaching Across the Curriculum: Student Evaluation Form

Thank you for participating in this unit plan! I would like to know if it was helpful and how it could be made better. Please answer the questions on this sheet to help me with this.

Part 1: Please let me know if you did the activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>I didn’t do it</th>
<th>I did it</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Career Journal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. My Perfect Day Timeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Look Into A Crystal Ball</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>D. Interest Inventory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Work Habits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Career Interview &amp; Research</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part 2: Please let me know if you thought the activity was helpful by circling whether you thought it was “not good at all”, “good” or “great”.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not good at all</th>
<th>Good</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Career Journal</td>
<td>☹</td>
<td>☺</td>
<td>☻</td>
</tr>
<tr>
<td>B. My Perfect Day Timeline</td>
<td>☹</td>
<td>☺</td>
<td>☻</td>
</tr>
<tr>
<td>C. Crystal Ball</td>
<td>☹</td>
<td>☺</td>
<td>☻</td>
</tr>
<tr>
<td>D. Interest Inventory</td>
<td>☹</td>
<td>☺</td>
<td>☻</td>
</tr>
<tr>
<td>E. Work Habits</td>
<td>☹</td>
<td>☺</td>
<td>☻</td>
</tr>
<tr>
<td>F. Goals</td>
<td>☹</td>
<td>☺</td>
<td>☻</td>
</tr>
<tr>
<td>G. Career Interview &amp; Research</td>
<td>☹</td>
<td>☺</td>
<td>☻</td>
</tr>
</tbody>
</table>

What did you like about this unit plan?

How could this lesson, unit plan or school wide intervention be made better?
Part 3: Please tell me how much you agree with the following statements by putting a checkmark in the box that best tells me how you feel:

<table>
<thead>
<tr>
<th>Activity</th>
<th>I Don’t Agree</th>
<th>I’m Not Sure</th>
<th>I Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>This lesson helped me to learn a lot about myself.</td>
<td>🙁</td>
<td>🙁</td>
<td>☺️</td>
</tr>
<tr>
<td>This lesson helped me learn a lot about careers</td>
<td>🙁</td>
<td>🙁</td>
<td>☺️</td>
</tr>
<tr>
<td>This lesson made me excited about what I could do with my life</td>
<td>🙁</td>
<td>🙁</td>
<td>☺️</td>
</tr>
<tr>
<td>This lesson made me want to learn more about different careers</td>
<td>🙁</td>
<td>🙁</td>
<td>☺️</td>
</tr>
</tbody>
</table>

Thank-you very much for your help!
General Information about the Presentation

Research Presentation Title:
What's the harm? Examining the stereotyping of Indigenous people and educational interventions for Indigenous cultural safety.

Time Format: Workshop 90 minutes

Presenter Information

Speaker Bios & Contact Info

A. Cheryl Ward, EdD. Candidate MSW, RSW
Cheryl Ward is Kwakwaka'wakw from northern Vancouver Island and a member of the 'Namgis First Nation. An experienced educator, curriculum writer and e-learning developer, she is committed to social justice education and de-colonizing anti-racism work. Over the last fifteen years, Cheryl has worked on several projects related to Indigenous specific racism and cultural safety. In 2008, Cheryl joined the Provincial Health Services Authority (PHSA) Aboriginal Health team as Provincial Lead for San'yas: Indigenous Cultural Safety Training. In 2013 Cheryl was awarded the British Columbia Health Care Hero Award for PHSA. Cheryl brings with her comprehensive knowledge of the theory and practice of cultural competence and cultural safety and their importance to effective praxis, and recognized expertise in the creation of innovative and transformative education programs. In 2011 Cheryl returned to university and is currently completing doctoral research at Simon Fraser University specializing in Indigenous-specific racism and decolonizing pedagogy. Cheryl is currently the Director of Indigenous Health for the province of BC in Canada.

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B. Laurie Harding, EdD. Candidate, MSWI, RSW
Laurie Harding is a lead facilitator with the San'yas: Indigenous Cultural Safety (ICS) Training program in Canada. Laurie is a White woman with Scottish and English Settler ancestry. She lives on Coast Salish territory, also known as Victoria in the province of British Columbia (BC) Canada. Laurie is presently conducting research on Indigenous stereotype harm in a doctor of education program from Simon Fraser University and has a Master's degree in Social Work with an Indigenous specialization. She has been working with the ICS program for the past seven years as a facilitator and describes herself as a social justice advocate. Laurie believes that a gap in Indigenous Cultural Safety education across all levels in North America and in other colonized continents is contributing to systemic problems that lead to inequities for Indigenous people. It is because of these inequities that she works as a researcher and an educator specializing in anti-Indigenous racism, stereotype harm, and transformative education.

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Affiliation: British Columbia Provincial Health Services Authority, Canada

Topic: Curriculum, Research and Development
Abstract

Across the world, colonization is a root cause of the inequities in education, health, housing and economic opportunity experienced by Indigenous people. Drawing upon two critically-oriented qualitative and quantitative research studies and extensive experience in delivering Indigenous cultural safety training, this presentation aims to unpack the way colonial ideologies in mainstream organizations perpetuate inequities and harm to Indigenous people.

Particular attention will be paid to the ways in which colonial ideologies embedded in the education system can promote harmful stereotyping of Indigenous people. Laurie will present data from her doctoral research with the San’yas: Indigenous Cultural Safety training program to illustrate the relationship between stereotyping and discrimination, and the impact on inequities experienced by Indigenous people. The findings from this study can inform educational contexts internationally.

Cheryl’s doctoral research emphasizes the role of educators in interrupting pathways to harm, with a view to exploring how such active interruption can be an intervention to reduce inequities across systems. Specifically, she will share ways in which enhancing knowledge, self-awareness, and skills related to Indigenous Cultural safety helps learners make sense of the inequities experienced by Indigenous people and mitigate the risk of reinforcing colonial ideologies that lead to ‘blaming the victim’. This session will particularly benefit educators and practitioners who wish to enhance their cultural safety skills by connecting theory to praxis.

Colonization has been identified as a root cause of the individual and structural inequities experienced by Indigenous people around the world. Historical and intergenerational trauma from ‘education’ policies, such as the mandatory enrolment of Indigenous children in Indian Residential Schools/Boarding Schools, continues to impact the lives of many Indigenous people and communities today. Yet, many educators do not have an accurate or adequate understanding of colonial history. The gaps between Indigenous and non-Indigenous Canadians, therefore, tend to be viewed in terms of deficits inherent to Indigenous people, rather than as a consequence of the ongoing impacts of colonization. Settler groups continue to rely on colonial ideologies to inform and reinforce the ‘Othering’ of Indigenous people, in an effort to rationalize actions that disadvantage, oppress, and harm them.

Notions of White superiority often drive colonial ideologies. Historically, these ideologies enabled settlers to rationalize the occupation of Indigenous land through doctrines such as terra nullius and the doctrine of discovery. We continue to see these ideologies contribute to the inequities experienced by Indigenous people through the perpetuation of settler narratives and stereotyping of Indigenous people.

Learners in the online San’yas educational program have provided thousands of comments that describe incidents in which Indigenous people were stereotyped and have experienced various levels of harm across educational, health, employment, child welfare, and justice systems. A case study approach was used to code this textual data and generate themes. Results from this analysis will be presented, including preliminary findings on the sites of harm within the healthcare system.
So You Want To Write A Grant: Lessons Learned About Writing and Implementing Grants Focused on Preparing Teachers of English Learners

Conference Proceedings

Description: This panel session features five presenters representing six grants totaling almost $20 million. Scholars, researchers and educators will share lessons learned when writing and implementing grants targeting preservice and in-service teachers of English learners. Presenters will discuss key components to be considered when writing grants. This will be an interactive session with opportunities to share ideas among participants and with panelists. Come prepared to share projects you would like to see funded.

Panel Session Group 1: Speed Dating for You and Your Grant Idea: Understanding Various Sources of Grant Revenue (ITEACH ELLs Project & AZGA STEMSS Institute)

Presenter: Margarita Jimenez-Silva – Center for the Art and Science of Teaching, Arizona State University

Abstract:

There are numerous sources of grant funding that exist to fund various projects focused on preparing teachers of English learners. In FY 2016, the primary area of emphasis for federal spending in education was listed as increasing equity. This emphasis resulted in the investment of $773 million for English Language Acquisition grants and $15.4 billion in Title I programs and grants (USDE, 2016). The U.S. Department of Education English Acquisition State Grants, provided over $732,144,000 in funding in 2012 with the range of new awards being $500,000–$150,058,414 (http://www2.ed.gov/programs/sfgp/funding.html). Several of the grants highlighted in this panel presentation were funding by Department of Education Office of English Language Acquisition National Professional Development Grants whose latest round of grant proposals were reviewed in the summer of 2016 and who are expected to award $23,850,000 (https://www.gpo.gov/fdsys/pkg/FR-2015-12-11/pdf/2015-31290.pdf). Furthermore, additional government funding sources exists at the state and local level. Numerous foundations and private organizations also provide opportunities for grant funding. This session will walk participants through the process, using the ITEACH ELLs and AZGA STEMSS grants as examples, of beginning with a key idea and then seeking funding. We will provide participants with various tools to help them identify possible funding sources.

References:
Presenter: Cathy Coulter -- University of Alaska, Anchorage
Irasema Ortega—University of Alaska, Anchorage

Abstract:
It is a common complaint among teacher educators: Candidates just want strategies for teaching ELLs (something they can do tomorrow) while teacher educators want them to engage in the deeper work of partnering academic rigor (understanding theoretical underpinnings, examining research) with professional reflection (Jacobs, Assaf, & Lee, 2010). For teacher educators, it is akin to the saying, “Give someone a fish and you feed her/him for a day; teach someone to fish and you feed her/him for a lifetime.” In this era of high-stakes testing and scripted curricula, the demand is even higher for strategies, but for strategies that work within this or that district-based mandated curriculum. As a result, grant partners can find themselves at odds in terms of the kinds of classroom practice they want to promote. Using Project LEAP as an example, we will explore the tensions and outcomes of this mismatch. Drawing from a scholar practitioner approach (Distefano, Rudestam, & Silverman, 2007), we will show how theory, research, and reflection is the ultimate in strategy, akin to teaching them to fish. Finally, we will use an interactive approach to discuss possible solutions for designing professional development that is based in solid theoretical underpinnings and research-based classroom practice while also meeting the needs of district partners and grant participants who work within specific federal, state, and district mandates.

References:

Panel Session Presenter Group 3: Unpacking an RFP: Blending Your Expertise with The Call (ARTEL)
Presenter: Dawn Lambson -- Arizona State University

Unpacking an RFP: Blending Your Expertise with the Call (2016 NPD Grant)

One of the critical first steps to writing a successful grant proposal is carefully unpacking the request for proposal or RFP. When a funder such as a public organization or government office issues a new grant program, it sends out an RFP outlining specific project specifications
and application procedures as well as specifying evaluation criteria. Meticulous attention to significant features including eligibility, submission dates and procedures, and details regarding formatting and organization can mean the difference between success and rejection. According to Harris (2015), as many as 50% of submitted proposals are rejected for not following RFP instructions.

Before beginning the proposal writing process, it is crucial to read and unpack the RFP document thoroughly in order to understand what is being requested and what criteria will be used in reviewing the proposal. The RFP will spell out all program requirements, goals, target dates, budget requirements, organization, and formatting requirements such as proposal sections, headings, page limits, and font size. To ensure that all of these details are synthesized into your final proposal, it is helpful to start with creating a summary document or checklist outlining all requirements in brief which can be used as a guide when creating and writing up the proposal. Every piece of the REP must be understood and addressed in order to ensure that all parts of your proposal conform to the requirements and have the highest chance for acceptance.

According to communitygrantsnow (2010), there are a number of key items to pay attention to when reading and making sense of an RFP:

1) *Knowing when, where and how the grant is due.* This may seem simple and direct, i.e. the recent National Professional Development RFP from the U.S. Department of Education, Office of English Language Acquisition clearly stated upfront, “Deadline for Transmittal of Applications: February 19, 2016”. However, the process is not as simple as it seems. Combing through the lengthy document, we found that there was also a Deadline for Notice of Intent to Apply which was December 31, 2015, and the application had to be submitted online via the Grants.gov website and received no later than 4:30:00 p.m.,
Washington, DC time. Further scouring of the RFP revealed a full page of instructions regarding submission information including the requirement that in order to submit the application, we had to be registered with the website, a process that can take several weeks. Creating a timeline that included a sufficient timeframe for the lengthy submission process was crucial to meeting the deadline requirements.

2) **Understanding the formatting requirements:** Grants generally have specific requirements for both content and form of the application. The 2016 NPD grant from the U.S. Dept. of Ed. included a page limit as well as requirements for margins, font style and size, and spacing. As indicated by communitygrantsnow.com (2010), such standardization makes the application easier to read and provides a means for disqualifying applicants in order to narrow the field. Specifically the RFP for the 2016 NPD grant included the warning, “We will reject your application if you exceed the page limit or if you apply other standards and exceed the equivalent of the page limit.” It is crucial to give time and attention to knowing and understanding these small but significant details as outlined in the RFP.

3) **Clarifying the goals and purposes of the RFP.** One of the first things to read through carefully and understand thoroughly is the goals and purposes section of the RFP. According to communitygrantsnow, com (2010), it is crucial that your grant application respond to the funder’s requests, and careful perusing of the goals and purposes outlined in the RFP will help you identify these specifics. The goals and purposes also provide a framework for organizing your proposal. Specifically stated, “A good proposal response should always show why it is consistent with and furthers the goals and purposes of the RFP” (communitygrantsnow.com, 2010).”
The RFP that our 2016 NPD Grant proposal responded to began with a description of the purpose of the program, specifically “to support professional development activities that will improve classroom instruction for English learners and assist educational personnel working with such children to meet high professional standards.” It went on to specify the types of programs that would be funded through the grant and outlined the specific program elements that the department had determined as significant to their goals and purposes. These were stated as competitive funding priorities and identified what was most important to the department in terms of program design. The RFP for the 2016 NPD GRANT specified one absolute priority which all proposals had to meet, that was, to provide professional development to improve instruction for English learners, two competitive preference priorities related to providing moderate evidence of effectiveness and improving parent, family and community engagement, and two invitational priorities, dual language approaches and supporting the early learning workforce to support ELLs. The competitive preference priorities and invitational priorities offered opportunities to accrue additional points towards evaluation of the proposal and highlighted key goals/priorities of the grant.

Careful reading of the priorities revealed that this new call for programs had shifted significantly towards more evidence-based projects utilizing research designs quite different from previous calls. Comparing the RFP’s goals and priorities to the program design that we had created in anticipation of the grant call, we found that only the absolute priority was already intact. To address the other priorities and align our proposed program model to that of the call, we would need to reconsider and revise our initial plan in significant ways. This is where it becomes critical to carefully and creatively align one’s
own expertise and goals with the goals and purposes of those called for in the RFP. Specifically for the 2016 NPD Grant this meant reshaping the program to include a quasi-experimental design and finding published research evidence that supported our proposed program model and implementation. It also meant reshaping the program to incorporate a dual language focus and incorporating a stronger emphasis on parents and community. We found that some of these modifications were an easy shift and fit well into the program we had already outlined. Others required networking with experts in other fields and tapping into new expertise and resources in order to design a program that would align as closely as possible to the call of the RFP.

4) **Identifying the points.** As part of the review criteria, RFPs spell out the specifics of what needs to be included in the proposal and specify point values for each portion. These point values reveal which parts of the proposal are most significant and likely require the most time and effort to develop. These knowledge can be used to guide the proposal writing process as well as assess the strengths and weaknesses of the proposal. Paying particular attention to the section on review criteria and evaluation helps in understanding what parts of the proposal may require the most attention and ensures that all elements are addressed. For example, the REP for the 2016 NPD Grant provided the following point values for a total of 100 points:

(a) Quality of the project design (up to 45 points)
(b) Quality of project personnel (up to 10 points)
(c) Quality of the management plan (up to 25 points)
(d) Quality of the project evaluation (up to 20 points)
Using these as a guide, along with the specifics of each as outlined in the RFP, it was possible to put together a proposal that met the requirements of the RFP and aligned well to the criteria that would be used by the proposal review team in evaluating the grant.

Conclusion:

While the initial encounter with a lengthy and dense RFP can seem daunting, unpacking and processing the document can be made more manageable through reading and rereading the entire document several times with a lens focused on each of the significant elements of the request – the timeline, purpose, goals, formatting, organization, and evaluation criteria. Developing a clear understanding of each aspect of the RFP and creating a checklist of requirements will go long way towards helping you develop a strong and viable grant proposal. In addition, creating a timeline for completing each part of the proposal and allowing sufficient time for submission is a success strategy that will help the process unfold as smoothly as possible. While responding to an RFP will most likely always be challenging and time consuming, the best way to ensure that one’s efforts will be met with success is to carefully and thoroughly make sense of every aspect of the call and take time develop strategies for compiling all aspects of the proposal in a timely and organized manner.

References:


Panel Session Presenter Group 4: If I Build It, Will They Come?: Designing Optimal Program Models, Management Plans, and Project Budgets (TELAC)

Presenter: Anthony Trifiro -- College of Liberal Arts and Sciences, Arizona State University

Abstract:
In this interactive session, participants will consider their grant project idea from the perspective of: program model, the proposal’s key personnel and project milestones, and budgeting for successful implementation. Effective, high quality PD programs that implement a new (reform) teaching practice are programs that engage participants’ participation, support active learning, foster salient connections to classroom context, and are of longer duration (Garet, Porter, Desimone, & Yoon 2001). A program model considers the program scope, its participants, organizational impact to participants and schools, and intended outcomes (Authors, 2015) A project’s management plan considers the project team’s capabilities, addresses the overall personnel needed to support the entire project, defines budget parameters relative to the RFP, and includes milestones relative to the project’s timeline (ASU Knowledge Enterprise Research Administration). The budget aligns the project scope, meets internal university requirements, meets funder’s requirements, and supports a complete evaluation. The budget and its narrative provide the funder with an understanding of how funds are employed and financial framework supporting project’s success. Components of a budget that include student support and U.S. Department of Education parameters will be used.

References:
Arizona State University, Knowledge Enterprise Development Research Administration Proposal Information/Resources  https://researchadmin.asu.edu/proposal-information-and-resources

(Authors, 2015)

The successful implementation of a sponsored project relies on program development, managing project objectives and budgeting for its successful implementation. Key guiding questions for the project, in the sponsored project development stage are:

Question 1) (Program Model) What elements of the program model are necessary to support participant learning and participant outcomes through the professional development initiative?

Question 2) (Management Plan) What are the key elements of the management plan (personnel and activities) that will support the project?
Question 3) (Budget) What budgetary requirements must be fully included to support the project for its duration?

Addressing these fundamental questions aids in developing these three areas. Using guiding questions preliminarily helps in making important decisions to these areas while formulating the proposal.

When responding to all the requirements of a grant call or request-for-proposal (RFP) for teacher professional development, researchers must consider which characteristics of the grant call or competitive priority in the NPD 2016 Grant will be addressed. Regardless of which competitive priorities are addressed, the program model must be one that provides a high quality program, supported by research, and in the case of NPD 2016, supports teachers in developing new (reform) teaching practices. Primary importance of a professional development program model/program design is supporting participant learning and maximizes effectiveness. Garet et al (2001) suggest that programs that engage and encourage participants’ participation, supports active learning, fosters salient connections to classroom contexts, and are of longer duration become key characteristics for an effective professional development (Garet. Porter, Desimone, & Yoon 2001).

In developing a program model for the 2016 NPD Grant as well as other grant program, the research team routinely considered the following criteria: program scope (intended outcome), its participants and their learning objectives, organizational impact relative to how will participation support their school or their PLC, and the extant the program positively impacts teaching and learning of students. When formulating a program model for the 2016 NPD project proposal, guiding Question 1 supported the research team by considering similar grants, academic literature and Arizona State Department of Education endorsement requirements.
In developing the curricular framework, researchers considered the need for participants to develop broad based knowledge. Researchers identified weak areas within the structure citing the differentiated needs for dual language teachers as a means for participants teaching in dual language contexts to develop expertise in delivery of K-8 content in both Spanish and English. These components included an understanding of the political context of language minority education, knowledge of EL students, their communities, aspects of language development and connections to first language literacy, ways of modifying instruction using appropriate sheltered instruction methods and to use assessments and scaffolding to support second language learners (Echavarría, Vogt & Short, 2009; Faltis & Coulter, 2008; Lucas, Villegas & Freedson-Gonzalez, 2008; Lucas & Villegas, 2012; Walqui, 2008; Walqui & Van Lier, 2010; Villegas & Lucas, 2002a; Villegas & Lucas, 2002b) The program focus sought to build on supporting teachers' practice changes that were culturally and linguistically centered. Learning about practice and reflecting on practice then becomes a foundational part of learning activities within the broader scope of the program design.

Proposed Curricular Model
In developing the curricular model, the research team considered a number of theoretical perspective such as Embodied Understanding of Practice (Dall’Alba and Sandberg, 2008) to support the program's curricular plan. Teachers’ understanding of key instruction for ELs is evidenced through teachers' implementation of new practices and refinement of current practices to support English Leaners and Dual Language Leaners as well as their PLC. Regardless of participants’ experience as a teacher of students who first language is other than English (LOTE), the curricular model employed establishes a solid grounding in
fundamental core knowledge relative to: language policy, EL students’ parent and community involvement, second language acquisition, literacy and bi-literacy practices, assessment, and methods of sheltered instruction. The practicum offers participants support for implementing and guiding others in practice changes.

Figure 1  The Sample Program Model-- Foundational Concept Map
From the program model, a curricular guide is established that can be easily communicated to the funder, potential districts and to potential program participants.

Table 1 Curricular Components of Knowledge and Skills ----Proposed Program Model

<table>
<thead>
<tr>
<th>Potential Course</th>
<th>Program Curricular Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course 1 Introduction - Foundations</td>
<td>Develop an understanding of the social, political and legislative aspects of language minority education.</td>
</tr>
<tr>
<td>Course 2 Role of Bilingualism and Second Language Acquisition Overview</td>
<td>Review notions of bilingualism and second language acquisition theories.</td>
</tr>
<tr>
<td>Course 3 Role of Parents and Communities of English Language and Dual Language Learners</td>
<td>Develop understanding of immigrant and first generation students and the social-cultural context of schooling.</td>
</tr>
</tbody>
</table>
| **Course 4**  
| **Assessment** | Provides an overview of assessments, informal and formal assessments in teaching contexts. |
| **Course 5**  
| **Bi-literacy Strategies** | Develop L1 Literacy and opportunities to develop maintain L1 literacy and develop English. |
| **Course 6**  
| **Strategies for English Leaners and Dual Language Learners** | Focus on modifying instruction. |
| **Practicums & One-to-One Coaching (Cognitive CoachingSM)** | Two semester practicum supported with Cognitive CoachingSM. |

While Question 1 supports development a preliminary building a model, there are subsequent questions that researchers should ask of the research team during project meetings. These questions might include: How can the program be more flexible to participant’s needs? What elements of proposed curriculum insure the project is meeting participant learning objectives? In reviewing the overall model, how does the practicum component fit into the courses offered? And similarly how do the courses build upon each other? To complicate the matter further, it is very important to obtain feedback from neutral parties when possible, but of great importance is to obtain feedback from potential district participants. Building a program model requires many sources of input and valued input from district participants is integral and is one way to gain program buy-in.

**Management Plan**
A project’s management plan considers the project team’s capabilities, addresses the overall personnel needed to support the entire project, identifies how the project will be implemented, as well as identifies milestones relative to the project’s timeline. The management plan also informs key budget areas.

In developing the management plan, guiding question 2 “What are the key elements of the management plan that will support the project?” supports the research team working together to develop a plan. Subsequent questions might include: Who are the key personnel on the project and what will be their roles? How will the project select recruit and select participates? What professional development might be needed for key personnel? What is the overall timeline?

**Key Personnel**

When addressing key personnel, the primary concern, which is also budgetary, is to first address roles with respect to the project such as project oversight/control, budget oversight, instructional, program delivery/recruitment, research and evaluation. The research team must also address who within the personnel matrix will have a 12 month, full-time role on the project and who will have less while meeting all of the funding and university requirements. Identifying roles also addressing expertise and how expertise is leveraged within the project’s scope.

Oftentimes the Project Director and the Principal Investigator are the same individual (ASU Research and Sponsored Projects Manual, October 2017). Generally this position is best defined as 12 month academic faculty member or department leader who is responsible for many activities associated with the grant including: program implementation, school district relationship management, participant recruitment activities, program continuation and broad project management of research activities including evaluation from a compliance perspective. There are many factors that may cause for additional personnel leading to separation of roles.
where there is a Primary Investigator and Project Director. More often than not, on larger funded
sponsored projects with expansive scope, larger employed funds annually, expansive research
and project work, the research team may identify both the need for separation and for adding
personnel.

Non-essential staff are considered individuals who are not directly related to the project on a
day-to-day basis and will be brought into the project for a specific task and at a specified time.
However, non-essential does not imply not important. Generally a consultant to a project as
well as a project’s evaluator are considered non-essential personnel and do not appear as staff on
the project. Their role is by no means diminished on the project but is important relative to
university policies for staffing and budgeting.

The scope of the project may determine the need for additional full or part-time staff. With
respect to the NPD 2016 Project, additional staff included a full-time faculty member also
serving as co-PI and an Administrative Coordinator. The project did include an Advisor whose
role would not be limited, but rather take on an important role relative to program development,
project evaluation and project dissemination of work. This was considered to be an essential
while the evaluator was considered non-essential and did not appear as related staff to the project
but contracted services.

It is highly suggested that a simple chart be developed to address all potential personnel
members, roles, responsibilities and expertise. This can be easily communicated to the funder
and members of the department.

Getting Participants: Recruitment, Selection and Retention
Recruitment efforts, selecting participants, and retaining participants to complete a professional development program is not only an important criteria to be met for continued funding, but also has implications for a professional development study especially with control groups. As a best practice, shared by other NPD grantees and used extensively on other NPD projects, recruitment is identified as an integral activity requiring uniformity. As also shared by other NPD grantees, can be a project activity requiring extensive effort. It is therefore best to consider ways to maximize recruitment efforts through an overall organized way. In the case of the NPD 2016 grant, recruitment activities occurred at institutes, large program orientations at different IHE campuses as well as partner district school sites. Target recruitment also included email and internet recruitment. It is extremely important to also identify how the project will address diversity in their recruitment activities. This will require recruitment outreach beyond the district offices and school sites. For the NPD 2016 grant, recruitment included activities to agencies and non-profits targeting potential teachers addressing specifically diversity of color, race and sexual orientation. Recruitment efforts for this grant begin early, approximately eight months prior to the summer session in order to provide ample time to meet with districts and reach potential participants. Recruitment timeline will depend extensively on many factors including the type of professional development program that is being offered as well as district support for these programs.

As a best practice, the selection process for program participation must be consistent for all potential participants. This would require participants to have equal access such as a university website dedicated to the project as well as pre-established rubric to select participants. As a best practice from other NPD grantees, selection should have some rigor. The selection rigor should seek to address each participant’s interest in the program and specific goals for participation.
Selection for the 2016 NPD grant required completion of an online application including responding to essay prompts, providing three references and completing a program overview orientation.

Retention efforts facilitate reaching pre-established participant recruitment and program completion targets. Retention efforts begins as soon as the participant is accepted into a cohort through completion of the last part of the program. Best practices from other NPD grantees have included frequent contact with participants prior to start of the first day and addressing all concerns throughout the program. For the 2016 NPD grant, retention also included program surveys on their learning experience each semester. This has been a best practice implemented in previous NPD grants as well.

Evaluation

The outside evaluator will work with the research team to determine instruments used for data collection and how they are to be collected and analyzed. The evaluator will also assist in completing the required reports for the funder. In the case of 2016 NPD grant, the evaluator is highly involved as an outside consultant to the grant providing guidance with data collection, establishing of control groups and project evaluation parameters relative to program effectiveness and meeting established objectives. The evaluator also meets on a regular basis to review program progress.

Project Timeline

The research team might consider completing an overview of project implementation and project events relative to the overall program for each year. While this is primarily an internal tool, it can be modified as a document for communication with school districts and internal departments
within the IHE relative to global project activities. Generally, the research team would consider a
start date based on what funders communicated relative to award notification.

Table 2 – Sample Planning/Communication Timeline

<table>
<thead>
<tr>
<th>Year 1 2016 Planning Project/Communication</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Project Planning</strong></td>
<td></td>
</tr>
<tr>
<td>Summer 2016</td>
<td>Fall 2016</td>
</tr>
<tr>
<td><strong>Funder Notification and Reporting</strong></td>
<td></td>
</tr>
<tr>
<td>Award Notification</td>
<td></td>
</tr>
<tr>
<td>First Report for Year 1</td>
<td></td>
</tr>
<tr>
<td><strong>Staff</strong></td>
<td></td>
</tr>
<tr>
<td>Hire of Project Director</td>
<td>Hire of Project Coordinator</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Hire of Faculty Coaches</td>
<td></td>
</tr>
<tr>
<td><strong>Course Planning/Learning Objectives</strong></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Delivery</td>
<td></td>
</tr>
<tr>
<td>Review of Course Delivery and Participant Learning</td>
<td></td>
</tr>
<tr>
<td><strong>Services (Consultants)</strong></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>Planning for Summer Institute</td>
</tr>
<tr>
<td><strong>Recruitment for fall 2017</strong></td>
<td></td>
</tr>
<tr>
<td>Start October 2016</td>
<td>Selected participants by April 2017</td>
</tr>
<tr>
<td><strong>District Meetings</strong></td>
<td></td>
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<tr>
<td>Planning</td>
<td>September 2016</td>
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Budgeting
The budget aligns the project scope, meets internal university requirements, meets funder’s requirements, and supports a complete evaluation. In developing the budget, the research team addresses Question 3 “What budgetary requirements must be fully included to support the project for its duration?” The budget and its narrative provide the funder with an understanding of how funds are employed and the financial framework supporting project’s success. Having a completed program model and management plan will allow for the development of a complete program budget for the project’s duration. The budget cannot exceed the RFP’s annual budget cap. For the 2016 NPD, this budget cap was $500,000 and no more than $2,500,000 over a five year period. Similarly any additional costs such as cost of evaluation and indirect cost must be included in this yearly cap.

In order to build an accurate budget all the parameters of the program plan must be identified; and with the help of the research team and others at the IHE, the goal is to project the project’s future potential expenditures. The budget planning process is to most accurately cover all potential expenses as a means to eliminate potential risks to the project. Once a budget is submitted and approved by a funder, it is nearly impossible to have it changed. This is the most difficult part of the budgetary process. The following addresses parameters that researchers developing budget might consider.

Staff Personnel

· **Actual Staff on Grant.** How many individuals will be covered on grant funding? This will mean that 100% of staff effort will be grant related. Staff working on a different grants cannot have 100% of their effort on just one grant. Their percentage of effort must be reflected accurately also in the staff budget.

· **Hire of New Staff:** If the new project is considering the hire of new staff for a particular sponsored project, it is highly suggested that the designated PI work with HR staff to determine compensation policies, and of great importance, average salaries for a particular hire. A Project Director hire might require extensive outreach for paid recruitment sites. These costs will be charged to grant generally.
For example, if the project seeks to hire a project director, a PI maybe advised that a project director salary range from $70,000 to 100,000, however, it is up to the discretion of the PI to hire up to $90,000. However, these salary figures cause the budget to exceed its cap.

Salaries of outside personnel added to a potential grant may often require returning to the management plan to redefine the project roles. It may also require elimination of potential new hires such as graduate assistantships, student workers, or staff. Conversations with the department as to what type of support can be provided from existing staff, with an effort share from the new grant, may be the appropriate solution. Effort shares can be as little as 10% but are generally 50%.

Oftentimes, it may be required to return to the original guiding questions to gain clarity of staff roles and budget.

- **Annual merit.** Merit is always added in and is reflected in the following year’s based pay. For example, the project seeks to hire a Project Coordinator earning $40,000 has the potential of earning up to 4% merit per research administration budget guidelines. For example: Year 1 Base Pay = $40,000 and Year 2 Base Pay plus potential merit pay = $41,600. Please note you must budget for the potential merit not the generally expected or given merit in any one department.

- **Employee Related Expenses (ERE).** ERE will vary depending upon the employee’s classification. These numbers are reported usually on the research administration website under budget proposal development. Faculty generally have lowered ERE percentages than university staff. Hourly employees will have the same ERE generally as salaried staff. Student workers always have the lowest percentage.

*Other Budgetary Considerations*

The research team, when planning the budget should consider any cost related to data collection such as research instruments, hire of special consultants to provide specialized training for the professional development program, any specific type of technology for participants to be used for participation in the program and not returned, any type of specialized materials needed for instruction, requirements to attend national conferences to report on research findings as well as annual meetings that are required by the funder. Often times, other budgetary considerations are based on the number of participants planned per cohort.
Materials: For the 2016 NPD grant, the grant identified several instruments that would require purchase as well as training to be able to use the instrumentation. Cost is $85 per person. Initial training is $800 per person plus travel out of state.

Technology: For the 2016 NPD grant, participants would receive a Dell notebook at a cost of $650 per participant.

Consultant Services. A consultant would be hired to provide training on School Reform Initiative for $200 per person as part of their practicum experience.

Indirect Costs are those cost passed through to the university from the grant and are utilized by the university to support the sponsored project. For professional development projects, indirect costs are generally pre-established with the funder. For example, in writing the 2016 NPD grant, the research team had to determine the exact indirect cost percentage agreed upon with the university and U.S. Department of Human Services. The indirect cost is based on the proposal’s modified budget. There are established guidelines as to what is excluded for a modified budget and is suggested to refer back to the university’s sponsored project website on proposal budget development. In the case of the 2016 NPD grant, tuition payments to cohort participants are included in the budget which are reduced from the overall budget for determining the modified budget

Indirect Cost. These cost are based on the modified budget. For example, for a professional development program, it is determined that the entire budget for Year 1 is $489,000. However, this budget includes the cost of tuition support/grant scholarship for year 1 which is $289,000. The modified budget for Year 1 is now $200,000 and the indirect cost percentage would be applied for this grant.

For continued illustration purposes, the indirect cost in this example just happens to equal $10,000. Therefore for Year 1 the total budget is $489,000 program budget plus $10,000 in indirect cost for a total of $499,000 as the Year 1 Program Budget. The year 1 budget would be allowed as it did no exceed the funder’s original yearly cap. If it exceeded, the researchers would have to determine which costs could be eliminated.
Planning for successful project requires considerable time and effort by the research team to insure that the program model, management plan and budget are working cohesively to fully support the project’s efforts for its duration.

ASU Research. https://researchadmin.asu.edu/


Did it Work?: Key Considerations in Developing an Evaluation Plan (Teachers of Language Learning Learning Community – TL³C)

Evaluating grant-funded initiatives centered on teacher or student learning is a complex task. Grant awardees often employ educational action research plans (Carr & Kemmis, 1986; Corey, 1953; Elliot, 1991; Noffke, 1997) that aim to enact some kind of educational change, require collaboration between higher education teachers and researchers and K-12 classroom teachers and administrators; and utilize mixed methods of data collection and analysis. While quantitative measures are often necessary to fulfill grant requirements and compete for future funding, qualitative measures offer the opportunity to better understand not only the outcomes, but also the processes of teaching and learning embodied in a grant.

Using the TL3C NPD Grant as an example, in this session, we will discuss ways to balance data collection and analysis across methods (qualitative and quantitative) and across resources (time, money and personnel), so that through ongoing and summative analysis, grant awardees will be better prepared to answer the question, “Did it work?” but equally as important, prepared to answer the question, “How did we get here?”

Setting the Stage: Defining what you are looking for

TL3C NPD Grant Example: Participants Served, Participant Completers, and Participant Certified Completers

One of the most challenging aspects of grant design, data collection and data analysis is creating a shared language that bridges the requirements of the grant (GPRA targets) with the lingo that is used in your institution/project. With the TL3C grant, it was clear the language used to describe participants in our original grant narrative did not align with the language (terms) the government wanted us to use for reporting purposes. In order to come up with shared terms with clear definitions, we had to go back to our project and using the terms required for reporting,
define what these terms would mean for each of our three populations (pre-service teacher, in-service teacher and paraprofessionals) participating in grant activities:

- What does it mean to be serviced by the grant?
- What does it mean to be a grant completer?
- What does it mean to be a grant certified completer?

The table below offers one set of definitions for these terms, for our pre-service teachers.

<table>
<thead>
<tr>
<th>GPRA Term</th>
<th>Definition</th>
<th>Period of Time</th>
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<tbody>
<tr>
<td>PST Serviced</td>
<td>Number of PST that committed to participating in grant activities (take/pass specific courses, complete X of service learning hours and attend a TL3C event)</td>
<td>Per Semester</td>
</tr>
<tr>
<td>PST Completers</td>
<td>Number of PST that meet all participation requirements (take/pass specific courses, complete X of service learning hours and attend a TL3C event)</td>
<td>Per Semester</td>
</tr>
<tr>
<td>PST Certified Completers</td>
<td>Number of PST that completed the course of study for the grant certification requirement (took students between 2-3 years to complete all course requirements for certification)</td>
<td>Per reporting year (starting in Y2)</td>
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Once we knew we could define these terms based on our grant goals (which our project officer clarified for us during the Year 3 meeting), using the terms and gathering data to assess these targets no longer seemed like something we had to figure out (in addition!) to our project goals, but rather, that as we were assessing our project goals, we could report out on the required GPRA targets.
Assessing As You Go: Qualitative and Quantitative

TL3C NPD Grant Example: Preservice Teachers Numbers and Narratives

One of the TL3C objectives is that 80% of PST serviced will complete the semester requirements for grant participation and the requirements for competition are threefold: students must pass their course, they must complete a certain number of service learning hours in schools and must attend at least one TL3C Grant event. After year one, we reported a startlingly low number of PST completers. When you look at numbers alone, it reads as though we totally failed at reaching our goal. Yet, when we started to pull the numbers apart - we realized that the problem lied with the service hour requirements. 80% of PST serviced passed their courses and attended a TL3C event, yet only 24% of serviced PST clocked the required service learning hours across the semester. Conducting a group interview at a TL3C PST meeting allowed us to determine why this requirement was hard for students to meet. PST reported that it was hard to earn their service learning hours because:

- They were limited to three schools to volunteer at; only one was geographically close to the college campus and many students did not have personal modes of transportation, this added an additional burden of time for student to take public transportation to and from the schools; and
- For PSTs who worked and went to school, completing 150 service learning a semester was next to impossible, our grant expectation was too high!

After the group interview and discovering some of the hurdles PST had with the service learning requirement, the grant objective was modified to require less hours each semester (the time was cut in half from 150 to 75 hours) and to allow for exceptions for school placement, pending a PST’s needs. While the NPD report that year (and in future years of the grant) placed a stronger emphasis on numbers rather than narrative, without taking the time to gather the narrative internally, our grant would have continued to miss the mark of meeting the targeted objective, but more importantly, of meeting our PST’s needs. The opportunities to weave in qualitative data collection methods with quantitatively measurable goals provided the narratives to expand the view of what was happening in the grant at the time.

Using Your Resources Wisely: Funds, time and personnel

TL3C NPD Grant Example: Why, when and how to use an external evaluator

TL3C employed an external evaluator for all five years of the grant, at the same rate of pay for time and services each year. Looking back across work of the external evaluator, we have
learned some lessons as to how we would recommend future grants make best use of this role. These include:

- Utilize the external evaluator more so in the first and last year of the grant. The first year the external evaluator should be essential to ensuring targets are measurable and tools for measuring targets are accurately chosen and used. The last year the external evaluator can also play a larger role since it is in the final year that the cumulative report is written, combining outcomes from all five years.

- During the middle years of the grant (for us it was years 2-4) the external evaluator should be used more sparingly, meeting with the grant team three to four times a year to check data collection and at the end of each year to second level data analysis.

- Protect the role of ‘external’ evaluator by not included the evaluator in regularly scheduled meetings with the core grant research team. We learned that when involved on a biweekly basis with meetings and grant projects, our external evaluator had a hard time playing the role of the outsider. It became difficult for her to recognize concerns and to be critical of aspects of data collection and analysis when she had developed an intimate relationship with the grant and grant personnel.

An external evaluator can be helpful when designing objectives and data collection, data analysis methods. But in order to allow them to play the role of an outsider raising critical questions, grant directors should take the necessary steps to plan out when and how the external evaluator will be involved with the grant activities.

References:
“First Writing Since” is a poem written by Suheir Hammad, a twenty first century Palestinian American poet, author and political feminist activist. She wrote the poem as a reaction to the attacks on the United States on the morning of Tuesday, September 11, 2001. Hammad e-mailed the poem to 50 friends. The poem took a life of its own and it was sent to 50,000 people. The poem became one of Hammad’s most famous and often anthologized poems. The main reason behind the poem's success, perhaps, is that it offered an outlet for people who were affected by the 9/11 tragedy. However, the poem also has qualities that appealed to people’s sensibilities and emotions and make it capable of evoking feelings of empathy, through various techniques and approaches, so much so that people not only read it but also contributed in spreading it all over the U.S.

What is empathy? What does it exactly mean?

Empathy is “the capacity to understand and respond to the unique affective experiences of another person” (Lamm 42). It’s “an other-oriented emotional response consistent with the perceived welfare of another.” So “if the other is oppressed or in need, empathic feelings include sympathy, compassion, tenderness, and the like” (Batson et al. 1656). It’s often confused with sympathy and the main difference between the two is that sympathy, unlike empathy, does not involve a shared perspective or shared emotions,
However, in order for empathetic feelings to be experienced by readers or audience, an overlap needs to occur between the audience and the character of the text or the speaker whose voice is expressed in the poem. In other words, there is a need to experience “a sense of similarity between the feelings one experiences and those expressed by others” (Lamm, Batson and Decety 42).

The fact that the poem is inspired and based on a real event, and such a well-known tragic event to be specific, helps in eliminating any sense of skepticism that might cause readers to distance themselves from the emotional impact of the poem and regard its details as fictional or imagined. Moreover, Hammad herself has been closely touched by the tragedy. She lives in New York and has experienced the whole event first hand as the details of the poem tells us. (Researchers) Batson et al. have found through their experiences that less empathy is reported, when participants are aware that the person they empathize with is fictional (1666). The authenticity of the experience described in the poem, therefore, predisposes readers and audience towards belief and empathy. It also encourages them to put themselves in the speaker's place (the poet) and share her feelings because all those details that she mentions in the poem are true.

“First Writing Since” uses several techniques to engage its readers emotionally and evoke empathy in them. It consists of seven sections, each of which includes two or more stanzas written in “deliberately loose, apparently improvised from of free verse.” The result is that the poem reads like “a confessional or a series of diary entries outlining the impact of the terrorist attacks on herself, her family, and the various, unnamed people she meets or imagines on the streets of New York City” (Gray 482). Hammad’s use of loose and seemingly improvised form of free verse makes readers feel that this is a spontaneous outpouring of
emotions and this, in its turn, encourages them to be open to its effect and sensitive to feelings of empathy that such confessions can arouse.

There are various techniques that can be used to evoke empathy in its audience & usually different techniques would elicit different types of empathy, such as perspective taking (cognitive empathy), memory-based empathy and emotional contagion or what is sometimes called empathic mimicry. Perspective taking entails “imagining how that person is affected by his or her plight” (Batson et al. 1656). Memory-based empathy entails remembering, rather than imagining, feelings and situations similar to those experienced by others. Emotional contagion is “the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, movements with those of another person and consequently, to converge emotionally” (Hartfield, Cacioppo and Rapson 81). In the poem, we would notice that Perspective taking and memory-based are the types of empathy that Hammad employs most frequently. I’m going to focus mostly on the first three sections.

A noticeable approach that Hammad employs in her poem, which helps in involving the audience in perspective-taking, is the use of a first person narration, an empathetic narrative technique that “best promotes character identification and readers’ empathy” (Keen 219). It is evident through the use of the first-person singular pronoun “I” (all through the poem) and also plural first-person pronoun “we” (see sections 3, 5). The whole poem is presented through the eyes and feelings of its speaker, thus maximizing the opportunity for the audience to imagine or relive (in the case of those who were touched by this particular tragedy or a similar one) the speaker’s pain and experience.

-Let’s check the poem again and for time’s sake, I’m focusing here mainly on the first 3 sections.
The first instance in which we, as readers, can be drawn into perspective-taking empathy is when reading the opening lines of the poem, in which Hammad questions the possibility to write about such a traumatic event, “there have been no words, i have not written one word,” she confesses. Like so many shocked people during that event, she is wordless. Moreover, such inability to express feelings or thoughts reminds readers through memory-based empathy technique of situations and traumatic events in which they felt similarly and were too stunned to put their feelings into words.

Through perspective taking and perhaps also memory-based empathy, readers can empathize with Hammad as she tells us “i feared for my sister’s life in a way never before” (section 1). We can remember moments in life when we were seized with fear for our loved ones because of an imminent tragedy or a situation in which they were in danger. However, even if we have never experienced such a moment, we can surely imagine how it feels to be so afraid for a loved one. Hammad, in fact, repeats this when she prays, “please, don’t let it be anyone who looks like my brothers” (section 1). In doing so, she expresses her fears for her sister and brothers’ sake and also engages the readers even more deeply to feel her plight and empathize with her. However, it goes beyond that for she prays for “anyone who looks like [her] brothers” and later on in section 6, we realize what her brothers look like: “their faces are of the archetypal arab man, all eyelashes and nose and beautiful color and stubborn hair.” By describing them, Hammad is initially encouraging readers to empathize not only with her brothers but also with anyone who looks like them. The effect is to enlarge the sphere of empathy to include Arabs and people from different ethnicities whose looks are similar to those of her brothers and different from that of the archetypal white American. In fact, Hammad makes this point clear as she writes, “most americans do not know the difference between indians, afghanis, syrians, muslims, Sikhs, hindus, more than ever, there
is no difference”(section 1). In pointing out Americans’ inability to differentiate among these different ethnicities, Hammad is also pointing to the danger that such an inability can create and at the same time she is eliciting empathy for these groups who can be easily mistaken for each other.

Another approach that Hammad employs to elicit empathy is by providing details about “the dead who are called lost” (section 3). And so she tells us about “iris, mother of three,” “priti, last seen on the 103rd floor. she was talking to her husband on the phone and the line went,” “george, also known as adel. his family is waiting for him with his favorite meal.” By providing those details about the “lost,” Hammad leads readers into imagining the feelings of the families of the “lost” or recalling similar feelings when they lost their loved ones. Readers can imagine, for example, the pain and the loss that Iris’s kids and family must be feeling. They can imagine how painful it must be for Priti’s husband to suddenly lose his wife. Readers can also imagine how worried George’s family must have been as they were waiting for him with “his favorite meal.” The details that Hammad provides about the victims make the whole experience more real to readers and also make them realize that those who were lost were people like themselves who have families and loved ones that are traumatized by the loss. It also drives home the fact that none of us is safe and that a tragedy can occur at any moment.

**Other approaches**

There are other approaches evident in the poem that help in stirring people’s emotions, engaging their empathy, and also drawing their attention to the ramifications of such a tragedy. There are many instances in which the poem promotes a more adequate model of human nature and the human condition. For one, it highlights human solidarity, which means “all persons are inherently and profoundly interconnected with others in three
Humans are connected on a practical level, as “no individual is capable of surviving without the help of others.” Additionally, “all humans are also connected with each other ontologically, through sharing a common, universal human nature.” All humans have bodies and brains and these are the basis for “the emotional-psychological-neurological attunement, care and concern for others” (Bracher 106, 109, 114).

This solidarity schema is activated early in the poem as Hammad emphasizes that the 9/11 tragedy involves not just those affected directly by it. Thus, when she tells us, in the first section, that she felt fear for her sister’s life, she concludes, “and then, and now, I fear for the rest of us.” In that way, Hammad manages to enlarge the sphere of empathy to include not only people who are closely related or loved ones, but “the rest of us.” One would assume that “us” refers, first of all, to all Arabs, who bore the burnt of American hostility after 9/11. It might also refer ultimately, to all those who are reading the poem; that is almost any human being and not just Americans.

The situationism schema is promoted when Hammad, through a perspective-taking technique, reflects on why the attackers would attempt such a heinous act. She declares: “I do not know how bad a life has to break in order to kill. /I have never been so hungry that I willed hunger/ I have never been so angry as to want to control a gun over a pen./ not really./ even as a woman, as a Palestinian, as a broken human being./ never this broken” (section 1). Here Hammad is indicating that the attacks must have been driven to a significant degree by the attackers’ circumstances and their pain. She reasons that they must be such broken human beings that it is beyond her comprehension, “even as a woman, as a Palestinian, as a broken human being” to understand what they must have gone through in order to be able to attempt such a crime and to choose “a gun over a pen.” Such passages help
readers to see how human behavior is affected by conditions outside of themselves and that’s what Hammad is trying to establish through this.

To conclude, the poem “First writing since” can be seen as an example of literature’s ability to evoke empathy in its audience. I have analyzed merely few parts to show that. However, I might venture saying that the poem’s success and the fact that it has received much attention and was widely circulated indicate that it actually appealed to people’s sensibilities and evoked their empathy in various ways.

Appendix

first writing since

1. there have been no words.
i have not written one word.
no poetry in the ashes south of canal street.
no prose in the refrigerated trucks driving debris and dna.
not one word.

today is a week, and seven is of heavens, gods, science.
evident out my kitchen window is an abstract reality.
sky where once was steel.
smoke where once was flesh.

fire in the city air and i feared for my sister's life in a way never before. and then, and now, i fear for the rest of us.

first, please god, let it be a mistake, the pilot's heart failed, the plane's engine died.
then please god, let it be a nightmare, wake me now.
please god, after the second plane, please, don't let it be anyone who looks like my brothers.

i do not know how bad a life has to break in order to kill.
i have never been so hungry that i willed hunger
i have never been so angry as to want to control a gun over a pen. not really.
even as a woman, as a palestinian, as a broken human being.
never this broken.
more than ever, i believe there is no difference.
the most privileged nation, most americans do not know the difference
between indians, afghanis, syrians, muslims, sikhs, hindus.
more than ever, there is no difference.

2. thank you korea for kimchi and bibim bob, and corn tea and the
genteel smiles of the wait staff at wonjo the smiles never revealing
the heat of the food or how tired they must be working long midtown
shifts. thank you korea, for the belly craving that brought me into
the city late the night before and diverted my daily train ride into
the world trade center.

there are plenty of thank yous in ny right now. thank you for my
lazy procrastinating late ass. thank you to the germs that had me
call in sick. thank you, my attitude, you had me fired the week
before. thank you for the train that never came, the rude nyer who
stole my cab going downtown. thank you for the sense my mama gave me
to run. thank you for my legs, my eyes, my life.

3. the dead are called lost and their families hold up shaky
printouts in front of us through screens smoked up.

we are looking for iris, mother of three. please call with any
information. we are searching for priti, last seen on the 103rd
floor. she was talking to her husband on the phone and the line
went. please help us find george, also known as adel. his family is
waiting for him with his favorite meal. i am looking for my son, who
was delivering coffee. i am looking for my sister girl, she started
her job on monday.

i am looking for peace. i am looking for mercy. i am looking for
evidence of compassion. any evidence of life. i am looking for
life.

4. ricardo on the radio said in his accent thick as yuca, "i will
feel so much better when the first bombs drop over there. and my
friends feel the same way."

on my block, a woman was crying in a car parked and stranded in hurt.
i offered comfort, extended a hand she did not see before she said,"we"re gonna burn them so bad, i swear, so bad." my hand went to my
head and my head went to the numbers within it of the dead iraqi
children, the dead in nicaragua. the dead in rwanda who had to vie
with fake sport wrestling for america's attention.

yet when people sent emails saying, this was bound to happen, lets
!! not forget u.s. transgressions, for half a second i felt resentful.
hold up with that, cause i live here, these are my friends and fam,
and it could have been me in those buildings, and we're not bad people, do not support america's bullying. can i just have a half second to feel bad?

if i can find through this exhaust people who were left behind to mourn and to resist mass murder, i might be alright.

thank you to the woman who saw me brinking my cool and blinking back tears. she opened her arms before she asked "do you want a hug?" a big white woman, and her embrace was the kind only people with the warmth of flesh can offer. i wasn't about to say no to any comfort. "my brother's in the navy," i said. "and we're arabs". "wow, you got double trouble." word.

5. one more person ask me if i knew the hijackers.
one more motherfucker ask me what navy my brother is in.
one more person assume no arabs or muslims were killed. one more person assume they know me, or that i represent a people.
or that a people represent an evil. or that evil is as simple as a flag and words on a page.

we did not vilify all white men when mcveigh bombed oklahoma. america did not give out his family's addresses or where he went to church. or blame the bible or pat robertson.

and when the networks air footage of palestinians dancing in the street, there is no apology that hungry children are bribed with sweets that turn their teeth brown. that correspondents edit images. that archives are there to facilitate lazy and inaccurate journalism.

and when we talk about holy books and hooded men and death, why do we never mention the kkk?

if there are any people on earth who understand how new york is feeling right now, they are in the west bank and the gaza strip.

6. today it is ten days. last night bush waged war on a man once openly funded by the cia. i do not know who is responsible. read too many books, know too many people to believe what i am told. i don't give a fuck about bin laden. his vision of the world does not include me or those i love. and petitions have been going around for years trying to get the u.s. sponsored taliban out of power. shit is complicated, and i don't know what to think.

but i know for sure who will pay.
in the world, it will be women, mostly colored and poor. women will have to bury children, and support themselves through grief. "either you are with us, or with the terrorists" - meaning keep your people under control and your resistance censored. meaning we got the loot and the nukes.

in america, it will be those amongst us who refuse blanket attacks on the shivering. those of us who work toward social justice, in support of civil liberties, in opposition to hateful foreign policies.

i have never felt less american and more new yorker, particularly brooklyn, than these past days. the stars and stripes on all these cars and apartment windows represent the dead as citizens first, not family members, not lovers.

i feel like my skin is real thin, and that my eyes are only going to get darker. the future holds little light.

my baby brother is a man now, and on alert, and praying five times a day that the orders he will take in a few days time are righteous and will not weigh his soul down from the afterlife he deserves.

both my brothers - my heart stops when i try to pray - not a beat to disturb my fear. one a rock god, the other a sergeant, and both palestinian, practicing muslim, gentle men. both born in brooklyn and their faces are of the archetypal arab man, all eyelashes and nose and beautiful color and stubborn hair.

what will their lives be like now?

over there is over here.

7. all day, across the river, the smell of burning rubber and limbs floats through. the sirens have stopped now. the advertisers are back on the air. the rescue workers are traumatized. the skyline is brought back to human size. no longer taunting the gods with its height.

i have not cried at all while writing this. i cried when i saw those buildings collapse on themselves like a broken heart. i have never owned pain that needs to spread like that. and i cry daily that my brothers return to our mother safe and whole.

there is no poetry in this. there are causes and effects. there are symbols and ideologies. mad conspiracy here, and information we will never know. there is death here, and there are promises of more.
there is life here. anyone reading this is breathing, maybe hurting, but breathing for sure. and if there is any light to come, it will shine from the eyes of those who look for peace and justice after the rubble and rhetoric are cleared and the phoenix has risen.

affirm life.

affirm life.

we got to carry each other now.
you are either with life, or against it.

affirm life.
Consulted Works


1. Introduction

The university students in various areas in Japan appear to show great diversity in English language proficiency. However, so-called test preparation courses for TOEIC®/TOEFL® seem to attract the most enthusiastic students toward learning to improve their English language ability.

One of the main reasons for this enthusiasm would be highly anticipated that the students are looking for the better job opportunities upon graduation from the university, as it is now considered by the companies in general that holding high test scores would be one of the convincing criteria for the job placement. However, there seems to be many students who are taking these courses for various different reasons, for instance, rebuilding their basis for their English proficiency including reviewing English Grammar supposed to have learned in their previous academic studies before entering the university, acquiring speed reading skills fully utilizing skimming and scanning and developing more effective ways for making effective presentations in English.

In addition to the reasons discussed above, particularly in the courses the author taught in the last semester of this academic year, there were considerably a lot of students who would like to learn even more comprehensible English skills such as reading the English newspapers, watching English TV news, and movies. I came to notice these students’ motivations and needs after I distributed and analyzed the answers for questionnaire on the reasons of their taking my courses.

Considering above realistic situation, the author was trying to effectively introduce making use of the Media English in TOEIC®/TOEFL® preparation courses.

2. Research question:

“Will the students’ listening scores in TOEIC®/TOEFL® be improved by introducing Media English through presentations into the classes?”
In order to making a survey on the above indicated research target, TOEIC®/TOEFL® preparation class was selected (n=36). The study itself was considered to be a form of practical research, since there was no intention of providing a control group. Taking the recent theoretical development of the second language acquisition, there was found to be acceptable research format, as the necessity of treating students fairly and equally had to be fully taken into consideration.

3. The relations of TOEIC®/TOEFL® preparation courses with the current English curriculum

IEC (International Education Center) at Tokai University offers the required English courses on the two skills combined basis for every student as follows:

- 1st and 2nd semesters students:
  - English Listening & Speaking 1 (2 credit)
  - English Reading &Writing 1 (2 credit)

- 3rd and 4th semesters students:
  - English Listening & Speaking 2 (2 credit)
  - English Reading &Writing 2 (2 credit)

Since these above indicated courses are mandatory for every Tokai University student, they are carefully and thoroughly designed so as to meet the students' needs in terms of the following three criteria: class streaming utilizing the placement test, unified final examination at the end of the semester, and the unified evaluation standards.

In addition to these required courses, there are a variety of elective English courses categorized in seven fields. Here are some examples:

- Basic English:
  - Basic English Grammar, Basics in English

- English Conversation
  - Introduction to English Conversation, Intermediate English Conversation

- English Interpretation:
Introduction to English Interpretation, Intermediate English Interpretation

• Preparation for English Certification:
  - Beginning TOEIC®, Introduction to TOEIC®, TOEIC® Intermediate
  - Beginning TOEFL®, Introduction to TOEFL®, TOEFL® Intermediate
  - STEP 2nd grade, STEP semi-1st grade
  - Tokai University English Certificate 1st grade

• Understanding American /European cultures:
  - Intercultural Communication, Sociolinguistics

• Media and Literature:
  - Media & Literature, Introduction to American and British Literature

• Others:
  - English Special Seminar

As the author stated earlier in this paper, of all the English elective courses introduced above, TOEIC®/TOEFL® preparation courses have attracted many highly motivating students especially over the last decade.

4. The different students’ motivations for taking TOEIC®/TOEFL® courses

The author gave out anonymous questionnaire at the beginning of the semester asking “Why have you decided to take these TOEIC®/TOEFL® preparation courses?”

The results from the previous semester were indicated as follows:

• By raising my TOEIC scores, I would like to have better job opportunity.

• I successfully completed the required English courses, now I would like to skill up my total English language proficiency by taking more English courses aiming at the TOEIC®/TOEFL® preparation.

• Because I completed taking mandatory four English courses, I would now like to keep up with my English proficiency.
Besides actively using TOEIC®/TOEFL® self-study materials at English Navigation self-study room, I would like to prepare for the real test situation by adding as course works. By this way, I can take additional credits for my graduation from the university and prepare for TOEIC®/TOEFL® simultaneously. I got a valuable advice from my friend who previously took these courses saying that studying the test preparation strategies as a course work is definitely the most beneficial way to raise test score. My friend improved the TOEIC® score approximately 200 over one semester by going through this way.

Above indicated reasons are understandably very common attitudes and motivations among the TOEIC®/TOEFL® preparation courses students. However, the author would say that below indicated reactions fairly reflect other true reasons for TOEIC®/TOEFL® preparation courses.

Since in high school days, I was too busy involved in the club activity as a school baseball team captain, so I didn’t study hard and before entering university, I am sorry to say but my basics of English is not strong enough including basic vocabulary, grammar, and so on, I’m afraid. As a consequence, I would now like to rebuild my English skills. However, rather than studying English Grammar and vocabulary by myself monotonously, I would like to study more active and stimulating way so that I can work toward the improvement of my English language proficiency and at the same time improve my TOEIC®/TOEFL® scores.

In addition to my effort to improve my TOEIC®/TOEFL® scores, I would like to enjoy stimulating daily and academic conversation with other Japanese and foreign students whose native languages are English. Through these practices, I think my motivation for studying English would be strengthened. In the required English classes, luckily, my class had several foreign students. By working for the research project with them, I learned a lot not only English language proficiency but also the intercultural communication skills and avoiding ethnocentrism.

I would like to be able to make three to five minutes presentations in English. When I was in high school, my English teacher gave us the task to make English presentations in front of the class. However, at that time, my teacher let us take a look at memos while making a presentation. I didn’t feel anything strange at the time of the presentation because everybody was doing the same way. But, if I recollect now, while
making presentations, it would be better not to take a look at or read the memos, but look at the audience by conscious eye contacts in order to make more persuasive speech. Therefore, this time, although I need to prepare a manuscript carefully, I would like to try to make good presentations without memos.

Besides studying for TOEIC®/TOEFL® on the designated textbook, I would like to study with even more authentic materials such as the English newspapers and English movies. I would like to learn English that can be used in everyday lives.

5. Possibility and feasibility of introduction of Four-skills integrated teaching method into TOEIC®/TOEFL® classes through Media English

Recently, the number of curriculum using four skills integrated method has been increasing. (Brown, 2007). Also, the importance of collaborative learning based on the students-centered or interaction-centered fosters the inter-reliability between the teachers and the students, and between students, and also reduces the various anxieties related to language learning. (Crandall, 1999, Brown, 2007). The author was trying to build up the course syllabus assuming the above underlying concepts.

5-1 pair-works
At the first day of introducing English presentation, the author introduced the following ice-breaking activity which encourages every participating students to get to know each other well. Every student in the class stands up and walks in the class so that they need to find the designated person and ask each other questions. Every student devotedly participated in this activity and responded positively.

Then, on the basis of the newspaper articles they selected of their own interests, they introduced the content each other together with their comments as pair works.

5-2 triple-works
After they realized the importance and pleasure of making conversation and exchanging ideas in English, the triple-works, which had one presenter plus two audiences they rotated, were introduced, since it is naturally considered that the presentation itself is designed to have more than one audience.

After they were acquainted with the discourse markers, which are, needless to say, crucial knowledge for TOEIC®/TOEFL® preparation and the presentation framework, and three components of the presentation, the introduction, the body, the conclusion,
they prepared a manuscript for the presentation on the newspaper articles they selected.

By going through this whole process, the students comprehensively experienced four skills of learning the foreign languages, listening, reading, speaking and writing. Also, they seemed to learn English comfortably and with confidence as the university students studying on the authentic English materials.

Some of the students’ comments are introduced below.

• Since I had never done the presentation in English, I had no confidence at all. However, after I learned the presentation framework and the discourse markers, and repeatedly kept practicing my presentation in class, on campus with other students, and at home with my family members, I came to realize how enjoyable it was to making presentations.

• Because I learned the presentation framework little by little, I was able to digest what I learned in class, so that I became confident as a consequence.

• To be honest, I had almost never read English newspaper before taking this course. So, at first, I had no confidence at all. But, due to the fact that I was able to select the article I got interested in, which was in my case sports section especially on base balls and soccer, I became absorbed in the content.

• I was, at first, surprised to know that the professor introduced the media English which was English newspaper into TOEIC®/TOEFL® preparation courses. But, after completing English presentation on the articles I personally selected according to my own interest, I felt I really improved my English ability, because I was able to understand better on TOEIC®/TOEFL® questions especially in the listening section even when I practiced at home by myself. Above all, in the real world after graduating from university, since I am planning to work in a multi-national corporation, having a plenty of opportunity to use English, I am sure that the content-based presentation experience will give me the enormous confidence.

6. The comparison of pre- and post-test TOEIC®/TOEFL® listening scores:

The author gave students the listening test before introducing and after introduced
the presentation and made a comparison.

The result is encouraging. In 36 students, more than 80 percent of students showed a considerable improvement between the pre-test and post-test in the listening section scores. No students showed a decrease in their scores. Throughout the entire process of introducing English presentation using the English newspaper articles, the author did not introduce so-called the test-taking strategy, for instance, read and check the written questions first before listening to CD, or the other various strategies written on the textbook. Consequently, the author finds that these improvements in terms of the listening test scores might be attributed to their positive experience throughout the entire process of presentation activities using English newspapers.

7. Conclusion and the implication for the future research

As discussed above, the author is firmly convinced that by introducing the alternative way to TOEIC®/TOEFL® courses, the students’ anxiety and affective filter towards speaking English appear to be a lot reduced. As a result of experience these process, what is called, confidence-building process, students’ listening scores in TOEIC®/TOEFL® showed a varying levels of progress. Therefore, the author might be able to say that it may be a positive small change to offer multi-skilled integrated approach in TOEIC®/TOEFL® preparation courses in the university.

For the future study, the author has a keen and urgent academic interest to make a comparative analysis of the pre-and post-tests of the students listening scores and its relations with their anxiety level changes.

In this study, the author tried to fully integrate the students’ needs towards learning English language into TOEIC®/TOEFL® preparation courses. If the certified tests preparation courses in the universities are simply instructing and repeating grammar, vocabulary and so-called test taking strategies, the class might not be so stimulating to the students. By actively introducing the small changes into the class activities based on the reflective teaching, we might be able to break the preconceived ideas (Fanselow, 1987). By carefully going through this valuable process, the author believes that these continuous small changes in language teaching can cause big changes in the future English language education in Japan.
Reference:


Hybrid Education: The Development and Validation of the Blended/Hybrid Learning Scale (BHLS)

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ABSTRACT

This paper presents a conceptual and measurement model underlying the development of the Blended/Hybrid Learning Scale (BHLS) assessing student perception of hybrid course environments and instruction. The scale constructs were adapted from previously validated instruments including the Unified Theory of Acceptance and Use of Technology (UTAUT), Teaching and Learning Strategy and Motivation to Learn Scale in Virtual Learning Environments (TLSM-VLE), Computer Mediated Communication (CMC) questionnaire, and the Self-Efficacy scale.

The outcome of this study is the development and validation of a conceptual and measurement model termed the Blended/Hybrid Learning Scale (BHLS). This model can be used in evaluating and improving current blended/hybrid programs for higher educational institutions with both undergraduate and graduate programs.
Malaysian Student’s Perspectives on the use of English as Medium of Instruction

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Abstract: This study explores the perspectives of the Malaysian students in the use of English as medium of instruction in the university level. As Malaysia is aspiring to be the educational hub in the Southeast Asian region, the importance of the use of English language in public universities specifically to undergraduate students has call for an attention in this current study. This qualitative study implements the use of open-ended questionnaire, focus-group discussion, interviews, and data analysis. A total of twenty (20) undergraduate students participated in the study. Findings of the study revealed diverse perspectives of the use of English in the classroom, which include their individual experiences of using English in their daily conversations. The analysis found nine (9) themes, which are the following: In-favor to use English in the classroom, important to use English in the classroom, fear of low academic result, scared to speak English, challenge, lack of confidence, putting oneself in an embarrassing situation, prefer to open a conversation with the locals, rather than to foreigners, and teased by friends. Meanwhile, the respondents expressed their willingness to improve their skill in speaking and understanding the English language.

Keywords: Perspectives, English, Malaysia

Background of the Study

Learning a foreign language proves to be a coveted skill in the field of education, specifically the English language. The use of English is acknowledged worldwide and most universities use it because it is the first language of a particular western country or use as the second language in most non-English speaking counties. To be able to be understood and messages to be expressed efficiently, learning English becomes highly
commendable. In universities where the presence of foreign students is increasing, with the worldwide move of globalization, and to make conversations with other nationals properly relayed, attitude to learn a second language like English is personally duty-bound. The need to learn English however should not have its limits on daily ordinary conversations, but more importantly to the sharing and transferring of knowledge (Greenwood, 2002). Thus, many of the universities today used English as the medium of instruction and communication. Al Sharaeai (2012) said that throughout history several English language-teaching methods have developed. On the other hand, countries which have been colonized by the United States or by the United Kingdom, English become widely used as a second language (L2), and Malaysia is one of the countries in Asia that was once under the colony of the native English speakers (Thirusanku & Melor, 2012 as cited by Darmi & Albion, 2013). Apparently, bilingualism was adopted in the educational system.

Speaking on bilingualism, again it dates back to the presence of foreign colonizers. Initially before the colonization, these countries are using the mother tongue as the medium of instruction in their respective educational system, but with their presence they have imposed the use of English. In Asia, these are Malaysia, India, The Philippines, and Nigeria that have currently bilingual in their educational system as result to colonization (Thirusanku & Melor, 2012). English become the second most important language in Malaysia as it has been integrated in the educational system implemented in the primary school until the university level (Asmah, 1982). In 2005 (Sithamparam & Choon) mentioned that the proficiency in English is an important skill for the Malaysian students to be able to further their studies at local universities, as well as abroad. On
similar note, Gill & Kirkpatrick (2013), emphasized the case of Malaysia to adopt bilingualism in schools was aimed to establish a balance between national and international need and challenges manifested through linguistic educational policies, thus placing English as a second language in the Malaysian educational system.

Historical record shows that prior to the coming of the British colonizers, Malaysia was using the Malay language as the lingua franca for business communication purposes (Fe, Siong, Kim, & Azizah, 2010). The presence of the British was the starting point that English was used as medium of instruction for primary and secondary schools, and even became the lingua franca for daily business communication.

The implementation of the education policy in 1979 stated that English is taught in the school to empower students to use English in everyday situations and also to prepare them for higher education (Foo & Richards, 2004).

With the advanced of globalization and the rapid growth of information there is a great increase in international student exchange. Malaysian government is much concerned about the importance of English language.

The Malaysian government aspirations to achieve a developed nation by 2020, the Higher Educational Institution Act 1996 stated clearly that higher education plays an important role in training people necessary for academic as well as the manpower needed for the nation. English used for acquiring knowledge in higher learning. Malaysia is extensively involved in the global competition in higher education the fact that foreign students are on the rise.

However, historical record shows that there is a decline in the proficiency of English language among Malaysian students, and observed that the use of English in the
The classroom is hesitantly welcome by the local students. With that decline and observation, the current study aims to explore the perspectives of the Malaysian students of the use of English as medium of instruction. Specifically, the study was conducted at Universiti Utara Malaysia.

Research Objectives

The objective of this research was to explore the perspectives of the Malaysian students of the use of English as medium of instruction. As per historical record that there was a decline in the proficiency of English language in the country, the study aimed to investigate the current perspectives of the students.

Methodology

The study used qualitative research design. The findings presented in this study are based on a total of twenty (20) participants, who are all Malaysian undergraduate students of the Universiti Utara Malaysia, from the College of Law, Governmental and International Studies (COLGIS), and from the College of Arts and Sciences (CAS). Firstly, the data collection was in a form of a “focus group discussion”, with open-ended questions, and a follow-up face-to-face and in-depth interview to some of the participants, to further capture the deeper perspectives among the participants. Interviews were semi-structured to allow a certain degree of flexibility for the research to probe and prompt. A non-probability sampling method was applied, specifically purposive sampling. Qualitative research design prefers to apply purposive sampling because the intended participants of the study assured of having the needed information. The
interview was audio-recorded and was transcribed, categorized, and tabulated, and arranged into themes. Descriptive notes added to the data. In qualitative study, data collection and analysis are interrelated. The process is iterative and flexible. It involves several stages. Moreover, an interpretive paradigm was chosen to be able to reveal deep insights into the research problem on the current perspectives of the Malaysian students on the use of English as medium for instruction.

Findings and Analysis of the study

The findings of the study revealed diverse perspectives from the students. There are many of them who are in favor of the use of English in the classroom and feel the importance to improve their English proficiency. In the analysis, there are some participants who have expressed their sentiments towards the use of English, basically from their personal experiences. Findings of the study is organized into themes, namely: *In-favor to use English in the classroom*, *important to use English in the classroom*, *fear of low academic result*, *scared to speak English*, *challenge*, *lack of confidence*, *putting oneself in an embarrassing situation*, *prefer to open a conversation with the locals, rather than to foreigners*, and *teased by friends*.

In this segment, meanings of the themes from the data collected are presented in relation to the research question on what are the perspectives of the Malaysian student’s in the use of English as medium of instruction.

Transcriptions from the interview have found that most of the participants are in-favor of the use of English in the classroom. Participants have realized that English is a
global language and to use it in the classroom is simply a needed training for them to develop their English proficiency.

“Personally, i agree to use English as a medium of instruction. first, English known as international language, therefore using English as a medium ensure the message delivered to all students include local and international students.” (P17).

The importance to use English as a medium of instruction has been expressed as well by some participants. Since the university level is the period for a higher learning, it is but expected that English language is one area of their learning to be improved. One participant disclosed:

“Using English as a medium indirectly improve English communication skills among students. improving English communication skills enable students to communicate with the people all around the world.” (P14).

Scared to speak English. Further probing from participants revealed that speaking English has never been a practiced outside the school. At the outset that they know that the course is to be conducted in English, they are overpowered with fear, that their achievement is affected because the class will be conducted in English. More probing have found out that in as much that most of their classes are in Bahasa Melayu, to be in an English class becomes a burden and scary.

“I am so scared to know that the class is conducted in English. I’m thinking I might fail or will not be able to have high CGPA.” (P2).

“My English is weak, I do not speak proper grammar, so I am not comfortable if class is in English.” (P6).
Nonetheless, there are participants who disclosed that being “challenge” is the initial reaction they have had upon knowing that the class is in English. These participants chose to improve their English proficiency and having to attend in English class is the best possible venue for their improvement.

“I am not afraid instead I take it as a challenge to improve my English proficiency.” (P11).

“I like to learn English even in high school. Even I am not always using it, but I love to use it and to be in an English class is I am happy.” (P1).

Self-timidity is attributable to personality factor. Some participants expressed of their being too shy to speak in English the fact that it has never been a daily language use. They know the language, but their being extremely shy hold them to use the language.

“No, I am not going to speak English. I am not use to it, and I am just so fine using my mother tongue language the bahasa malayu. I know how to speak English, but why do I use it when bahasa melayu is the majority’s language. Easy to communicate and to understand. To foreign students, yes I do speak English to them just a bit, because I am so shy.” (P12).

Many of the participants also disclosed that of having “doubts” in their English usage made them fail to speak the language. This could be a factor of having “less confidence” as well. This theme was probed and according to their narratives it is basically for the fact that even then English is second important language in Malaysia, but it is not widely spoken. Additionally, these participants revealed that to initiate conversation with foreign nationals in order for them to use English, but they also not the type of making a first move to communicate with foreigners.
“Because I am doubtful of my language, I will not initiate a conversation with foreign nationals. If there is a circumstance, then I will answer them in English, but do I initiate. I am seriously having doubts of my English proficiency.”

“I accept that I have less confidence in speaking English, Im not used to it, I don’t speak it regularly even in the school, thus I know I have less confidence to use it, but then I understand the language.”

Whilst having through an embarrassing experience, is one cause of not speaking English anymore. Recalling a particular incident when the participant was put in an embarrassing situation, made him stop speaking English at all, which make him eventually forget the proper use of the language. He disclosed that a group of his friends laughed at him when he spoke English with an incorrect sentence. Worried for a similar situation may be repeated, the participant revealed he won’t be speaking English any longer.

“...maybe I could not just take to be laughed at again by friends, thus I avoid to speak English.” (P15).

Indeed, it is more comfortable and easy to use our own vernacular language to our own like. In Malaysia, behasa Melayu is the national language and it is but expected to converse using that language. But since the presence of foreign nationals are obviously increasing in the country and of course the local Malaysians definitely use English to these foreigners, however as they feel not excellently conversant in English, they tend to not initiate a conversation with the foreigners. The usual scenario is that the conversation becomes exclusive among themselves using bahasa melayu. It is not so much expected that the initiative to open a conversation with the foreigners will start from them.
“...I would not usually start a conversation to the foreign students. There are many things that I have in mind. Firstly, it is difficult as to understand their slang, so I assume we would not be able to understand each other because of pronunciation, accent, and intonation. It’s really hard. Thus I tend not to start a conversation with them.”

This is one area that Malaysian students’ proficiency in English decline since most of them would not initiate a conversation with a foreign student.

**Conclusion and Recommendations**

Many studies have conducted about student’s perspectives, factors causes students low in English language learning, and psychological factors on these causes, all points toward that English as a global language should be passionately learned (Khader & Mohammad, 2010). Based from the current study, although these participants have diverse perspectives in the use of English in the classroom, others are in favor and deemed it important to use English, some are challenged, but there are some who scared, they have low self-confidence, in doubt, and some others ceased to speak English due to their embarrassing personal experiences. Nevertheless, majority of the participants expressed their utmost willingness to improve their English proficiency and have realized how important English is when they will be in the working world in the future.

This study recommends a study to be in quantitative design, where a large number of participation from local students to understand profoundly the perspectives of the Malaysian students of the use of English as medium of instruction.
References


Title of Submission: Investigating Attitudes of Upper Primary School Students in Thailand towards Peers with Specific Learning Disability

Topic Area of Submission: Special Education

Presentation Format: Paper Session

Description:

This qualitative study investigated attitudes of upper primary school students towards peers with specific learning disability. Upper primary schools from 3 schools in Thailand were individually interviewed on what they thought about a hypothetical student who had difficulties with reading and writing. Preliminary analysis found that the majority of the students had positive attitudes towards peers with reading and writing difficulties but their understanding of specific learning disability needed to be further improved.

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Investigating Attitudes of Upper Primary School Students in Thailand towards Peers with Specific Learning Disability

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In Thailand, the number of students with specific learning disability in were reported to be approximately 300,000 students (Office of Special Education Administration, 2015). In order to promote social inclusion of students with specific learning disability, it is important to understand the attitudes of regular students towards peers with specific learning disability. Better understanding on the topic will be helpful in developing an effective program for promoting social inclusion of students with specific learning disability.

This qualitative study investigated attitudes of upper primary school students towards peers with specific learning disability. Upper primary school students from 3 schools in Thailand were individually interviewed on what they thought about a hypothetical student who had difficulties with reading and writing. The study employed semi-structured interviews and the interview questions were reviewed by three experts. Approximately half of the male students and female students were interviewed about a hypothetical student with the same gender of the interviewees, while the other half were interviewed about a hypothetical student with a different gender from the interviewees.

Preliminary analysis found little gender differences on the attitudes toward peers with learning disability. The majority of the students had positive attitudes towards peers with reading and writing difficulties but their understanding of specific learning disability needed to be further improved.

Keywords: Attitudes, Specific Learning Disability, Primary School Students
ABSTRACT

Leaders are respondent of the obligation of driving individuals in a dynamic and empowering way. One of the imperative parts of Leadership is team leadership and team building. This paper illustrates a blended strategy pilot training of team building and team administration skills created in students when engaged with virtual and traditional group faction in an MBA and DBA class. The results of this pilot study will provide data on salient learning outcomes and skills needed to incorporate in teaching team leadership and building
INTRODUCTION

The current scenario in the business world has placed great responsibility in the hands of the leaders by calling for the formation of teams composed of generations, cultures, and different nationalities. Also, audacious goals and increasingly short deadlines for the completion of the projects become an immensely complex task to integrate and align human capital needs, more than ever, working synergistically.

In this article, let's meet and analyses the main challenges that the Manager must face and overcome to develop a team, and the concepts and techniques that support leadership when exercised in working groups (Fisher, 1999). But is that managers are trained to act in these situations? Training and team leadership of work passes, inevitably, by turbulent periods filled with uncertainties and conflicts. The resulting disarray makes the Manager, often unprepared to deal with individual variables, have great difficulty in integrating people and developing the maturity of the group. To think of leadership is important to set as an example.

The example can take on different facets, but he has to be there. The instance in the context of communication can be considered as the first form of transmitting a message by "unique and shared" or through non-verbal communication. As a rule, always observe more bad examples than good. So it is important to be aware of it. An important way of leading learning to be an example and review all your career and see if you can identify at least two people were fantastic examples of good and bad leadership. Then, you should raise the examples that all these people have come and analysed the effects caused by these examples in the group or team. Some of the key components of the unique and shared team activity include:

**Assignment:** The primary action to go ahead on the road to show the way is a form of leadership by example. Under what conditions you can "lead" in an advanced position in your field?

**Team:** As a builder and maintainer of the team, you should keep or change group standards - the rules that maintain group cohesion. How can you develop patterns of your team through the power of his/her example?

**Individual:** Think of each team member as a leader of law. Each should be a leader in professional or technical function.

Thus we can see how they give priority to the maintenance of the unit, going against external or internal pressures, sometimes demonstrating ingenuity in the process. Many of the group's rules whether written or not, there to promote this unity and to maintain cohesion at all costs.

Those who saw the boat or infringe group standards may rely on reactions that can range from friendly indulgence to absolute fury. Instinctively, there is a common feeling that United we stand, separated miss that friendly relations, desirable in themselves, are also essential means to the goals of the group. This need to create and promote group cohesion may be called the need to maintain individual. Individuals lead to group their needs, or your individual needs, which include not only the physical needs (such as food) but also the psychological, such as recognition, the feeling of doing something useful, status, etc. (Breaker).
TYPES OF TEAM ACTIVITIES IN LEADERSHIP BUILDING

A generalized form, a team activity process supports a person to add better professional or personal life. So there are several contexts and coaching roles, however (Barry, 1991) stresses that occur important distinctions and at the same time an overlap in the various approaches.

Executive learning

It is the increase of skills identified as keys to professional development. It is possible to say also, according to (Fisher, 1999) which is a personal improvement, since the Executive learns to do a leadership himself. The company generally is favoured with the coaching; that represent a way of organizational transformation through collective and individual alignment with the focus on the desired future. Within the Executive learning activity, according to (Fisher, 1999), it separate application contexts occurs:

• "Performance": Focus on capacity and current demands, seeking a full expression of professional force.
• Skills and Abilities: Focus in the current project or support for a specific situation.
• Development: Focus on responsibilities of future job or career in the future, strengthening skills now to be ready in time to take on new responsibilities to respond to challenges and new opportunities.

Life coaching

This type of coach plays an individual consulting with his client for the purpose of creating customer satisfaction and a sense of accomplishment in life (Zaccaro, Rittman, & Marks, 2002). Points out that a large proportion of people seek Coaching for life at a stage where we are already well underway, however, still want to invest in themselves to take full advantage of their potential, creating in this way. Nowadays represents a worldwide trend in human development to achieve personal and professional success.

Learning steps

According to (Zaccaro, Rittman, & Marks, 2002) the coaching process consists of six steps and has variation from person to person, from task to task, in form and content:

Definition or negotiation of standards, what is expected of the person

You can't expect people to have clearly what the company expects of them in terms of behavior, values and results. People are different and perceive the world differently. Their behaviors are reflections of the internal realities that are formed according to the meaning that they give to the facts that they write. It is up to the Coach to translate the vision, mission and objectives of the Organization on standards understandable and accepted by the developers. According to (Barry, 1991), the first phase of the team activity is formulated in table-1:
PROJECT BASED LEADERSHIP DYNAMICS (Barry, 1991)

<table>
<thead>
<tr>
<th>Team Activities</th>
<th>Leadership Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Getting acquainted</td>
<td>• Social</td>
</tr>
<tr>
<td>• Resource discovery</td>
<td>• Spanning</td>
</tr>
<tr>
<td>• Develop goals &amp; vision</td>
<td>• Envisioning</td>
</tr>
<tr>
<td>• Assess realism of vision</td>
<td>• Organizing &amp; Spanning</td>
</tr>
</tbody>
</table>

OF THE REASON AND THE IMPACT

Knowing your role within the structure, because it must perform certain tasks, and what impact that attitudes and behaviours have in overall results, the developer feels more fresh, confident, secure and part of the team. When applicable, the Coach must demonstrate how to do the task, once images are worth more than words

Coach:

• Observe, exercising positive control the Coach controls to supervise, but not because it has the commitment to ensure that the standard is being met. The control is necessary; out of control you can't measure progress; so you can't know if the path is correct. The developer can participate in deciding how to control wants to be controlled in this way won't be monitored or "charged".

• Guide with feedback- it is impossible to give consistent feedback without going through the previous step. Without notice and control, such as whether the developer is developing and playing your role? There is no feedback upon "guesses". The feedback should be specific, given in a positive way, without trial. Must be authentic and focus on the future and on the results. Constant recognition is essential to maintain the motivation of employees.

• Be open to suggestions for change-As the conditions change constantly, the developer can create a better way (to himself) to perform the task. The Coach must learn to listen and be open to what the developer guarantees your motivation to perform a task the way you think best. Most of the time, this also leads to better results.

To move forward on this very important subject, let's first understand the distinction between the terms "group" and "team". The group is different. The Group has sometimes divergent objectives, where every one cares about its own target. The team, in contrast, works for a higher cause: a collective project. The team recognizes individual contributions and vibrates with the total result (Melita Prati, 2003)

It is clear, therefore, that lead a team means to promote both the maturity of its members as the power relations between them. In this sense, the leader will need to face and overcome two fundamental challenges that are part of the development process of the working groups:
1. Empower the team members to take on self-management.

2. Ensure that the group evolves from conflict to synergy.

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**LEARNING OUTCOMES AND SKILLS NEEDED TO INCORPORATE IN TEACHING TEAM LEADERSHIP AND BUILDING**

**Outcome 1: empower the led to take the self-management**

You **never, ever** have a team empowered and directed learning unless the Manager is willing to share the control. (Melita Prati, 2003) Would you have thought to see a coach going into the field to do the work of your team? The mentality – so common among some manager’s profiles – "Let me do it" is thus highly pernicious to the construction of self-managed teams. In fact, the more the leader assumes the responsibilities due to led, less responsible they are. As responsibility and power form an inseparable activity, in requiring the first leader's duty to provide the second. An empowered team is faster without losing its effectiveness. It is an assertive decision in most cases, the opinion and approval of the leader, but how to build a team like that?

![Figure-1: Influence of leader performance functions on team effective processes Source: (Zaccaro, Rittman, & Marks, 2002)](image)

The empowerment and self-management in a team do not occur as a result of an isolated act. They are the consequences of continued efforts of the leader in the lead your group through four stages of development – common to virtually all working groups – as model proposed by (Barry, 1991). Let's see what they are.
The 4 stages of group development

1. **Guidance**: in this stage, the Group has high expectations but is dependent on the leader, needing guidance on goals, methods of work and the role of each Member. In this situation, the leader should use "Board style" because the Group's morale is high and the power is low.

2. **Dissatisfaction**: in this stage, the group feels a discrepancy between the high expectations and the harsh reality. To realize the goals are difficult to be reached, the led they feel unhappy about the authority. In this situation, the leader should use "training style" because the Group's morale is low and the competence is medium-low.

3. **Resolution**: in this stage, the group feels a decreasing dissatisfaction. Reduce the discrepancies between expectations and reality and develop harmony, trust, support and mutual respect. The members practice greater openness and more feedback. Take responsibility and share control. Use a language group ("we" instead of "I"). In this situation, the leader should use the "style" because the Group's morale is medium and the medium-high.

4. **Production**: in this stage, people feel excited by participating in team activities. Demonstrate great confidence to accomplish tasks. Share the leadership. Have a positive feeling about the success in the execution of tasks. Have a high level of performance. In this situation, the leader should use "delegation style" because the Group's morale is high and the competence is high.

As we have seen, it is necessary to adjust the style of leadership to the development of the group because of the two variables, morals and competence vary according to the stage in question. Notice also that the Group presents a growth in power and responsibility as it grows its maturity level.

**OUTCOME 2: ENSURE THE GROUP EVOLVES FROM CONFLICT TO SYNERGY**

According to (Melita Prati, 2003), the conflict arises when there is a disagreement resulting from information and different personal preferences "while synergy is when" the result of the group is better than individual results " . We realize, therefore, that synergy is the real *modus operandi* of a team as it provides results that cannot be achieved individually, but as foster synergy in a team?

From experiments with cooperative games, (Zaccaro, Rittman, & Marks, 2002) lists some factors that facilitate the performance of the working groups. They are clarity of objectives; solidarity; trust and mutual respect; open communication; cooperation; "stop to think"; creativity; leadership of all; patience. From the factors listed and personal experience in leading groups, we captured eight practical concepts that the leader should observe to lead the Group of conflict to synergy.
THE 8 CONCEPTS (8CS) TO PROMOTE SYNERGY IN TEAMS:

- C1. Consciousness
- C2. Communication
- C3. Cooperation
- C4. Coordination
- C5. Convergence
- C6. Conviction
- C7. Companionship
- C8. Creativity

Come on now, get to know each of these concepts and how the leader must act to develop them.

➢ C1. Consciousness

Consciousness is the concept that integrates the perception and identification of the individual with the three most important elements of organizational identity: Mission, vision, and values. What is the importance of consciousness to the synergy of the Group? People work with more enthusiasm when they understand that their individual tasks and the work of his staff contribute to a higher purpose. Without awareness of the mission, vision, and organizational values, all routine work seems disjointed and meaningless, causing distress and dissatisfaction that threaten the integrity of the group.

As the leader must act to develop awareness in the Group? Reinforce constantly the relationship between tasks, and its meaning in the larger context of the Mission of the Organization, its vision and the values that are being communicated to the society. Resolve any conflicts by calling the attention of those involved with the actual purpose of the work.

➢ C2. Communication

Communication is the concept that expresses the ability of the team to deal with the information relevant to the implementation of the methods and goals. What is the importance of communication for the synergy of the Group? It is through communication that occurs in the dialogue which means "stream of meaning". To facilitate communication, we are giving way to the organizational identity (mission, vision, and values) and its significance reinforced and relevant information about the working methods to be shared.

As the leader must act to develop the communication within the Group? Be an example of efficiency in communication, both when talking about the hearing. Be effective upon receiving and giving feedback to subordinates. Encourage transparency and open communication among the group.

➢ C3. Cooperation

Cooperation is the concept that expresses the power to "operate together" (co-operate). What is the importance of cooperation to the synergy of the Group? The following phrase can express the sense of cooperation: If your operation makes it easy to me and facilitates its operation, so we're cooperating. A team that cooperates, works faster generates fewer costs and gets better results. Its opposite, the competition, discourages the search for alternatives of type win/win.
When this occurs, in the long term we will have unproductive behaviors generating unnecessary costs for all involved.

As the leader must act to develop cooperation in the Group? Practicing meritocracy valuing individual competence but, especially when this is placed at the service of the integrity of the team. Apply the aphorism "the more evolved the initiative of conciliation." educating their subordinates to seek, as soon as possible, alternatives of type win/win.

- **C4. Coordination**

  Coordination is the concept that expresses the shared use of power and responsibility. It is the right and duty of all team members for the order set (coordinating). What is the importance of Coordination to the synergy of the Group? When the power and responsibility are centred on the leader or even a member of the group, the other members tend to take an immature and dependent behavior. The concept of Coordination fosters the maturity and takes the group to self-management by promoting discipline necessary for the efficient execution of tasks.

As the leader must act to develop the coordination group? Through education and training and to stimulate the maturity of the led to performing their duties better. Allow active participation in decision making to the led that demonstrate competence. Maybe among the eight concepts, it is the most difficult to apply because they require the leader to control and decentralization of power.

- **C5. Convergence**

  Convergence is the concept that expresses the interdependence among the goals in the various cells and levels of the organization.

  What is the importance of the convergence of the synergy of the Group? Since the achievement of individual goals contribute to the achievement of the goals of the team, and the achievement of the goals of the team contribute to the achievement of organizational goals, all members must have science on particular objectives and act aimed at the success of the group. Conflicts and disagreements, when to arise, must be quickly administered by own staff so that both individual results as not compromised collectives.

  As the leader must act to develop convergence on the Group? Clarify, preferably in writing, the individual and collective goals. Clarify the interdependence between the objectives of each. According to the maturity of the Group and the context, individual goals may be negotiated in such a way that, in the end, the collective goal is doable and challenging.

- **C6. Conviction**

  Conviction is the concept that expresses the subjective value credit deposited between team members.

  What is the importance of confidence to the synergy of the Group? Is the confidence that gives support to the flow of meaning (dialogue) that is essential to the proper functioning of the group? Without it, the communication becomes shallow, concealed and, consequently, the "spirit of teamwork" is weakened.

  As the leader must act to develop confidence in the Group, it must externalize the organizational values by example and stimulate this same behavior in your team.
Ø C7. Companionship

The Companionship is the concept that expresses the behavior and zeal among team members.

What is the importance of companionship to the synergy of the team? Unlike the friendship that is based on mutual affection, companionship is a behavior that is independent of personal preferences. It is aimed at the well-being of all to achieving the goals of the team. The lack of companionship with a group creates a psychological environment inhospitable, leading participants to experience feelings of insecurity that reduce productivity, creativity and commitment to cohesion.

As the leader must act to develop fellowship within the team? Be an example and zeal for the led. Not practice nepotism. Never criticize a member of the team in his absence or "behind his back".

Ø C8. Creativity

Creativity is the concept that expresses the manifestation of the power transformer and evolutionary renewal of a team. What is the importance of creativity for the synergy of the team? When it is given to all the right to contribute ideas, creates an exciting atmosphere that increases the motivation for participation. The evolution becomes accelerated because nobody stands up to own ideas. The lack of creativity in a group denotes oppression, omission, and indifference.

As the leader must act to develop creativity in the team? Talk less and listen more. Give you the tools and not impose solutions. Learn how to deal with dissenting ideas, mainly.

CONCLUSION

As we have seen, the leadership of a team requires knowledge, skills and attitudes for dealing mainly with the subjective. Visions, beliefs, values and individual feelings create a bond that is both important and critical to the functioning of the group. In this situation, the leader must develop the maturity of the led so that, together, take their self-management and, at the same time, manage conflicts taking the group to the synergic operation.

Identify the stage of development of the team and apply leadership style consistent is the technique that aims to induce a behavioral response toward maturity. The application of the eight proposed concepts, through the leader’s behavior, is tactics that are aimed at the administration of conflict in search of the synergy of the team.
REFERENCES


A. Title of Submission: A Partnership Program Between Institutions of Higher Education and County Offices of Education for Successful School Administrator Preparation

B. Topic Area: Educational Administration

C. Presentation Format: Workshop

D. Description:
National University has developed a “Partnership” program, with California County Offices of Education, for providing an administrator credential and MS degree program for new school administrators. This presentation specifically explores a unique program opportunity that describes the successful “partnership” between National University and the Sacramento County Office of Education Leadership Institute for providing the Preliminary Administrative Services Credential and the MS degrees to meet the needs of local school districts.

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Presentation Abstract

“A Partnership Program Between Institutions of Higher Education and County Offices of Education for Successful School Administrator Preparation”

This presentation describes a unique “partnership” between National University and the Sacramento County Office of Education (SCOE) Leadership Institute. SCOE is approved by the CCTC (Commission on California Teacher Credentialing) to grant the Preliminary Administrative Services Credential to successful program candidates. Many of the credential program candidates also desire to acquire the MS degree in Educational Administration. However, SCOE is not WASC (Western Association of Schools and Colleges) accredited for granting the MS degree in Educational Administration. This is where National University partners with SCOE in order to provide candidates an effective school administrator training program, including the administrative services credential and the MS degree in Educational Administration. The goal of the program is to effectively prepare future successful school leaders with the leadership skills and knowledge for meeting the needs of the local school districts where they serve.

Another advantage of the partnership is all SCOE program instructors, for both the credential and MS degree programs, are approved National University adjunct instructors. Therefore, all program courses, (credential and MS degree) can be taught by current and/or retired local Sacramento COE administrators who meet the National University adjunct instructor standards. The value in this part of the partnership is that these NU approved adjunct instructors know the needs of the local school districts and can properly and effectively prepare the program candidates to be successful future school leaders.
Abstract

After attending this presentation the attendees will have a better understanding of academic freedom and academic responsibility that will help them protect their rights. Faculty members academic freedom is of fundamental importance to their institutions. Academic freedom is the particular freedom for scholars, teachers, and students within the universities and colleges to pursue knowledge, speak, write and conduct scientific activities without unreasonable restriction.

As a result of the increase in ideological conflicts, especially regarding to religious, political economic issues, it is essential for the members of the academic community to be familiar with Declaration of Principles on Academic Freedom and Academic Tenure issued by American Association of University Professors (AAUP) in 1915 and its updated version in 1940. The Declaration stated that academic freedom of the teacher “comprises three elements: freedom of inquiry and research; freedom of teaching within the university or college; and freedom of extramural utterance and action”.

Academic freedom and academic responsibility are the core values of higher education as they affect the academic profession in all aspects of teaching and research. The student also has academic freedom. Academic freedom and responsibility have long been topics for public concern and debate. However, many professionals still do not understand exactly what it means.

The purpose of this presentation is to promote understanding and support of academic freedom amongst the academic community which applies to teaching and research and ensures that faculty rights are protected.
Mobile Apps to Disseminate Information for Instruction and Extension

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Abstract

Collaboration and cooperation within our college and between our college and the horticultural industry and public is important. This, in part, involves disseminating up-to-date information. The use of mobile devices and apps (applications), specifically RSS feed and news aggregator apps, can help achieve this. The objective was to develop an approach to help our college's research, instruction, and extension personnel find and make known current information to end users. RSS (Rich Site Summary or Really Simple Syndication) is a format for delivering changing web content to a user. RSS feeds help you easily stay updated by retrieving the latest content from sites that you are interested in. New aggregators search the web to bring you news stories and information that is significant to you. Based on reviews of apps and my personal evaluation, I selected the iPad apps Feedly, Read by QxMD, Fox News, and those of local television news stations. These apps were used to retrieve pertinent articles, websites, news stories, and videos on topics, keywords, and scientific journal titles that I had specified. Looking at the titles and briefly evaluating the content helped me determine if these resources would be relevant to specific individuals. For faculty and staff within our department, college, and university, this was done by familiarizing myself with their research and extension projects, and what courses they teach. I e-mailed appropriate articles, websites, news stories, and videos to colleagues in our department, our college, graduate students, undergraduate students, student organizations such as the undergraduate Horticulture Society and the TPSS Graduate Student Organization; and the Coordinating Group on Alien Pest Species, Pacific Cooperative Studies Unit, University of Hawaii. I sent information to colleagues at the University of Hawaii at Hilo College of Agriculture, Forestry and Natural Resource Management, Windward Community College, and Leeward Community College. I further disseminated information to industry organizations such as the Hawaii Tropical Fruit Growers, Hawaii Export Nursery Association, Hawaii Department of Agriculture, Noelani Elementary School teachers, and private companies such as Mari's Gardens, Hawaiian Turfgrass, and Island Fungi. Lastly, I shared information with colleagues in departments of horticulture at U.S. mainland universities. In conclusion, RSS Feed and News Aggregator apps have enabled me to disseminate relevant information to others and to demonstrate this approach for their possible adoption.

Additional index words: applications, RSS feed, news aggregator
**Introduction**

Collaboration and cooperation within our college (College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa) and between our college and the horticultural industry and public is essential. This involves disseminating up-to-date relevant information to colleagues, students, and stakeholders (Wray, 2016).

Extension (Cooperative Extension Service) provides education and learning activities to people including agricultural producers and the general public. It takes the knowledge gained through research and education and brings it directly to the people. Land-grant colleges and universities have the extension mission of conveying practical information to farmers, small business owners, consumers, and the general public.

Up to date information has been disseminated to students online and in the classroom. Extension personnel have provided information to the public through newsletters, extension publications, workshops, field days, and trade publications. With the Internet, electronic means can be used to find and distribute relevant information (Kobayashi, 2014). With the advent of mobile devices and applications (apps), specific apps have been used to find information (Capdarest-Arest and Glassman, 2015; Kobayashi, 2013). These apps included specific apps such as Popular Science, Popular Mechanics, and Science. A disadvantage has been that they require the user to use each app to find information.

A RSS (Rich Site Summary or Really Simple Syndication) reader enables the user to stay informed by retrieving the latest content from news-related sites. Time is saved by not having to visit each site individually. Rather, a RSS reader aggregates or gathers news and web content from online resources such as websites, newspapers, and videos for easy viewing. News aggregator apps search the web to bring news stories and information that are important to the user. The objective of this paper was to develop an approach to help our college's instruction and extension personnel find and disseminate current information to end-users.

**Methodology**

Based on reviews of apps and my personal evaluation, I selected the iPad/iPhone apps Feedly, Read by QxMD, Fox News, NHK World TV, and those of local television news stations. These apps were used to retrieve pertinent articles, websites, news stories, and videos based on topics, keywords, and scientific journal titles that were specified. Looking at the titles and briefly evaluating the content helped to determine if these resources would be relevant to specific individuals. The usefulness of the resources found were based on my familiarity with the subject areas and what would be relevant and useful for someone's work. The information about the resources found was e-mailed to selected people.
Results

Instruction. I e-mailed relevant articles, websites, news stories, and videos to the students in my courses as assigned readings or supplemental readings. With the use of the flipped classroom approach and Bring Your Own Device (BYOD) in my courses, students reviewed these assigned readings and videos outside of class. Then, in class students formed small discussion groups of typically two to four students and discussed the assigned readings, videos, and news stories. Their laptops and mobile devices enabled them to search and retrieve additional information on the Internet to aid in class discussions. Each group of students reported their answers and discussions to the class with each student having the opportunity to speak.

Extension. For faculty and staff within my department, college, and university, I familiarized myself with their research and extension projects, and what courses they teach. Appropriate articles, websites, news stories, and videos were e-mailed to colleagues and graduate students, undergraduate students, student organizations, and various units within our college and the university. For example, information was sent to colleagues at the University of Hawaii at Hilo College of Agriculture, Forestry and Natural Resource Management, Windward Community College, and Leeward Community College. Further, information was disseminated to industry organizations such as the Hawaii Tropical Fruit Growers, Hawaii Export Nursery Association, Hawaii Department of Agriculture, Noelani Elementary School teachers, and private companies such as Mari’s Gardens and Hawaiian Turfgrass. Lastly, information was shared with colleagues in departments of horticulture at U.S. mainland universities.

Conclusions

In conclusion, RSS feed and news aggregator apps have enabled me to disseminate relevant information to others and to demonstrate this approach for their possible adoption.

Acknowledgements

I thank Matthew Chun-Hori, College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa, for printing the poster. I am grateful to Joyce Goo-man, Lamination House, Inc., for laminating the poster.

Literature Cited


Figure 1. iPhone/iPad applications (apps) finds and retrieves news stories, scientific articles, and websites. Apps include local television stations, Feedly RSS reader, Fox News, Read by QxMD for finding scientific articles, and NHK World for news stories.
Figure 2. Feedly app for finding news stories in such topic areas as Horticulture, Science, Technology, Apple, Flipped (flipped classroom), and Writing.
Got $36M? This nuke plant could be yours

It’s not the Brooklyn Bridge, but authorities in Alabama do have a nuclear power plant they want to sell you. Minimum bids for the never-finished Bellefonte nuke plant start at $36.4 million, which is essentially the value of the 1,400…

90 rocks in Australia could rank up there with

European lander released to begin final descent to Mars

Buckle up, space tourists! Blue Origin on track to

Figure 3. Fox News app finds news stories in the category Science. Other relevant categories include Technology, Health, and Lifestyle.
Figure 4. Read by QxMD app for finding scientific articles by journal titles such as the Journal of Experimental Botany.
The Development and Validation of the MOOC Virtual Learning Environment Scale (MVLE)

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Abstract

This paper presents a conceptual and measurement model underlying the development of the MOOC Virtual Learning Environment Scale (MVLE) assessing student perceptions of virtual course environments and instruction. The scale constructs were adapted from previously validated instruments including the Unified Theory of Acceptance and Use of Technology (UTAUT), E-learning Systems Success Scale (ELSS), and the E-Learning Satisfaction Scale.

The data analysis procedures will include the validation of the scale using Exploratory Factor Analysis (EFA). EFA procedures use factor loading to statistically and theoretically combine items resulting in a final parsimonious scale. Descriptive statistics will also be conducted to describe the shape of the distribution and frequencies of survey item responses.

The specific outcome of this study is the development and validation of a conceptual and measurement model termed the MOOC Virtual Learning Environment Scale (MVLE). This model and scale can be used in the design and development of MOOC courses specific to instructional design and pedagogy. In addition, higher education leaders can use this model to guide strategic planning, transform faculty professional development, and engage in instructional innovation to inspire digital age citizenship.
Title:
Implementing Peer-Led Team Learning in a Community College Computer Science Course: Lessons Learned

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Implementing Peer-Led Team Learning in a Community College Computer Science Course: Lessons Learned

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Abstract:
Peer-Led Team Learning (PLTL) is an instructional strategy that has the potential to improve the retention and performance of underrepresented minorities students in computer science courses. In this paper, we discuss the lessons learned after implementing PLTL in three courses with different instructors in a community college. Students from one of the three courses had a more positive perception about the PLTL sessions and participated more actively and consistently. We explored some ways to promote a more active participation across all courses.
Introduction

There is a nation-wide concern about the current number of students who choose to major in Computer Science (CS) in the United States (Bureau of Labor Statistics, 2014). This issue is particularly evident with underrepresented minority (URM) students: a College Board report in 2013 showed that among 22,273 high school students who took the Advanced Placement computer science test, 4% were African American, 9% were Hispanic Latino, and 19% were female (College Board, 2014).

According to the findings of a longitudinal study conducted by Chang, Sharkness Hurtado and Newman (2014), that involved 3,670 students at 217 institutions, URM students are significantly less likely to persevere in Science, Technology, Engineering and Math (STEM) majors. The findings also indicated that institutions could potentially improve the persistence of URM students in these majors by increasing the likelihood of students to engage in academic experiences, such as studying frequently with others.

One of the reasons students decide to leave their CS major is the “perception of asocial community with low levels of human interaction including student-faculty and peer-peer” (Biggers, M., Brauer, A., & Yilmaz, T., p. 406). Peer-peer interaction, specifically Peer-Led Team Learning (PLTL), has the potential to improve the retention and performance of URM students in CS courses (Horwitz et al., 2009), increase women’s participation in a CS major (Murphy, Powell, Parton, & Cannon, 2011), and improve the retention attitudes of under achiever students in introductory CS courses (Stewart-Gardiner, 2010).

Hartnell College, a medium-size two-year Community College in California with over 90% of URM students, has exhibited a high attrition rate of students in Computer Science in the past five years: about half of students drop the Introduction to Computer Science course. An optional PLTL program was implemented in Spring 2015 with the goal to improve student retention.
Learning from Peers

Literature in Social Constructivism provides empirical evidence that peer collaboration can foster cognitive growth (Hogan & Tudge, 1999). Having students teaching and guiding their peers is not a new educational approach. Early in the 19th century, Joseph Lancaster created the Monitorial System of Instruction in which advanced students taught novices, educating in this way a very large number of students at a low cost (Rayman, 1981).

Peer-Led Team Learning (PLTL) also involves having advanced students teaching their fellow peers. However, a specific set of characteristics differentiates PLTL from other peer learning models. Gosser et al. (2001) identify the following ones:

PLTL consists of a weekly workshop, which includes a group of six to eight students and a peer leader. The peer leader has successfully completed the course and has been trained in leadership skills and teaching/learning strategies. Peer leaders are facilitators, not lecturers, teaching assistants, or answer givers. Teachers are closely involved with the workshops, holding weekly sessions with the peer leaders and developing challenging materials that are integrated with the course content.

Gosser et al. (2001) also describe the tasks of the peer leaders:

- clarify the purpose and goal of each workshop
- ensure full participation of the students
- build students’ commitment and self-confidence
- strengthen students’ skills and problem solving approaches
- create special opportunities for students
- practice listening skills and questioning techniques
- reflect continuously upon the process they are leading the workshops

PLTL was originally developed in the early 1990s to support students in general chemistry (Gosser et al., 2001); however, it has been successfully implemented in several other areas, such as biology (Batz, 2014), Information and Communications Technology (Sheard et al., 2011), Mathematics (Hockings, DeAngelis, & Frey, 2008), and Computer Science (Horwitz et al., 2009; Huss-Lederman, Chinn, & Skrentny, 2008; Murphy, Powell, Parton, & Cannon, 2011; Stewart-Gardiner, 2010).
PLTL in Computer Science Courses

The results of several studies that implemented PLTL in Computer Science courses are very promising: Murphy, Powell, Parton, and Cannon (2011) report a significant increase of women’s participation in CS majors after six semesters of offering an adapted version of PLTL: their workshops were language agnostic, instead of covering Java, which was the programming language used in the actual course, the workshops focused on algorithmic thinking and problem solving.

Horwitz et al., (2009) implemented a PLTL combined with active recruiting (sending emails to URM and female students, attending orientation sessions, sending announcements in the course, etc). The results indicate an increase of retention rates and grades. Peer leaders benefitted from the PLTL program as well, self-reporting an improvement on their leadership skills.

Stewart-Gardiner (2010) reports that even though not every single student seemed to have benefitted from the PLTL workshops, several groups of students did benefit, especially those enrolled in higher-level undergraduate courses. In a separate study, peer leaders have been found to exhibit cognitive, personal, and instrumental growth from facilitating workshops (Micari, Streitwieser, & Light, 2005).

Our PLTL Implementation

In Spring 2015, PLTL workshops were offered as an optional supporting academic activity to students in the three sections of the Introduction to Computer Science and Programming Fundamentals course (CSS 1). Each section started with an average of 36 students.

Several students applied to be peer leaders but only five were selected by one of the instructors based on their performance in the class. All of them completed the same course the previous year, obtaining high scores. Peer leaders received a stipend for being part of the PLTL program.

The workshops were offered in three days of the week, including Saturdays, being Saturday the most popular day. Each workshop lasted about 2 hours and it was composed of 8 to 10 students. The same content was covered in the three weekly workshops, in this way, students could attend a workshop in the day that it was most
convenient to them. While students were initially assigned to a specific group, they had the flexibility of attending the workshops with other groups to accommodate any unexpected activity in their schedules.

Prior each workshop, all peer leaders were required to attend a one-hour session with the PLTL program coordinator, the second author of this paper. In this session, the program coordinator provided the materials that would be covered in the following workshop. The Coordinator prepared weekly problem sets that aligned with what students learned in the previous week. Emphasis was put on conceptual understanding and misconceptions. Problems were sourced from various curricula.

Peer Leaders worked through each week’s problem set in advance, guided by the PLTL coordinator. Peer Leaders refreshed their own skills, learned computer science- specific teaching techniques like memory diagrams, and discussed concepts where students often struggle. Moreover, peer leaders were trained to use several instructional strategies to facilitate the workshops, including peer problem solving and round robin techniques (Gosser et al., 2001).

Several Peer Leaders attended each of the three weekly sessions and they formed groups as needed based on the number of attendees, keeping up to ten students in a group. The weekly workshops were not required, but students had the opportunity to earn significant course credit (4% of final grade) for consistent attendance. Students were offered extra credit for attending the PLTL workshops.

**PLTL Implementation Results**

An anonymous online survey was conducted to collect students’ perception of their participation in the PLTL program. There were 53 students who submitted the survey across all three sections of the course. Students’ perception towards PLTL varied significantly on each section. The most positive experience was from students in section 1: From the twenty-three students who submitted the survey, 91% attended at least one PLTL session and most of them attended 12 or more sessions. 81% of those who attended at least one PLTL session considered that the sessions were very or extremely helpful and 66.7% of them indicated they were more likely to pursue a major in computer science.
From the 15 students in section 2 who submitted the survey, only 33% attended at least one PLTL session. 80% of them considered that the sessions were very or extremely helpful and also indicated they were more likely to pursue a major in a field related to computer science.

There were 14 students in section 3 who submitted the survey. Only 42.85% of them attended at least one PLTL session. Half of those who attended at least one PLTL session considered that the sessions were very or extremely helpful and also indicated being more likely to pursue a major in computer science.

The following table summarized the survey responses of students in the three sections:

<table>
<thead>
<tr>
<th></th>
<th>Section 1</th>
<th>Section 2</th>
<th>Section 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys submitted</td>
<td>23</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>PLTL attendees</td>
<td>21</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Perceived PLTL very or extremely helpful</td>
<td>17</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>More likely to pursue a major in CS</td>
<td>14</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

The course content was the same in the three sections and the peer leaders were also the same for students in all three sections. These are some of the potential reasons that might help explain why students in Section 1 had an overall more positive perception about PLTL and had a bigger number of attendees:

1) Students in section 1 were offered extra credit for attending the PLTL sessions. Specifically, they were offered 4% of the final grade for consistent attendance. Students in the other two sections were not offered any extra credit.

2) The instructor in section 1 is highly charismatic and has several years of experience teaching this course.

3) Based on the survey results, several students in sections 2 and 3 were unable to attend to PLTL sessions due to conflicting schedules.
On average, students who attended at least one PLTL session had a positive perception about the peer leaders: students strongly agreed that the peer leaders were able to adequately answer questions, and they agreed that a) they felt comfortable asking questions to the peer leaders, b) the peer leaders were able to encourage everyone who participated in the sessions, and c) the peer leaders managed group discussion effectively.

One of the survey questions asked students to describe their relationship with the peer leaders. Overall, students in all three sections have a very positive perception of peer leaders. Here are some of their positive answers:

“Although they are a year above my knowledge level, I felt like they were my equal and I didn’t hesitate to ask questions or for help”
“The PLTL leaders made me feel more open to speak up”
“They are such amazing people very helpful and understanding!”
“They were all very helpful”
“All the peer leaders were easy going and friendly to talk to.”
“One of the leaders was particular helpful. It was evident this instructor enjoyed the topics and really tried to help me when I had questions”

Just a handful of responses were not too positive about the peer leaders:

“I felt like some of the leaders were not as invested in the program.”
“some of them were nervous and weren't able to explain their reasoning that strongly.”

Lessons Learned

1) A more active recruiting is needed in order to get students to participate in the PLTL sessions. There was a significant difference in the number attendees from section 1 and the other two sections. Students in section 1 were given the incentive of extra credit. Most students might not be familiar
with PLTL sessions and they need to be encouraged to attend at least one session to realize how helpful they can be.

2) It would be helpful surveying students’ availability to schedule the PLTL sessions. About 14% of the students who responded the survey indicated that they were unable to attend the sessions due to scheduling conflicts.

3) The peer leader training is essential and it seems to be working properly in our implementation. Most students attending the PLTL sessions have a very positive perception of the overall performance of peer leaders.

4) When most students in the course participate in the PLTL sessions, the persistence in the course seems to increase: from all students in Section 1, over 61% of them completed the course, which is higher than the 50% typical completion rate.

References


An Integrative Literature Review: A Theoretical Framework Supporting the Development of a Virtual Learning Environment Model

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Abstract

Virtual Learning Environments (VLEs) are software platforms designed to provide learning spaces for education, economics, cultural, and other human activities. In this paper, the authors conceptualize three major design components related to an efficient VLE. We offer a conceptual model and framework for educators to consider during curricular developmental stages. This framework consists of best practices related to system alignment, pedagogy and instruction, and social dimensions in the formation of the VLE environment.

An Integrative Literature Review is a specific research design and methodology of its own. This type of literature review is a selective scholarly overview that synthesizes prior research to formulate a research question and establish credibility for a study. As part of the process, researchers attempt to provide a compilation of major theories that contribute to the research topic that are bounded by the parameters identified in prior research.

Based on an exhaustive review of prior research evidence, we suggest a VLE model for teaching and learning promoting synchronous and asynchronous learning. Through the dissemination of information, communication, collaboration, and various Web 2.0 tools (i.e. blogs, wikis, discussion forums), educators have the ability to enhance the quality and variety of student engagement activities and academic outcomes. In addition, VLEs promote 21st century constructivist, student-centered learning that fulfills the crucial demand of technology skills in a progressive global setting.
EFFECTS OF CONVERSION FROM O/A LEVEL TO INTERMEDIATE STREAM IN PAKISTAN: A CASE STUDY

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Rakhil Mariam, Research Associate

Abstract

The subsequent research investigates the swift rise in the adaptation from O/A levels which is the British education system to the intermediate system (the national education system) of Pakistan. Seekers consider that intermediate stream upsurges the probabilities of getting admission in medical and engineering colleges as the intermediate system in Pakistan operates according to the fundamentals of science colleges. Moreover, reduction in the overall marks obtained in the British education system at the time of entry test by the Inter Board Committee of Chairman (IBCC) also dispirits the students to pursue in this stream. However, both structures have almost similar years of learning but differ in their learning patterns. O/A levels comprise a motif of conceptual learning. On the contrary, intermediate stream is entirely an annual based system where students are analyzed on the basis of their exam attempting abilities. Furthermore the British education system is even challenging to bear the expenses keeping in mind the economy level of Pakistan. O/A levels are considered to be as a status symbol in Pakistan. This study explores as to how successfully students are profited after conversion from O/A levels to intermediate stream. A sample of 100 students within the vicinity of Edwardes College Peshawar, Pakistan were engaged as the case study that has shifted from O/A levels to intermediate stream within the last five years (2010-2015). A quantitative survey method was used to acquire responses from the respondents. The outcome advocates that 25% students, who convert, significantly reach their target of study. 50% students scuffle and face strain to cope up with the memory based learning. Left over25% students achieve either average grades or fail their exams.

Keyword: O/A stream, Intermediate Stream, Conversion from Conceptual Learning to root memory system

Introduction

Education in Pakistan is overseen by the Federal Ministry of Education and the Provincial governments, whereas the federal government mostly assists in curriculum development, accreditation and in the financing of research and development. Article 25-A of constitution of Pakistan obligates the state to provide free and compulsory quality education to children of the age group 3 to 16 years. "The State shall provide free and compulsory education to all children of the age of five to sixteen years in such a manner as may be determined by law".

The education system in Pakistan is generally divided into six levels: Preschool (for the age from 3 to 5 years), primary (grade one through five), middle (grade six through eight), high (grade nine and ten, leading to the secondary school certificate or SSC), intermediate (grade eleven and twelve, leading to a higher secondary school certificate or HSSC) and university programs leading to undergraduate and graduate degrees.

The communal assessment system of England and Wales is the Advanced or A-Level, which is a regulated test of the high school, taught after the completion of O level, intended for the acquisition of General Certificate of Education (GCE). A-Level encompasses an enhanced
learning and comprehension and serves as a pre-requisite for the students aged 17-18 years desirous of higher education, to be eligible for admission into the university.

The formal A-Level system of England is comparable to the Intermediate or FSc. in Pakistan. Intermediate is the Federal evaluation analysis of students who have completed their two year Matriculation studies. The Intermediate is aimed at providing the High School or Higher Secondary School Certificate (HSSC), based solely on subjective reasoning and questioning. Intermediate is obligatory for Students aged 17-19 years seeking further advanced education.

**Comparative Overview of Both Systems**

**Syllabus Pattern.** A-levels for every subject there is a specific syllabus and guideline to follow. Students study from different reference books in accordance with syllabus and are not stuck with a single course book throughout the course period. Intermediate students have certain prescribed books for every subject which they are bound to learn for exams. They don’t go around consulting different books.

**Grading System.** In A-levels performance of a student in each subject is graded. The grades range from A+ being the best to E being the last considerable grade. Students unable to make through exams are ungraded and are graded with symbol, “U”. Matric system deals with numbers rather than grades. Total marks for Matric and intermediate (secondary and higher school certificate) exams are different for different Boards. They get grades on overall performance instead of per subject. Student who scores more than 80 percent marks is awarded an A grade.

**Examination Pattern.** In O level CIE takes 2 to 3 papers of a single subject aimed at building skills in creative thinking, enquiry and problem solving, practical skills and theoretical knowledge. Matric exam usually have either 2 papers or 2 sections under the name of Objective and Subjective testing there theoretical knowledge. There is a practical exam for science subjects also.

**Examination Fee.** A-levels are far more expensive than its counterpart. The examination fee for A-level is the sum of individual fee for every subject a student takes. It is more or less 65 pounds per subject making the total examination fee more than 500 pounds.

**Examination Timings.** A-levels exams take place biannually. Once in May/June and then in November/December for the second time. This gives students; an opportunity to improve their grade within a span of 6 months. Matric examination takes place once in a year during spring season. Students willing to improve their marks have an opportunity of reappearing in the exams held right after the results.

**Most people perspective.** If pursuing the higher education abroad is the primary concern, than A-levels without a doubt is the accurate preference. But if future resides within the country one should opt for the national educational boards.

**Objectives**

The objective of research is to **explores** as to how successfully students are profited after conversion from O/A levels to intermediate stream.
Hypothesis

H1: Students are successful after conversion from O level to intermediate stream.
H2: Students are partially successful after conversion.
H3: Students are not successful at all after conversion.

Significance of the study

Students will possess the potential to elect the wise and suitable system with secure and acceptable policies and the authority to figure out the pros and cons of both the classification.

Literature Review

Muhammad Saied. (2007), stated that Education system varies from province to province in Pakistan. Literacy rate of Baluchistan is comparatively low than other provinces. Even the selection criteria for admission in universities are different for the residents of tribal areas of Pakistan. The fact that preference of desiring FSC over A-levels, after doing O-levels, can vary from province to province. Literacy and change adaptation rate is high in Punjab and Sindh that means they possess a higher tendency of accepting a sudden change in education system. Even in U.K, educational years for the same degree in England are different as that of Scotland. Bachelors from England comprises of 3 years whereas 4 years in Scotland. Education and training authority, assessment and evaluation and supervision and management vary from area to area within the same country.

Khalid, S. M., & Khan, M. F. (2006), concluded that the condition of education in Pakistan is that students are only inclined towards achieving a degree. They are least bothered in getting practical education. A country performs well because of its highly experienced and learned human resource. The ones who are studying just for the sake of getting admissions and getting a degree are going to be the future HR of this country. Even parents are not realizing this situation. They make their kids pass levels first and then transfer them into intermediate stream because of certain factors such as: levels overall percentage falls at the time of admission in a university, the university tests are according to the intermediate system. They barely bother about personal grooming and learning potential in a child.

Memon, G. R. (2007), found that presently Pakistan higher education is very low and poor. The research rate is very less as compared to other countries. The main reason behind this is that students are just concerned about their results and getting a degree to show off. They do not know what exactly they are interested in for e.g. opting intermediate after O-levels, not having the proper prerequisite which ends upon not getting any proper educational background just because no proper assistance was set about the educational future. In Pakistan parents and students do not have this attribute of having a friendly relation where students can openly tell their parents what they wish to study in future. Students are not given proper facilities either by the government or even in private sector.

Lumsden, Mary Ann, et al. (2005), stated that a tool such as personal qualities assessment is used for medical student admission in order to realize, are they capable enough to perform at a higher level representing the medical situation of their country? It doesn't matter how fast you learn the notes. The personal grooming and growth of a student matters the most. Anybody can be a man but it takes a lot to be a gentleman. The intermediate stream does not play a vital role in the grooming of a student whereas Levels students are the ones that study and excel in a better learning environment. Intermediate focuses on just admission in top universities of sciences.
Rumberger, R. W., & Thomas, S. L. (2000), came up with the findings that when a student transfers from O-levels to intermediate stream the turnover and dropout rate rises. Scott stated that usually the dropout or turnover rate depends on a student's background. If students are studying something that they have never heard about before in their lifetime or are never interested in that, it will lead them towards huge failure or if maybe a student does not have that potential of studying something and is forced by family to study so (which has actually become the culture of Pak now), it will lead him towards nowhere. Another factor that creates an immense impact is the policies of that specific institution. It has happened allot that even a fine performing student, ends up getting out having no degree in his/her hands because of certain practices. School policies influence failure as well.

**Methodology**

Respondents include students of Universities and colleges of private sector. The data was collected from 100 students of private sector universities and colleges within the vicinity of Peshawar and Islamabad. A self-developed questionnaire regarding the study was shaped and distributed. Our method of sampling was convenient sampling. Self administered questionnaires were distributed among the respondents who were students. Total number of 120 questionnaires was distributed out of which 100 were properly responded back. Data analysis was obtained using descriptive statistics in SPSS.

**Results and Discussion**

The result of this analysis is a clear depiction of the fact that the levels system emphasizes the practical learning of the students. It lays importance on the creative thinking of the students, unlike the opposed, intermediate system of education. It develops confidence in the students when working with the opposite gender from the beginning (co-education). The students are well versed owing to the fact that they communicate and work in English. The fraction of intermediate is low as the students are tested based merely on their performance in the exams, as to how well they attempt the questions asked, not on the intellect, knowledge and
understanding of the student. Nonetheless, a reasonable portion exclaims that more than the system of education in which a student is, the primary element of creative learning, gaining knowledge and understanding is the student itself. Neither the Levels can make a student competent nor the intermediate confine their skills and knowledge.

A majority of the people have opted for practical learning over getting good grades as practical learning is the source of gaining better skills and better learning. An institution is the best place to enhance and refine the skills and qualities of a student. The present day Pakistani student is well aware of the importance of practical learning in developing a good career. However, unexpectedly, the other half that has chosen getting good grades, are not false in saying so, as unfortunately, in Pakistan, acquiring good grades is the only way the students can enter a well reputed organization to prove themselves being knowledgeable enough to get a good job and establish a stable future.
The entry tests for universities in Pakistan are based entirely on the education taught in intermediate. Moreover, importantly, the education imparted in universities is also formatted on the intermediate education system because the Federal Ministry Instructs the National system of education for all the Pakistani colleges and universities. In this respect, the Levels students face problems in passing the entry test, also owing to the fact that their percentage marks are also deducted when applying to any university. Yet, a small fraction of people also hold the view that the students can clear the test irrespective of the system if education studied in.

### 3. Which system is more beneficial in passing an entry test of medical and engineering college?

<table>
<thead>
<tr>
<th>Levels</th>
<th>Intermediate</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>18%</td>
<td>46%</td>
<td>36%</td>
</tr>
</tbody>
</table>

### 4. Which system is a better option for applying in a foreign university?

<table>
<thead>
<tr>
<th>Levels</th>
<th>Intermediate</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>6%</td>
<td>14%</td>
</tr>
</tbody>
</table>
Evidently, Levels being the education system of Britain, is based entirely on the British education standards. The structure, method of teaching, grading, subjects and exam boards are all the ones, practiced in Great Britain. Despite the difficulty faced in coping up for the difference of education system, the intermediate students still, are eligible to apply for admission in the foreign universities.

5. Which system is easy to afford?

A striking majority of the people have voted for the intermediate as being the cost effective system of education. Pakistan being an emerging state is still ranked in the list of third world countries, where, for a lay man, to spend a major portion of the income on an expensive system of education such as Levels is not viable.
The majority voted for Levels, as the levels system is based on developing in the learner, skills of creative thinking, enquiry and problem solving. It is framed such that the student focuses on the subject content, enhancing their intellect in applying their knowledge to new, unprecedented situations. Also awakening in them, a sense of cultural awareness which is barely seen in the intermediate system of education, presenting the meagre portion of the results. Although, for some 18% of the study population, this variation in the learning pattern holds no significant standing.
The Levels system of education focuses on a more broad and expanded provision of knowledge to its students thereby, increasing the duration of the study period which takes about a year and a half above the intermediate system of education. If the student is unable to pass the examination they will have to wait another six months before reappearing. Where an intermediate student, on the other hand, has the privilege to reappear just after three months, further prolonging the time duration for the Levels student. As shown clearly by the results.
The rate of success in the transition from Levels to the intermediate is more as the learning patterns and policies of the institutions are flexible for such students and the students themselves are apt enough to adapt to the changing environment, they will undoubtedly face difficulties, but will manage to succeed. Though, the less 30% of the respondents disagree and find it will not be possible for them to cope up with an abrupt change in the teaching system, where in their own system the Levels students are much indulged.

9. Will you transfer from levels to intermediate stream if you realize in between that it is not appropriate for you?

The rate of success in the transition from Levels to the intermediate is more as the learning patterns and policies of the institutions are flexible for such students and the students themselves are apt enough to adapt to the changing environment, they will undoubtedly face difficulties, but will manage to succeed. Though, the less 30% of the respondents disagree and find it will not be possible for them to cope up with an abrupt change in the teaching system, where in their own system the Levels students are much indulged.
A present day student (representing majority of the study result) is well aware of choosing the field suitable for them, if however during the course of study they assess that their productivity is not to the maximum owing the inappropriate system of education they are in, they will consider it wise to switch the system in between rather than wasting one whole year and wait for the upcoming session to start. Nevertheless, a lesser amount still considers switching in between the session might prove to be ineffective for them.

### 10. Will you choose the education system that you are forced to, by the society or parents?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>

A majority of the students are conscious to the significance of choosing a path that they think is appropriate for them, depicted clearly in the study results. 40% students are still forced to opt for the path chosen by their parents, who are forced to get the education preferred by their parents, which is the major cause of student drop out from schools. Parents nowadays consider admitting their children to a medical or engineering college as a status symbol, not realizing their interests and abilities, which ends up as a failure in professional career of their children.

**Conclusion**

Laying significance on the inventive opinion of the students, A. levels is considered to be an enormous platform of practical learning mounting the self-confidence attitude of the students. It is evident that practical learning, being the focus of a student’s mission, is the foundation of gaining healthier skills and enhanced knowledge. The structure of A-levels leaves behind no query when it comes to applying in a foreign university or competing in an international environment. Whereas in Pakistan, intermediate makes it fairly straightforward and feasible for a student to enter a medical or engineering college since the teaching imparted in universities is also designed on the intermediate education system. Intermediate scheme turns out to be the simply affordable quality education system caring regarding the purchasing power parity of an individual in Pakistan, moreover being the single effectual and remarkable
education system that consume not as much of educational time period as compared to the opponent system results in building a vast satisfaction rate over A. levels. More than two third of the entire populace believe transferring from O-levels to intermediate stream rather than continuing A. levels is a sensible come secure decision and one third of the population as collapsed when opting the similar shift of education systems, considering the discussed aspects in view. Specifically when in Pakistan. However, social pressure from parents and society do play a serious function in a student’s educational tenure, thoroughly confused and ending up choosing the mistaken corridor. Further details that need to be carried out in the same field of study include the suggestion from other provinces of Pakistan and responses from public sector.

References


Movement’s Role in Learning: A Neuroeducational Perspective

Matt Thul
**Introduction**

The purpose of this literature review is to analyze the role that movement plays in the cognitive learning process. This review includes exploration of why movement is important for learning and a deeper exploration of how the cerebellum impacts learning is included as well. Furthermore, movement’s role in learning will be emphasized through analyzezation of learning disabilities and cognitive impairments.

**Neuroeducation Definition**

To bring clarity to this review and topic of neuroeducation a definition would prove useful. Neuroeducation is defined as an “interdisciplinary field that combines neuroscience, psychology, and education to help create improved teaching methods and curricula” (The Dana Foundation, 2009, para. 2).

**Movement’s Role in Learning: A Neuroeducational Perspective**

Movement plays an important role in student academic achievement and learning, especially when attached to some form of novel, goal-directed learning (i.e. a student with an interest in art reads a book on painting techniques believing it will make him or her a better artist) (Tomporowski, Davis, Miller, & Naglieri, 2008). When some type of movement is performed on a regular basis for several weeks, positive cognitive effects occur (Colcombe et al., 2004). Aerobic, when compared to anaerobic exercise, has been shown to be more effective in producing a positive correlation between movement and cognitive abilities (Kramer et al., 1999; Tuckman & Hinkle, 1986). Studies have shown that there is a connection between fitness levels and academic scores for students ranging from elementary age through high school (California Department of Education, 2005; Dwyer, Sallis, Blizzard, Lazarus, & Dean, 2001). Also, connections between cognitive delays and developmental motor skills have been shown
MOVEMENT’S ROLE IN LEARNING: A NEUROEDUCATIONAL PERSPECTIVE

(Westendorp, Hartman, Houwen, Smith, & Visscher, 2011), which further demonstrates the connection between movement and learning.

Movement plays an important role in the maintenance of body weight and the reduction of health risks, especially during a time when childhood obesity is at an all-time high; overweight children now represent over one third of all children in the U.S. (Davis, et al., 2011). Forms of physical activity or movement, such as running, playing on outdoor park equipment, or participating in organized sports, may also provide enriched effects on children’s mental functioning that are associated with cognitive development (Davis, et al., 2011; Leiner, Leiner, & Dow, 1991; Sibley & Etnier, 2003). When exercise is performed on a regular basis for several weeks, alterations to brain functions related to cognitive development occur (Colcombe, et al., 2004). Davis et al. (2011) conducted a study that showed positive effects on overweight 7 to 11-year-old African American and Caucasian children in both higher planning skills as well as mathematics achievement; the 171 children were randomly assigned and participated in either regular aerobic exercises (two separate groups having durations of either 20 minutes/day or 40 minutes/day) or a no exercise control group for three months. The children in the study were given no mathematical instruction, yet they still showed improvement. Similarly, Tomporowski et al. (2008) found that gains in children’s mental functioning due to exercise was most enhanced when exercise was paired with goal-directed actions (i.e. studying for a test to get a better grade) in complex, constantly changing, novel environments.

There is a difference associated with learning outcomes based from the type of exercise performed. Aerobic exercise (i.e. running and cycling) impacts cognitive function more strongly than anaerobic exercise (i.e. weightlifting). A study performed by Kramer and colleagues (1999) assigned 124 participants to either a 6-month aerobic training program or a 6-month non-aerobic
toning program. Participants were given a variety of tasks to accomplish before and after the specific training program. Participants who were in the aerobic training program performed executive-function-based tasks (i.e. task switching, response compatibility, and stopping) more rapidly than did the participants in the non-aerobic program. Another study conducted by Tuckman and Hinkle (1986) demonstrated similar results. The study consisted of 154 fourth, fifth, and sixth grade children who were randomly assigned to either participate in a 12-week aerobic running program or attend regular 30-minute gym classes that met three times per week. Children who participated in the aerobic exercise training program performed better on a test measuring creativity than did the students in the regularly assigned gym class. The test used in this study was the Alternate Uses Test, which measures divergent thinking. Participants were asked to name 10 familiar objects and write as many appropriate uses for each object.

Research indicates there is a relationship between measures of physical fitness levels and academic achievement. Dwyer et al. (2001) conducted a study measuring fitness levels of over 8,000 Australian children ranging in ages seven to 15 years of age in 109 schools and compared the results with the student’s individual academic scores. Although small, there was a significant positive association between a child’s physical fitness level and their academic scores. There was no additional exercise of any form imposed on any of the children in this study, however. The California Department of Education (2005) conducted a similar study, which revealed comparable results between physical fitness levels and test scores among fifth, seventh, and ninth grade boys and girls. This study showed a stronger relationship between girls’ physical fitness levels and tests scores than when compared to the boys’ physical fitness levels and tests scores. Considering students’ physical fitness levels may help give an overall picture of students’ learning abilities.
Movement through play allows students to develop academically as well as emotionally. Because the brain is continually growing, changing, and adapting, it is important to give students room to learn independently (Rushton, 2011). Neuroscientist Rushton uses movement and play in classrooms as a way to allow early childhood students to form self-selected learning which is unique to each child’s emotional, intellectual, and physical domains. Rushton gave an example of a kindergarten student who accidently broke her classmate’s thermos, became embarrassed and was not sure how to handle the situation, so she ran to the canvas in the classroom and started painting until she was calm. When students are allowed to express themselves through play, they move towards mastery of emotions in any given situation (Rushton, 2011). This mastery can look different depending on the child due to our individually and uniquely structured brains. Additional positive effects can be gained when adding, along with movement, real life, hands-on, meaningful learning experiences that require some form of problem-solving, such as learning the meaning of a new word while helping a family member cook a family favorite recipe (Rushton, 2011). Rushton’s classroom demonstration emphasizes that students are unique learners and will display different forms of learning based from emotional, intellectual, and physical abilities.

Learning Disabilities and Movement

Children are different in many ways, and learning abilities are no exception; however, the connection and interaction between motor skills (movement) and academic abilities remain the same because of this shared relationship. Research has shown the connection between well-developed gross motor skills and children’s cognitive functioning abilities, especially academic abilities reading, language, and mathematics (Burns, O’Callaghan, McDonell, & Rogers, 2004; Son & Meisels, 2006). Since there is a connection between gross motor skills and cognitive
functioning abilities, one could predict that children with cognitive delays would demonstrate some lag in typical gross motor development. Westendorp et al. (2011) showed that students with cognitive learning disabilities often displayed under-developed gross motor skills. The strongest connection for students with cognitive delays was between mathematics and object-control skills, such as handling a ball or catching an object.

In a similar manner, research indicates that students with differing learning disabilities show similar signs of struggle in relation to developmental lags in movement and the specific learning or cognitive disability. For instance, Henderson and Sugden (1992) performed a study that discovered a connection between students who have dyslexia and poor scores in the balance test of the Movement Assessment for Children. Furthermore, Best, Miller, and Naglieri (2011) found that the larger the child’s developmental learning lag, the poorer the child’s motor skills. The authors also studied the relation between learning disabilities and poor gross motor skills, which showed students with learning disabilities performed poorly on locomotor skills and ball handling skills.

**Movement and Learning: The Cerebellum’s Role**

The connection between movement and academic abilities may be closely intertwined to an area of the brain called the cerebellum. From a neuropsychological perspective, the connection between the cerebellum and the prefrontal cortex makes sense (Diamond, 2000). The prefrontal cortex is associated with higher-order thinking or executive functioning and the cerebellum is associated with complex, coordinated movements. When one performs a strategic movement, both areas of the brain are activated.

Motor control (i.e. strategic movements) is most associated with the area of the brain called the cerebellum. The cerebellum sits at the back of the brain underneath the occipital lobe
and is connected to the brainstem (Carter, 2014). It only takes up one-tenth of the brain by volume, but it contains nearly half of all its neurons (Ivry & Fiez, 2000). In fact, most of the neural circuits in the cerebellum go outwards, meaning it influences the rest of the brain (Middleton & Strick, 1994). Thusly, the influence of the cerebellum is not wholly limited to movement. The cerebellum can make predictive actions involving gross-motor tasks as well as cognitive tasks (Ivry, 1997).

Movement, as associated with the cerebellum, and learning can further be examined through reflection of human evolution. Humans have evolved, survived, and thrived because of movement (Bloedel & Bracha, 1997; Blumenfeld, 2002; Koziol, Budding, & Chidekel, 2012). The part of the brain that is most concerned with movement is the cerebellum (Carter, 2014). The brain is influenced by the cerebellum due to the assigned outward-going neural circuits (Middleton & Strick, 1994). The effects of the cerebellum have been produced in areas of the prefrontal and parietal cortexes which construct advanced planning, executive functioning skills, and planned movements (Leiner, Leiner, & Dow, 1993). It is movement that drives inspiration of learning and higher-order thought processes in the brain and the cognitive effects are its byproducts (Ivry, 1997).

Cognitive thought is a byproduct of movement (Koziol et al., 2012). Without movement, there is no need for thought because we were born to move (Bloedel & Bracha, 1997). Our survival depended on and still depends on successfully making strategically planned movements (Koziol et al., 2012). Evolution of manual dexterity for use of tools, creation of art, and instruments to be played are all products of movement (Koziol et al., 2012). Compliments of movement also include the ability to gesture, write, or even speak (Gibson, 2002). It is not coincidental that all the parts of the body with the greatest sensory sensitivity generate
movement, including: toes, feet, fingers and hands (Blumenfeld, 2002). The importance the role movement plays in our learning process is highlighted by nature. The enhanced sensitivity to the areas of the human body that generate movement allow us to learn more effectively and are essentially linked with the cerebellum.

The range of the cerebellum’s effects extends to the prefrontal and parietal cortex areas of the brain which are associated with advanced planning, executive functioning skills, as well as planned movements (Leiner et al., 1993). The cerebellum can no longer be viewed as a structure with a sole purpose focused on movement (Bostan, Dum, & Strick, 2013). Bostan and colleagues (2013) explored the cerebellum’s impact by injecting virus trans-neuronal tracers into the cerebellum of primates and recording the outputs. The study found that the virus tracers were observed in both areas of the prefrontal cortex, as well as the parietal cortex, again demonstrating the range of the cerebellum’s influence on other areas of the brain. Furthermore, Koziol et al. (2012) argue that the cerebellum in fact trains the frontal system’s responses to various settings and situations by anticipating outcomes through use of sensory input, thus concluding that the frontal lobe is situated by sensorimotor structure. Since the frontal lobe is most directly associated with executive functions and the cerebellum attributes great influence on its function, the role of movement and learning is again emphasized.

Executive functions are used as a means to help make sense of new learning and behaviors. Miller (2008) defines executive function as the functions an organism uses for its own interest as an act of survival. The cerebellum is attached to the brainstem, which serves many of the automatic functions used for survival, such as breathing and heart rate and in the cerebellum’s case movement and coordination (Carter, 2014). Koziol et al. (2012) emphasis of the cerebellum’s role in the prefrontal regions of the brain, which are associated with executive
functioning, remains grounded in sensorimotor anticipation which means that executive functioning abilities are based from automatic movement-based principles.

**Learning Disabilities and the Cerebellum**

The importance that movement plays in our abilities to learn can equally be shown through observations of people with cognitive learning disabilities and impairments towards motor functions. Piek, Dawson, Smith, and Gasson (2008) led a study that examined 33 infants with gross motor problems in early stages of their lives and followed up with the same children at later ages, six to 11 years of age. The infants were noted as having troubles with the sucking motion during feeding. A predictive relationship between the lack of gross motor skills (sucking motion during feeding) and later-shown inefficiencies involving working memory and processing speed was revealed. Thus, there is a strong relationship between early gross motor problems and troubles in higher-order, executive functioning because feeding habits in early years overlap with neural networks of cortical, subcortical, and brainstem regions of the brain which support executive functioning later in life (Piek et al., 2008).

The cerebellum’s role in movement and its association with learning can be analyzed from the perspective of children who suffered damage to their cerebellar regions. Riva and Giorgi (2000) conducted a study, which analyzed 26 children with a mean age of 10 years old, all of whom had undergone surgery to remove tumors located in their cerebellar regions. The children with tumors on the right side of the cerebellum presented inefficiencies in auditory sequential memory and language processing, while children with tumors on the left side of their cerebellum showed disturbances with spatial and visual sequential memory attributes. Post-surgery, children who underwent surgery on the right side of the cerebellum developed speech disorders, and children who had surgery on the left side developed behavior disorders similar to
those of children with autism. The cerebellum is known for its critical roles in movement. Cross-examination of studies involving disturbances to the cerebellar region and the connection between the cerebellum’s role in movement emphasizes the impact that movement has towards learning.

**Concluding Summary**

This literature review explored connections between movement and the cognitive learning processes. Analyses between different forms of movements including aerobic versus anaerobic exercises, as well as general correlations between physical fitness levels and academic levels were explored. The cerebellum’s role in the cognitive learning process was explained, as well as analyzed from a neuroscientific and medical lens based from learning disabilities.

Research shows there are observable connections between either physical fitness levels or intentionally practiced forms of movement (California Department of Education, 2005; Colcombe et al., 2004; Dwyer et al., 2001). Greater positive results can be made when meaningful and novel learning (i.e. providing a learning experience which is applicable to the student’s life or directly relates to the student’s interests) is attached with the movement or exercise (Tomporowski et al., 2008). The cerebellum’s role is clearly identified through research studies; however, it is commonly disputed within the neuroscientific field due to inconsistencies in overall research and restrictions or limitations due to specificities conducted in the studies. For example, the study conducted by Davis et al. (2011) involved sedentary, overweight, seven to 11-year old African American and Caucasian children. This may generate profound implications but it should not then be generalized to the overall public and thusly more research is needed. However, the importance of findings from studies such as these contribute knowledge into students’ overall learning process and may help bring further insight into the education field.
References


This study examined emotional knowledge as a mediator between inhibitory control and social competence in preschool children. The research was performed three times, at the beginning of the school year (Time 1), in the middle of the school year (Time 2) and at the end of the school year (Time 3). The results suggested that inhibitory control (Time 1) and emotion knowledge (Time 1) showed associations with social skills (Time 3).
1. **Title of submission**
   The influence of contingency of self-worth and achievement motivation on adaptation of undergraduate students.

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6. **This study examined influences of contingency of self-worth, achievement motivation and social skills on adaptation of undergraduate students. Questionnaires were completed by 158 university undergraduates (average age was 20.03 years). The results suggested that even if individuals with a high contingency of self-worth, individuals with a high self-fulfilmentive motivation and with a high social skill may prevent from worsening adaptation of undergraduate students.**
A Real Touchy Subject: The Perceptions of Female University Students on Physical Contact by Male Authority Figures

Submission for Hawaii International Conference on Education
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The Factors Comparison of the Teachers’ and Parents’ Competence Scale for Building Early Childhood Educational Community in South Korea

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Abstract

Background
The recent child abuse cases by preschool teachers caused increase of social mistrust about teachers and preschools in South Korea. Some experts have stressed that school society need to change and make efforts for forming educational community as a key of solution (Chung, 2015; Kim, 2007; Hong, 2012). And competent preschool teachers and parents are needed for building the early childhood educational community but little effort has been made to understand teachers’ and parents’ core competencies.

Purpose
The focus of this study was to compare the factors of Korean early childhood teachers’ and parents’ competence scale for building educational community. And the study intended to present educational implications for developing preschool teachers’ and parents’ competencies.

Method
The sample of the research consisted of 638 preschool teachers and 543 parents with preschoolers,
selected according to cluster sampling method. In light of the scales obtained from the related literatures and focused interview with 12 members included in 2 teachers, 2 parents, 2 directors, and 6 experts. Then, the first form of the scale was presented into the views of 5 field experts for content validity. Final scale consisted of 68 items which had 17 competence elements divided into 15 common and 2 teacher specific or parent specific elements. In order to test the validity of the scale, the exploratory and confirmatory factor analyses were carried out.

Results

The same two factors were extracted like ability of practicing partnerships and ability of practicing shared core values of the scales. The estimates of confirmatory factor analysis provided a good fit to the data. The scales showed high validity, reliability and item quality so that it can be used to measure teachers’ and parents’ competencies for building educational community. By the way, components within the factors were different between the scales. Teachers’ scale showed similar components number but parents’ one consisted of relatively little components in ability of practicing shared core values factor.

Conclusions

An interesting finding in the present study showed differences in ability of practicing shared core values factor between teachers’ and parents’ scale. This means that parental perception about ability of practicing shared core values was different to teachers’. And it shows that parents tend to think about some elements of social competencies for development of institutes and society in relation with individual psychological competence such as ability of practicing partnerships. This study suggests that understanding and educating of parental social competencies is important to develop educational community competence.

Keywords: Preschool Teacher, Parents, Early Childhood Educational Community, Competence Scale
Use of ICT for Higher Education in Japan
-An Analysis Based on Student Enrollment-

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Abstract: This research analyzes the usage of Information Communication Technology (ICT) in the university setting, based on enrollment size. The research reports the results of the “Survey on promotion of ICT utilization education in higher education in Japan,” administered in 2015. Two main points were found in the survey. First, the introduction of LMS is progressing, compared to results found on the same survey in 2013. However, it tends to be used primarily in small universities. Second, improvement of the technological "infrastructure" is fairly universal, regardless of the size of the university; however, educational support and school administration factors are just being introduced in most small universities. In addition, smaller universities tend to take a more active approach in ICT implementation.

Introduction
In recent years, with the advancement of globalization and openness of higher education, the use of information communication technology (ICT) is becoming indispensable for providing diverse forms of education in the 21st century university. However, the current state of ICT utilization education in higher education in Japan has not been widely studied. Therefore, based on the survey result of ICT utilization by higher education in Japan conducted by AXIES (Academic Exchange for Information Environment and Strategy) in FY2015, this paper examines the state of the ICT environment in Japanese universities.

Overview of Survey
With the cooperation of the Ministry of Education, Culture, Sports, Science and Technology, the ICT Utilization Research Group of AXIES surveyed 1215 institutions of higher education in Japan during the period from November to December 2015. The purpose of the survey was to grasp the situations and trends of ICT utilization in education, such as e-learning and open education, at Japanese universities. The survey was conducted in a web questionnaire format. The response rate was 64.8% (517/798 institutions responded).
Methods of Analysis
AXIES analyzed the question items from "the state of ICT in the university" survey, and was disaggregated based on university enrollment. Based on the number of undergraduate students, the scale indicators were classified into five groups A to E as shown in Table 1.

Table 1: Number of Institutions by Undergraduate Enrollment

<table>
<thead>
<tr>
<th>Group</th>
<th>National University</th>
<th>Public University</th>
<th>Private University</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 10001-</td>
<td>8</td>
<td>0</td>
<td>31</td>
<td>39</td>
</tr>
<tr>
<td>B: 5001-10000</td>
<td>24</td>
<td>2</td>
<td>47</td>
<td>73</td>
</tr>
<tr>
<td>C: 3001-5000</td>
<td>14</td>
<td>3</td>
<td>38</td>
<td>55</td>
</tr>
<tr>
<td>D: 1001-3000</td>
<td>11</td>
<td>24</td>
<td>141</td>
<td>176</td>
</tr>
<tr>
<td>E: &lt;1000</td>
<td>8</td>
<td>25</td>
<td>118</td>
<td>151</td>
</tr>
</tbody>
</table>

Results and Discussion

1) Introduction Rate of LMS
Figure 1 shows the trends in the implementation rate of LMS by university size, together with the results of a survey conducted by the Ministry of Education, Culture, Sports, Science and Technology conducted in FY 2013 (Kyoto University, 2014). In the two years from FY 2013 to FY 2015, the introduction of whole school LMS is increasing for universities of all enrollment sizes; however, introduction has progressed further in smaller universities in comparison to larger universities.

![Figure 1: Implementation rate of LMS by university size](image)

2) Introduction Rates of ICT Environments
We divided the whole ICT environment into "Infrastructure", "Administration,” and "Learning Support” categories. Figure 2 shows the rate by category.
As seen in Fig. 2 (a), the mail system was introduced in over 90% of all surveyed universities. For on-campus wireless LAN, the introduction rate is high overall. However, smaller schools lag behind in the availability of wireless LAN on campuses.
Figure 2 (b) shows the introduction rate of the ICT environment related to teaching management. Web publishing of syllabi is almost universal for all universities. Course management systems are not used as much in large universities as in small universities.
Figure 2 (c) shows the introduction rate of ICT environment related to learning support. Evaluation using a "study portfolio" is listed in the national guidelines of 2012 as an item to be promptly addressed, so the introduction rate of an e portfolio tends to be high among the items of learning support. However, Japan’s rate is behind that of the United States, according to this data (Allen, 2014).
From these graphs, systems that allow students to take actions themselves, such as viewing and registering systems, are being updated at universities of all sizes. However, in the area of support for
learning, the introduction of the ICT environment has not yet taken place. Furthermore, the introduction of the ICT environment is delayed overall in smaller universities.

According to survey items about securing the budget to procure ICT utilization for education, the smaller group, the E group, is not dependent on the type of school (national, public, private), but the rate at which "budget is not secured" is higher than in other groups. We also found that smaller universities are reluctant to utilize ICT at educational sites.

![Graph of ICT environment implementation rate by university size](image)

**Figure2: Implementation rate of ICT environments by university size**

**Conclusions**

Based on the data of the 2015 survey on ICT utilization in higher education, we analyzed the situation of the ICT environment. Regardless of the size of the university, while the infrastructure environment has been improved, it has been found that ICT is not yet utilized in the learning scene. Introduction of the ICT environment was delayed in the larger universities as well as in smaller universities, and more detailed analysis is necessary.

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**References**


Commissioned projects by MEXT
The Effect of Safe Ride Programs on Neighborhood Crime

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Abstract

According to the National Center for Education Statistics (NCES), 34% of public four-year colleges, and 24% of private colleges offer some version of night-time shuttle or van service for their students. Student safety is the primary purpose of these programs. However, given the relationship between institutions of higher education and their communities (often referred to as the “Town and Gown” relationship), might these programs be providing a greater service by reducing the amount of crime in the neighborhoods served? This study analyzed crime rates in the neighborhoods served by one university’s van shuttle program and determined that the program played a significant role in reducing crime in these neighborhoods. The study has relevance for other campus’ currently sponsoring, or considering sponsoring, such services.
Introduction

Private expenditures on crime deterrence and prevention are enormous. Americans spend more on private security than they do on police (U.S. Census Bureau, 2012). Private efforts to reduce crime include block watches, alert systems, security equipment, and personal expenditures on self-defense. Colleges and universities are similarly concerned about the safety of their students, and spend a great deal of time and money on programs related to the safety of their students. These programs include, but are not limited to foot patrols, nighttime escort services, emergency phone systems, better lighting, and self-defense courses. They also include van service or ‘safe ride’ programs for students. All of these programs and services are designed to keep students safe. But is it possible that these programs, in particular the safe ride programs, serve a secondary purpose: reducing the crime rate in the neighborhoods surrounding the campus? This paper looks at the effect that one safe ride program had on the crime rate in the neighborhoods served, and determined that the van service did indeed reduce the crime rate in the area served. The results will be useful for students and administrators who can use the data to make a strong case that safe ride programs have a wide-ranging, positive affect on the college and the community.

Purpose of Safe Ride Programs

According to the National Center for Educational Statistics (NCES), 34% of public four-year universities, and 24% of private four-year universities had some version of a safe ride program for their campus. These programs vary in their hours and breadth of services, but they were all designed for two purposes: 1) prevent the victimization of students and; 2) prevent students from driving drunk (Lewis, 1997). Although there is no one single organization that keeps track of all the campus safe ride programs, two national organizations do exist to help
students develop and maintain safe ride programs. These organizations are Safe Ride Programs United (SRPU) and the BACCHUS Initiative (part of NASPA: The National Association of Student Personnel Administrators). When one scans their respective websites, it is clear to see that the foci of campus safe ride programs are, indeed, safety of the students and prevention of drunk driving. According to Gieck and Slagle (2006), students using safe ride programs do, in fact, use them for these two reasons. Additionally, Gieck and Slagle found in their study that 75% of students using the safe ride program in their study indicated their primary reason for utilizing the safe ride program was to avoid drunken driving. Nineteen percent indicated that a lack of transportation was the reason for their using the service, 16% used it due to inclement weather, and 34% used it because their friends did. Although these two foci (safety of students and preventing drunk driving) do exist, this paper focuses on just one of the issues: safety. More specifically, and certainly related, it focuses on what affect safe ride programs have on the level of crime in the neighborhood they serve.

Colleges and universities have become increasingly concerned about protecting their students since the Jeanne Clery Act took effect in 1991. As a result of this legislation, universities have been required to collect and release crime data for their campuses. These crime data can be instrumental in the enrollment decisions of prospective students and their parents. According to Janosik and Gehring (2003) 60% of students read crime-related reports, news articles, or flyers produced by their institutions. Their concern about campus crime may be warranted, given the fact that 15% of the students in this same study reported that they had been a crime victim while they were a student. Colleges, realizing that high crime rates can handicap efforts to attract students (and faculty), to their respective campuses, often use safe ride programs to show how they are actively working to keep their campuses safe.
Despite widespread prevalence of these safe ride programs, however, little systematic exploration has been done to assess their effectiveness. While Elam, McKaig, Jacobs, Whitlow and Louis (2006) found that a majority of students believe that safe ride programs are effective, there exists no statistical analysis of the actual effectiveness of safe ride programs on campus. Given the substantial investment that colleges continue to make with these programs and the increasing pressure on programs to demonstrate that they are having an impact, such studies could have a substantial impact for these programs in terms of funding and improving town/gown relationships.

History of UWM’s Safe Ride Program

In 1999 the University of Wisconsin – Milwaukee (UWM), started an evening shuttle program, Be On the Safe Side (BOSS), for students to utilize on campus and in the surrounding neighborhood. At its inception the program was defined as being a core component of UWM’s commitment to campus safety. Initially, students were allowed to bring guests on the vans but the program later transitioned to being a service strictly for UWM students. In 2015, however, the guest policy was reinstated. When BOSS started in 1999, neighborhood patrol teams were also part of the program and that practice continues today. During BOSS operation hours, three teams of two continue to walk the neighborhood surrounding the campus. If a student calls BOSS for a ride and needs to travel less than three blocks, the patrol team walks with the student instead of providing a shuttle. In this way the patrol program works to alleviate the burden BOSS faces during its busiest times, while still providing an escort service many students want to ensure their safety.
At other universities, similar shuttle programs are offered to promote campus safety.

Table 1 is a snapshot that compares the service BOSS offers, to similar programs across the country.

<table>
<thead>
<tr>
<th>University and Program</th>
<th>Cost Per Ride</th>
<th>Limitations and Regulations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>UWM BOSS</td>
<td>None listed</td>
<td>None listed</td>
<td>Will not pick up from a location that is “suspected of inappropriate behavior.”</td>
</tr>
<tr>
<td>Oregon State SafeRide</td>
<td>None listed</td>
<td>None listed</td>
<td>Does not pick up or drop off students at bars or parties.</td>
</tr>
<tr>
<td>University of Wisconsin – Madison SAFEride Cab</td>
<td>$1 donation plus tip per ride</td>
<td>1 ride per night 6 rides per semester</td>
<td>No more than two people per ride. Cannot use to go to a bar or a party.</td>
</tr>
<tr>
<td>Washington and Lee University Traveller Safe Ride Program</td>
<td>None listed</td>
<td>None listed</td>
<td>Only for students who do not live near a bus stop.</td>
</tr>
<tr>
<td>University of Pittsburg SafeRider</td>
<td>None listed</td>
<td>1 round trip ride per night 20 round trips per semester</td>
<td>Only for students who do not live near a bus stop. Cannot use for shopping trips or to a business that sells alcohol.</td>
</tr>
</tbody>
</table>

The BOSS program has some rules to guide its operation, but many of its policies are intentionally vague thereby neither limiting nor committing to a set number of rides a student can take during the year, nor to limit the location the vans will go. While the geographic territory is defined, places within the territory are generally not restricted. Having said that, the BOSS staff will not pick up students from a location where they suspect inappropriate behavior. This policy will be revisited in the discussion section of this paper.
The shuttle programs help ensure the safety of the students and the community members by providing students a safe method of transportation home during evening hours. According to DeJong (1995) these programs serve as a formal reminder to students that there is no need to drive under the influence. The service discourages drunk driving by providing students an alternative way to get home safely. Gieck and Slagle (2006) claim that this also benefits the surrounding campus neighborhood. They showed that for every $1 spent on van shuttles, the community saved $3. In another study examining a late night bus study, police captains appreciated the service because they felt it kept intoxicated people from driving or walking home, which in turn resulted in fewer alcohol-related arrests (Elam, McKaig, Jacobs, Whitlow, Gros Louis, 2006). Although these programs can sometimes be seen as expensive for the college they serve, there is a clear benefit for the campus community.

Even though there has been support to continue the shuttle programs, there have been some negative responses to these services. The concern with these programs is that it eliminates a student’s reason not to drink by providing a ride home (DeJong, 1995). If a student is guaranteed a free ride home at the end of the night, it enables a student to drink recklessly. There is also a concern that these programs are not getting to the root of the problem. In Kelly and Torres's study of women's perceptions of campus safety, they stated that safety services are crucial to the campus, but "these measures only address the fear of crime" (Kelly & Torres, 2006). Those who oppose these programs, are concerned about sending students the wrong message and only solving a short term problem.

When parents are getting ready to send their son or daughter off to college, questions about campus safety often arise during the school selection process. In Janosik's (2004) study on "Parents' Views on the Clery Act and Campus Safety," he found that parents were asking about
campus safety during campus visits and new student orientation, however, the crime statistics did not factor into the college decision. This could simply mean that parents, while interested in what colleges and universities are doing to keep their students safe, they do not have that as one of their priorities when selecting a school initially. Should something happen to their child during the school year, however, it could have a major impact on retention.

Although different universities implement campus shuttle programs at different capacities, these services are becoming a necessity. The shuttles help keep students from drinking and driving, and keep intoxicated students out of the neighborhoods. Even though this is a short term solution to the problems the student could be facing, it helps keep the campus community safe and gives the student a safety net. Not all students are going to make responsible decisions, but it should be the university's responsibility to help guide them towards being accountable for their actions.

Methodology

In conducting a study related to campus shuttles and safety, one might anticipate that university policy makers would target the program so that it is open during high crime hours and closed in low crime hours, leading to concern with reverse causality. If this influence dominates, positive correlation can be expected between the hours the program is open and the count of the crime. Indeed, national data confirm that relatively little crime occurs between 2am and noon, and the night hours before 2am have more crime than daylight hours (Dudzinski, 2011). Therefore, to select an estimation strategy that controls for this reverse causality, fixed effects in an hour of the week panel is ultimately controlled for. Each hour of the week is presumed to have a unique propensity for crime over the data window, supported by the frequent openings and closings of the program within any hour over the time series. It is shown in later analysis that
failure to control for these fixed effects generates an estimate for the program that conflates the program’s crime reducing influence with the tendency of the program to operate during high-crime hours. By comparing pooled and fixed effect estimates, the size of this confounding effect is isolated.

As suggested, the variation in the provision of the program acts as quasi-natural experiment to identify its impact on crime. Poisson regression is required for an hourly number of crime as a count data. Therefore, the follow regression is created with controls to build a more complete specification:

\[
\text{crime}_{it} = e^{(open_{it} \times \delta_1 + x_{it} \times \beta)} + \epsilon_{it}
\]

Where the independent variables, \(i\) and \(t\), represent the hour of \(i\) from the week \(t\) in the 182 weeks of the time frame. The variable of interest, \(open_{it}\), is given the value of 1 if the Boss van service is available in that particular hour, otherwise 0. The coefficient \(\delta_1\) denotes the relationship between the Boss van program being open and crime. \(x_{it}\) is the pooled content of control vector, varying with specific estimate. Conveniently, the coefficients are interpretable as the approximate response in the percentage of hourly crimes from a unit of increase in the independent variable. Also, to avoid overdispersion from Poisson data, the coefficients are bootstrapped 200 times following the recommendation from Efrom and Tibshirani (1993).

Findings

To generate the \(x_{it}\) containing the best information of controlled condition, so as to uncover the effect of the Boss van program as accurately, multiple specifications were attempted. The result is show in Table 1.
Table 1. Coefficient and significance of the effect of each element on crime

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td></td>
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<td>weeken</td>
<td>violent</td>
<td>nonviol</td>
<td></td>
<td></td>
<td></td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>0.091</td>
<td>0.0875</td>
<td>0.0848</td>
<td>0.1517</td>
<td>0.2049</td>
<td>0.0812</td>
<td>0.1460</td>
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<td>(1.84)</td>
<td>(1.74)*</td>
<td>(1.68)*</td>
<td>(3.56)*</td>
<td>(4.53)*</td>
<td>(1.09)</td>
<td>(3.70)*</td>
<td>(2.13)**</td>
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<td>School</td>
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<td>0.2270</td>
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<tr>
<td></td>
<td>(4.49)*</td>
<td>(4.63)*</td>
<td>(5.35)*</td>
<td>(3.05)*</td>
<td>(5.20)*</td>
<td>(5.61)*</td>
<td>(2.33)**</td>
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<tr>
<td>Precipitation(.1 mm)</td>
<td>-</td>
<td>-</td>
<td>0.0079</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0174</td>
<td>0.0186</td>
<td>2</td>
<td>0.0370</td>
<td>0.0120</td>
<td>0.06535</td>
<td></td>
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<td>2</td>
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<td>9</td>
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<td></td>
<td>(1.42)</td>
<td>(1.47)</td>
<td>(0.38)</td>
<td>(2.27)*</td>
<td>(0.96)</td>
<td>(1.96)*</td>
<td></td>
<td></td>
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<tr>
<td>Snow (.1mm)</td>
<td>-</td>
<td>-</td>
<td>0.0074</td>
<td>0.0973</td>
<td>0.2300</td>
<td>0.0958</td>
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<td>3</td>
<td></td>
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<tr>
<td></td>
<td>(2.64)*</td>
<td>(2.46)*</td>
<td>(3.29)*</td>
<td>(0.11)</td>
<td>(2.21)*</td>
<td>(0.87)</td>
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<td>Snow down(mm)</td>
<td>-</td>
<td>-</td>
<td>0.0038</td>
<td>0.0249</td>
<td>0.0253</td>
<td>0.0601</td>
<td>0.0319</td>
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<tr>
<td></td>
<td>1</td>
<td>5</td>
<td>6</td>
<td></td>
<td>7</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>(1.21)</td>
<td>(1.21)</td>
<td>(0.15)</td>
<td></td>
<td>(1.99)*</td>
<td>(1.44)</td>
<td>(0.41)</td>
<td></td>
</tr>
<tr>
<td>Min temp(.1C)</td>
<td>0.0050</td>
<td>0.0043</td>
<td>0.0006</td>
<td>0.0090</td>
<td>0.0041</td>
<td>0.00576</td>
<td></td>
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<tr>
<td></td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.29)*</td>
<td>(1.96)*</td>
<td>(0.20)</td>
<td>(2.14)*</td>
<td>(1.93)*</td>
<td>(1.00)</td>
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<tr>
<td>_constant</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.046</td>
<td>0.2095</td>
<td>0.0150</td>
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<td></td>
<td>17</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.15)</td>
<td>(3.55)*</td>
<td>(2.56)*</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>30648</td>
<td>30648</td>
<td>30648</td>
<td>30648</td>
<td>17496</td>
<td>13152</td>
<td>30648</td>
<td>30466</td>
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<tr>
<td>Cluster by Hr of Wk</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Month Control</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hr of Wk</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Fixed Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P<0.1 is *, p<0.05 is **, p<0.01 is ***
Column 1 in Table 1 shows the simple partial correlation involving only the element of whether the Boss van program is open or not. We can see that the opening of the Boss van program is correlated with a weakly significant 9.1% decline in count of crimes ($b=-0.091$, $t=1.84$, $p<0.1$).

Column 2 has both Boss van program and open school in sessions in the model because one may consider when school is in session crime around school as well as the demand for transportation and rides increase. This is supported by the coefficient that effect of school session accounts for 16.6% of the crime increase in school. By adding this element, the effect of Boss van program drop slightly to 8.8% in reducing crime counts, which is still a significant effect ($b=-0.088$, $t=1.74$, $p<0.1$).

Column 3 takes the influence of weather on crime into consideration since weather clearly impact both demand for transportation and crime. The meaningful weather condition on crime may include precipitation, snowfall, snow on the ground and minimum temperature. As shown in the column, one unit of increase in precipitation, snowfall and snow on the ground tends to decrease the crime count by 1.7%, 10.7% and 2.5% respectively; while, if minimum temperature increases by one Celsius degree, crime count will be 5% higher. With the weather condition considered, the effect of school in session increases to 17.3%. The target effect, the effect of the Boss van program, decrease again to even weaker but significant 8.5% ($b=-0.085$, $t=1.68$, $p<0.1$).

Finally in column 4 we add the effect for hour of the week, that is, the interaction of hour and day, based on the consideration that each hour of the week had a different mean amount of total crime. As is shown in the table that, when adding the effect for hour of the week, other elements still affect crime counts in the same direction, only the effect size varies from previous
ones. A noticeable 15.2% of the crime count reduction can be attributed to the Boss van program (b=-0.152, t=3.56, p<.01), which is nearly as twice as when the effect for hour of the week is not considered. This discrepancy in the magnitude of the coefficient suggest that using the effect of fixed hour of the day uncovered a substantial portion of the endogeneity that exist in the Boss van program.

To further investigate the conditions that will possibly affect the Boss van program’s effect on crime, next we take weekdays (Monday-Thursday) or weekends (Friday- Sunday) in to the model. The result is displayed in Table above.

A glance at the table reveals that in general, all the variables affect the crime count in the same direction as before except for precipitation and snow on the ground in the weekdays. They two changed their coefficient signs, meaning one unit of increase in the either precipitation or snow on the ground will encourage, rather than reduce, the crime in weekdays. This may signals that in weekdays the effect of weather, at least of precipitation and snow on the ground, is random. In other words, crime will happen as it should do in weekdays on matter what is the precipitation of the day and how much snow is on the ground. Based on this interpretation, our target effect, the open or close of the Boss van program in a designated hour, attribute to as much as 20.5% of the crime decrease in weekdays (b=-0.205, t=4.53, p<.01), while on weekends, the effect is only 8.1% (b=-0.081, t=1.09, p>.1). This comparison may indicate the less efficiency of Boss van program on weekends.

In the last two columns, effect on different types of crimes is also presented. When the crimes are categorized into violence and nonviolence based on the XYZ classification system, the Boss van program have significant effect on both of them. In addition, we should notice that,
even though both are significant at certain statistical level, the program is more effective on nonviolent crimes ($b=-0.185$, $t=2.13$, $p<.05$) than on violent crimes ($b=-0.146$, $t=3.70$, $p<.01$) – reduce nonviolent crimes by 18% and violent crimes by 15%, which seems not matching to the natural and the goal of the program. However, given that the program is operated during the time periods when violent crimes are more likely to occur, this is also interpretable. The program’s effect to nonviolence is probably due to the fact that nonviolence is not necessarily conducted during the night and early morning, when the Boss van program operates. Its effect coefficient might be inflated. On the other hand, because the rides are available only when the violent crimes are highly possible, the effect coefficient on violence shown above might be conservative.

(From here on talking about next table)

Furthermore, we investigating the number of rides Boss vans give in an hour, several relationships between crime and Boss van program have been uncovered. Within the 35 crime categories that we have examined, all of them receive negative effect implication with only one notable exception of kidnapping. This means, for the 34 crime categories, additional rides lead to lower every single crime category if the impact is significant; if the impact is not significant, additional rides is still feasible to each crimes only that the effect is not statistically significant. The significant effect details of the Boss van program on the 4 categories of crimes are presented in Table 2 below.

**Table 2 Coefficient and significance of the effect of each element on 4 specific types of crime**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Burglary</td>
<td>Kidnapp</td>
<td>MV theft</td>
<td>Robber</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Standard Error</td>
<td>t-value</td>
<td>p-value</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Rides (hourly)</td>
<td>0.06989</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Snow (.1mm)</td>
<td>0.00338</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Min temp(.1C)</td>
<td>0.01169</td>
<td>0.00038</td>
<td>3.04**</td>
<td>0.00677</td>
</tr>
<tr>
<td>Precipitation (.1mm)</td>
<td>0.00036</td>
<td>0.000217</td>
<td>2.59**</td>
<td>0.00100</td>
</tr>
<tr>
<td>Noon</td>
<td>0.7936</td>
<td>0.01806</td>
<td>2.45**</td>
<td>0.00027</td>
</tr>
<tr>
<td>June</td>
<td>0.5777</td>
<td>0.03782</td>
<td>1.87*</td>
<td>0.04864</td>
</tr>
<tr>
<td>2007</td>
<td>0.2535</td>
<td>0.03301</td>
<td>1.73*</td>
<td>0.04768</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.632</td>
<td>0.04768</td>
<td>1.50*</td>
<td>0.06266</td>
</tr>
</tbody>
</table>

P<0.1 is *, p<0.05 is **, p<0.01 is ***
The elements of control listed in Table 2 are selected to be presented here. To study the hourly rides as its relationship to each of the crime categories, the total slate of controls that should have been contained in the table included an indicator for every hour of the day, every day of the week, every month of the year and every year as well as the set of weather variables. However, uninteresting controls are omitted for brevity, keeping only the weather variables, Monday, Friday, 2am, 9am, noon and June as reference. These are selected because of the anecdotal values of Monday and Friday nights as “low crime” and “high crime” respectively. June was chosen to represent summer break. The times of 2am, 9am and noon were chosen to represent bar close, typical work hours and lunch time, respectively. The constant term represent a “normal time”, which the results are centered around, the time of Sunday at 12am in January, 2005.

In spite of the small coefficient value due to the measuring scale of number of rides, we can see that an additional ride from Boss van will be reduce about 7‰ of a burglary \( (b=-0.0069, t=3.04, p<.01) \), 3 ‰ of a motor vehicle theft \( (b=-0.0034, t=1.90, p<.1) \) and 3 ‰ of a robbery \( (b=-0.0034, t=1.81, p<.1) \), but encourage 6% of a kidnapping \( (b=0.070, t=2.19, p<.05) \). A more visible description of the effect can be found in the summary table below.

Table 3. a comparison between the effects of the Boss van program and the snowfall

<table>
<thead>
<tr>
<th>Crime</th>
<th>Yearly Estimated Impact</th>
<th>The same impact of one ride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burglary</td>
<td>-56 crimes</td>
<td>as 0.7mm of snowfall</td>
</tr>
<tr>
<td>Kidnapping†</td>
<td>+9 crimes</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>-38 crimes</td>
<td>as 0.15mm of snowfall</td>
</tr>
<tr>
<td>Robbery†</td>
<td>-39 crimes</td>
<td>as 0.4mm of snowfall</td>
</tr>
<tr>
<td>Aggregated Violent Crime†</td>
<td>-68 crimes</td>
<td>as 0.5mm of snowfall</td>
</tr>
<tr>
<td>Aggregated Nonviolent Crime</td>
<td>-216 crimes</td>
<td>as 0.1mm of snowfall</td>
</tr>
</tbody>
</table>

Note: BOSS delivers about 124,000 rides yearly. † is categorized as a violent crime.
While the table has coefficient of elements on each crime type with a reasonable sign, indicating it is promoting or reducing the type of crime, there are two additional patterns of notes in the data. Firstly, burglaries begin during the day, and tend to stop in the evening. In general, burglaries are likely to happen when people go to work (represented as 9am in Table 2), and not when they come home. Burglaries are unlikely to occur in the evening. Secondly, agreeing with the discussion above for Weekdays, weather element such as snow, snow on the ground, minimum temperature and precipitation do not dampen violent crimes. Most of these crimes appear to be impulsive, and therefore not particularly responsive to weather. Nonviolent crimes, such as vandalism and larceny, are very likely to be premeditated, and therefore impacted somehow by the weather.

While the program’s impacts on other crime categories are not significant, a list of all the crimes categories that are studied in this research can be found in the appendix to illustrate the statistically insignificant but practically important impact a shuttle program can have potentially. Although these crime categories were not affected in this study, it is entirely reasonable to thing that a similar shuttle service operating somewhere else could have a positive affect in reducing crime in some of these categories.

As the results are clear and confident, it is reasonable to conclude from all the discussion above that Boss van program reduces crime in a measurable and statistically significant amount.

Discussion

The data from this study confirms what many administrators feel, and what some researchers have anecdotally found. Elam, McKaig, Jacobs, Whitlow, and Louis (2006), for
example, stated “While one purported benefit of the Midnight Special (a Safe Ride program at one university in the Midwest) is keeping intoxicated student drivers off the road, available police arrest data are largely inconclusive, if not contradictory, to this claim. However, this perception remains, along with contentions that vandalism, noise, fights, and other alcohol-related disturbances have also been reduced by this service.” They go on to suggest “Efforts should be made by university administrators to work with the police departments to gather outcomes data more formally that can validly establish or refute these claims.”

Similarly Ketterman and Holmes (2009), in their analysis of the Safe Ride program at Frostburg State University, found that while the program was initially established to provide students with safe rides home at night, “Soon after implementation, the campus learned of other benefits of the program. The local law enforcement agency indicated that there was a decrease in nighttime vandalism. The local neighborhood group reported that nighttime noise also had decreased.”

While data from the study by Gieck and Slagle (2006) found that passengers using safe ride programs do so in order to reduce the risk of harm to themselves and others, there is also a monetary reason for colleges and universities to establish Safe Ride programs for their students. According to the National Highway Safety Administration (2002), safe ride programs save their communities $3 for every $1 spent.

Despite their effectiveness, however, Safe Ride programs can still use some good PR. In their study assessing late night bus services, Geick and Stangle found that 60% of students felt that safe ride programs promote drinking. Since safe ride programs do carry students to and from bars, it is entirely possible that community members might feel the same about these
programs. Nineteen percent of the students in Geick and Stangle’s study also said that when they used the Safe Ride program, they did consume more alcohol because the ride was available. In contrast, however, 81% of the students in the study, said that using the service did not influence their drinking behavior.

Add information on Table one (conflict between helping to alieve drunk driving while not stopping at bars and parties)
Appendix One: Summary of crime data. (add a top line: Crime Category…Number of Crimes Reported)

<table>
<thead>
<tr>
<th>Crime Category</th>
<th>Number of Crimes Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggravated assault</td>
<td>1488</td>
</tr>
<tr>
<td>All other larceny</td>
<td>3815</td>
</tr>
<tr>
<td>All other offenses</td>
<td>97</td>
</tr>
<tr>
<td>Arson</td>
<td>82</td>
</tr>
<tr>
<td>Burglary</td>
<td>2730</td>
</tr>
<tr>
<td>Counterfeiting/Forgery</td>
<td>4</td>
</tr>
<tr>
<td>Credit card/ATM fraud</td>
<td>9</td>
</tr>
<tr>
<td>Destruction of property</td>
<td>5018</td>
</tr>
<tr>
<td>Disorderly conduct</td>
<td>262</td>
</tr>
<tr>
<td>Extortion/Blackmail</td>
<td>0</td>
</tr>
<tr>
<td>False pretenses/Swindle/Confidence game</td>
<td>1</td>
</tr>
<tr>
<td>Forcible fondling</td>
<td>97</td>
</tr>
<tr>
<td>Forcible rape</td>
<td>75</td>
</tr>
<tr>
<td>Forcible sodomy</td>
<td>53</td>
</tr>
<tr>
<td>Homicide</td>
<td>28</td>
</tr>
<tr>
<td>Impersonation</td>
<td>4</td>
</tr>
<tr>
<td>incest</td>
<td>1</td>
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<tr>
<td>Intimidation</td>
<td>29</td>
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<tr>
<td>Kidnapping</td>
<td>100</td>
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<tr>
<td>Liquor law violations</td>
<td>20</td>
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<tr>
<td>Motor vehicle theft</td>
<td>2493</td>
</tr>
<tr>
<td>Pocket picking</td>
<td>51</td>
</tr>
<tr>
<td>Purse snatching</td>
<td>110</td>
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<tr>
<td>Robbery</td>
<td>1788</td>
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<tr>
<td>Sexual assault with an object</td>
<td>15</td>
</tr>
<tr>
<td>Shoplifting</td>
<td>333</td>
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<tr>
<td>Simple assault</td>
<td>1912</td>
</tr>
<tr>
<td>Statutory rape</td>
<td>45</td>
</tr>
<tr>
<td>Stolen property offenses</td>
<td>8</td>
</tr>
<tr>
<td>Theft from building</td>
<td>198</td>
</tr>
<tr>
<td>Theft from coin-operated machine</td>
<td>33</td>
</tr>
<tr>
<td>Theft from motor vehicle</td>
<td>5655</td>
</tr>
<tr>
<td>Theft of motor vehicle parts</td>
<td>1951</td>
</tr>
<tr>
<td>Trespassing</td>
<td>66</td>
</tr>
</tbody>
</table>
Weapon law violations 0

Literature Review

BACCHUS Initiative


Dudzinski, 2011


Janosik and Gehring (2003)


Ketterman and Holmes (2009),

Lewis, 1997

National Highway Safety Administration (2002),

Safe Ride Programs United (SRPU)


U.S. Census Bureau, 2012
Increasing Learner Metacognition and Self-Regulatory Behavior In Graduate Distance Education

Benjamin J. Roberts, Walter E. Owen

Naval Postgraduate School (United States)

Abstract

The purpose of this paper is to illustrate strategies taken to increase program completion in a graduate Systems Engineering program delivered primarily by web conferencing. Recent literature (Bezait 2016, Dunn and Rakes 2015) has called attention to the paucity of research on employing metacognitive and self-regulatory strategies in graduate distance education. The referent educational program for this article is a graduate, executive-level systems engineering program that is delivered primarily by web-conferencing. The authors are faculty members who have served as program managers for this program and have gathered lessons learned for over a fifteen-year period of time. The program is characterized by a two-week resident session at the onset, followed by two-years of coursework and a thesis requirement. The impetus for the strategies taken resulted from observations of successful course completion, followed by notable unsuccessful thesis completion rates. This, in turn, resulted in lowered graduation rates. This paper is a qualitative review of a work in progress to address program completion rates. More specifically, strategies are discussed that are complimentary to both the distance learning environment and student characteristics. The strategies taken collectively fall into both Metacognitive and Self-Regulatory practices. Of the many reasons in the literature for graduate program incompletion, the authors recognized a pattern described by Kiely (1984) that observed graduate candidates finding themselves disconnected from the structure of coursework and interaction with faculty. After completion of coursework, and at the onset of thesis work, students may experience isolation and lack of preparedness to conduct thesis work. As reaffirmed by Rakes and Dunn (2010), “Maintaining motivation may be more difficult for the online students as they face problems related to social isolation and technical issues that cause frustration not as frequently experienced by students in face-to-face classes.” Taking these perspectives into account, the authors, as program managers, have instituted a tiered strategy that occurs over the lifecycle of the student’s program. That strategy has included the following elements: A two-week resident orientation; providing students with their learning and perceptual styles; an ongoing seminar emphasizing critical thinking; thesis workshops; two industry trips to enhance learning, motivation and cohort cohesion; introduction of specifications grading. The implementation of these elements are described and discussed in light of program completion.
References:


1. Paper Title: “Indigenous Knowledge Active-STEM”: Promoting Culturally Responsive, Physically Active STEM Learning and Youth Development in Pre-High School Coeur d’Alene Tribal Students

2. Topic Area: STEM Education; Indigenous Education (additional topic area) (Research Abstract)

3. Preferred Presentation Format: Paper session

4. Description (75 words or less): This presentation will describe a multi-year project in partnership with Coeur d’Alene Tribe to provide pre-high school youth with culturally-relevant, physically active STEM education through canoeing and canoe building, snowshoeing and snowshoe lacing, native plant and animal identification, physically active games, and hiking. This presentation will focus on the reciprocal learning opportunities, optimal engagement, and relatedness that developed between youth and project staff. We will discuss various program challenges (and possible solutions?) as well.

5. Authors:

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HICE Abstract Proposal: Indigenous Knowledge Active-STEM: Promoting Culturally Responsive Physically Active STEM Learning and Youth Development in Pre-High School Coeur d’Alene Tribal Students

Background Significance: Enhancing STEM education and physical activity (PA) opportunities are two key initiatives for youth in our partner Tribal communities. STEM achievement levels are lower in the U.S. than other developed nations (e.g., Tabernik & Williams, 2010) and youth obesity levels continue to climb (Skinner, Perrin, & Skelton, 2016). These issues are particularly significant in Tribal communities, where an environmental-based STEM workforce is key to maintaining the community’s sovereignty (Cajete, 1994). STEM initiatives focused on the importance of cultural relevance and equity are only beginning to be developed, with a dearth of STEM programs for pre-high school Native American youth. Add to this situation, STEM programs tend to stay within well-defined disciplinary boundaries, with little attention to youth development from an Indigenous, holistic mind-body-spirit standpoint (Cajete, 1999). The White House released a press release recently (April 21, 2016) on “Advancing Active STEM Education for Our Youngest Learners.” Of the dozens of STEM projects highlighted, only one focused on Alaska Native STEM education and none mentioned physically active STEM.

Study Purpose and Setting: It is important to provide some information about the project in which this study is a part to provide some context of, and a deeper connection to, the community - as community is of the utmost importance (Weber-Pillwax, 2001). The Families in Four Seasons Project is an ongoing, multi-year project with Coeur d’Alene Tribe in Northern Idaho. The primary purpose of the project was to provide youth with culturally-responsive, physically active opportunities for STEM education through experiential learning of canoe and canoe paddle building, snowshoe lacing on wooden snowshoes, searching for native plants and animals, hiking, canoeing, and snowshoeing. The intent is for these activities to represent the four seasons of spring, summer, fall and winter with the incorporation of both old and new aspects of Coeur d’Alene culture (Stephenson 2008). Please see Project Medicine Wheel attached, which was developed for the Schitsu’umsh (Coeur d’Alene) Calendar. The hope is that youth learning these activities and skills will continue these traditions in their own lives and transfer these concepts and values to their families now and in the future. An additional purpose of this study was to provide project staff, including college student staff members, with knowledge of Coeur d’Alene culture and experience working with youth on physically active STEM projects. In this
way, the researchers hope for a reciprocal learning environment that values community, relationality, and respect for all learners (Weber-Pillwax, 2001; Wilson, 2008).

*Study Design & Methodology:* Youth participated in 17 Culture Days in the Active-STEM program over the course of the 2015-2016 school year. Program activities included physically active games and activities, building wooden canoe models and canoe paddles, building features of a 16-foot sturgeon nose canoe, including lacing to support the ribs and battens and sewing to attach the kevlar skin, snowshoe lacing, learning language terms for animals that could be found on trips, and Elder and visitor guest lectures/demonstrations. To date, seventeen 4th to 8th grade youth and seven project staff, including two undergraduate and three graduate students, have participated in the project. One research objective was to determine to what extent project students and staff felt the project accomplished the goals of providing physically active STEM learning opportunities and increasing cultural awareness for both Coeur d’Alene youth and university students. Another key objective was to determine what ways of learning and knowing university students and staff described as part of their own journeys on the project. This analysis relies on qualitative questionnaire data with four college students over three time periods in addition to 52 pages of field notes provided by staff and college students.

*Results & Discussion:* Results revealed several key youth development themes from the perspective of college students and staff: a) Youth engaged and learned about culturally responsive physical activities and Coeur d’Alene language, b) Youth learned how to use diverse wood working and other tools to make the canoe paddles, canoe models, and sturgeon nose canoe c) Snowshoe lacing may have exceeded the optimal challenge/skill combination, with the task proving difficult for youth and instructors alike, and d) Development of mutual trust and respect amongst youth and project staff, and the involvement of Elders and knowledgeable guests, enhanced youth learning outcomes and engagement (Relationality; Weber-Pillwax, 2001, Wilson, 2008). Staff also learned the importance of: a) lesson planning, and having Plan A and Plan B lesson plans with 2-to-3 hour class sessions, b) encouraging participation through role modeling (Respect, Reciprocity, Wilson, 2008), and c) interspersing STEM lesson plans with culturally- and age-appropriate physically active games. In this presentation, we attempt to relate these findings to Csikszentmihályi’s (1990) Flow Theory and Deci and Ryan’s Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2000), particularly the concepts of optimal engagement, autonomy, competence, and relatedness in Active-STEM education. Although there seemed to be some applicability of these theories to the findings, it may be that these theories seem to apply because the majority of project staff members have been trained in a Western approach. Further research is needed to determine to what extent, if any, these theories or modifications therein are responsive to Coeur d’Alene culture and education. Additionally, as part of this presentation, we will discuss various program challenges (and possible solutions?) as well.

*References:*


Strategies & Self-Regulation in ESL Writing:
Using Self-Regulated Strategy Development in an African Seminary

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Abstract

Self-Regulatory Strategy Development (SRSD) is an interactive instructional method used to teach writing through the use of strategies and self-regulation (Harris, Graham, Friedlander, & Laud, 2013). Using SRSD, the researcher implemented a 6-week essay writing unit in an ESL university classroom in Cameroon, West Africa. The author collected and analyzed data in the form of writing samples, student and teacher assessments, and student self-reflections. The findings demonstrate the effectiveness of SRSD within this setting, from a quantitative perspective (rubric-based assessments) and a qualitative perspective (student self-reflections). A discussion on the findings and implications for future use of SRSD are included.
Academic writing is a valuable and essential tool for all students across all subjects. At the university level, writing demands are significant. Students convey their knowledge and understanding through writing, especially expository writing. The process of writing is quite complex. Skilled writing involves knowledge of writing genres and formats, problem solving skills, and self-regulation (Harris, Graham, Friedlander, & Laud, 2013).

Academic English writing can present difficulties for students with a non-English speaking background. Students must master content knowledge as well as procedural knowledge necessary for writing, all in a language where they might still be struggling with grammar and vocabulary (Wong & Storey, 2006). This is true, not only within the United States, but around the world in areas where people from diverse linguistic and educational backgrounds are attending westernized English-based institutions (Li & Vandermensbrugghe, 2011; Pappamihel, Nishimata, & Mihai, 2008; Pessoa, Miller, & Kaufer, 2014; Wang & Bakken, 2004; Weaver & Jackson, 2011). This project was designed specifically to offer writing intervention, in the form of Self-Regulated Strategy Development, to ESL students in Cameroon struggling to meet university academic writing requirements.

**Purpose of the Project**

This action research project took place in a theological seminary located in the West African nation of Cameroon, boasting over 270 living languages. English, as one of the country’s two official languages, is the academic language of the institution, though it is not the primary or often secondary language of the majority of citizens. Academic writing is required in all content classes at this institution, and each instructor has his or her own requirements and specifications for written assignments. In teaching “English Grammar and Composition” to first year Bachelor of Arts students, my goal is to prepare them to write well in their content classes
and provide students with an effective writing strategy that can be easily reproduced and adjusted for a variety of writing situations and assignments.

Self-Regulatory Strategy Development (SRSD) is an instructional approach designed to teach task-specific writing strategies using self-regulatory procedures. Through teacher modeling, scaffolding, and allowing independent practice, students learn to organize, write and revise their work through memorization and implementation of writing strategies as well as self-regulatory strategies. Using flexible and recursive instructional procedures, teachers help students learn, maintain, and repeat effective writing skills (Graham & Harris, 1999; Harris & Graham, 1993).

In this project, students were introduced to a mnemonic strategy (POWER + TREE) to remember the steps of the writing process and the organization of a persuasive essay, based on POW+TREE, a common SRSD strategy. POW stands for Pick my idea, Organize my notes, and Write and say more. During the organization of notes, the mnemonic TREE is used, representing Topic sentence, Reasons: 3 or more, Explanation for each reason, Ending (Mason, Harris, & Graham, 2011). Within this instructional unit, two additional steps were added, creating POWER (Pick a topic, Organize, Write, Edit, and Revise). Also adjust slightly was the T in TREE. In this unit it stood for Topic, which is a broader concept than Topic sentence, and could therefore include more features of an introduction, such as introduction of the topic, background information, definition of terms, and the topic sentence. Within this unit, TREE stood for Topic, Reasons, Explain, and Ending.

This action research was designed to evaluate the effectiveness of SRSD on the academic writing abilities of students within this class. If academic writing skills increase, as expected, I will have a flexible teaching tool to supplement the curriculum and provide students with
strategies for many writing purposes. The question driving this research was: If Self-Regulated Strategy Development is taught, what will happen to the academic writing abilities of the students?

**Framework of the Project**

Academic writing can be a challenge for all students, and can be especially difficult for students with a Non-English Speaking Background. Many students not only lack grammatical and lexical knowledge, but can also have little experience with English academic texts (Ewert, 2011). Effective ESL university writing programs often include some or all of the following: Academic English and text structure instruction, process writing, self-regulation, and task-specific strategy instruction.

Academic writing has a particular style, rhetorical convention, and structure that is dependent on the arrangement and organization of ideas, use of specific language and vocabulary, understanding of genres, and the ability to use evidence to support main ideas and details. Explicit instruction in style and structure is important as it provides the framework for effective academic writing (Li & Vandermensbrugghe, 2011; Pessoa et al., 2014; Weaver & Jackson, 2011). Students should be exposed to and instructed in various expository text structures, in order to recognize basic components, including introductions, conclusions, and placement of main ideas and details (Bluestein, 2010; Montelongo et al., 2010). Students need practice interacting with various structures, noting interrelationships between ideas, in order to then apply that knowledge to their writing (Reynolds & Perin, 2009).

Students struggling with writing often lack necessary information about the writing process (Harris, Graham, Mason & Saddler, 2002). When students learn to write, it is essential that they learn to plan and organize before writing, and after writing, they should revise and edit.
Reviewing and revising one’s writing and/or having an outside observer help has been found to be helpful for ESL students (Pessoa et al., 2014; Weaver & Jackson, 2011). “Skilled revision involves critically reading one’s writing and comparing it to a representation of intended text, noting discrepancies, and making changes so the existing text becomes more in line with the ideal text” (De La Paz & Sherman, 2013, p. 129). This requires an emphasis on the text as a whole, consideration of rhetorical features, fluency, clarity, and text development and organization, rather than an emphasis on surface features, like spelling, mechanics, and word choice (De La Paz & Sherman, 2013; Ewert, 2011; Moussu, 2013).

Metacognition and self-regulation also contribute positively to writing performance. Using quality teacher feedback and self and peer assessments, students can learn about themselves, increase self-efficacy, and become more motivated (Lam, 2015). Writing lends itself to self-regulation because writing is an intentional activity with many parts and processes. Self-regulation offers routines and “building blocks” for the writing process, and offers the writer opportunities for fine-tuning in the process (Graham & Harris, 2000). It allows students to be autonomous in their writing by assisting students in remembering and maintaining writing strategies and transferring those strategies to various situations (Harris & Graham, 1999; Lam 2015; MacArthur, Philippakos, & Ianetta, 2014).

Skilled writers have a stock of strategies at their disposal for managing the writing process, such as task analysis, organization of content in specific genres, and revising for ideas (Graham & Harris, 2016; MacArthur et al., 2014). These strategies are not visible actions; so teaching them explicitly makes them tangible and understandable (Graham, Harris, & MacArthur, 2006). Task-specific strategies are useful as they can be duplicated in independent
writing, so it is important to teach students not only how to use them, but when to use them (Wong & Storey, 2006).

**Self-Regulated Strategy Development**

Self-Regulated Strategy Development was developed to address affective, behavioral and cognitive needs of students and provide powerful interventions for students tackling writing challenges (Harris & Graham, 1999). It is a teaching method involving explicit, interactive and scaffolded instruction to teach specific planning, writing and revising strategies, including various memorized mnemonics to remember the writing process, and how to apply these strategies across writing genres (Graham et al., 2006; Harris et al, 2013; Mason, Harris, & Graham, 2011).

The key components of Self-Regulated Strategy Development are self-regulation and strategy instruction. SRSD instruction generally flows in the same order starting with developing background knowledge and explicit text structure instruction, interactive discussion of strategies, teacher modeling of self-regulation and writing strategies, memorization of strategies, followed by guided practice, or scaffolding, in order to move the student toward independent practice, and eventually maintenance (De La Paz & Sherman, 2013; Graham et al, 2006; Harris et al, 2013; Guzel-Ozmen, 2009; Lienemann & Reid, 2008; Mason et al., 2009; Santangelo, Harris & Graham, 2008). Taking student needs into account, these steps can be rearranged and repeated as necessary (Harris et al, 2013).

SRSD has been effective in students with LD and ESL, and organizes instruction in such a way as to reduce the demands on working memory, by teaching small steps and utilizing guided practice (De La Paz & Sherman, 2013; Lienemann & Reid, 2008; Sexton, Harris, & Graham, 1998). SRSD has shown effectiveness in writing performance with students of all ages
and various writing levels, from elementary to university (Graham & Harris, 1999; Harris & Graham, 1999; MacArthur et al, 2014; Santangelo et al, 2008). Students successfully moved from teacher modeling to independent practice, and they used self-regulating strategies in their writing process (Guzel-Ozmen, 2009; Lienemann & Reid, 2008; Mason et al., 2011).

Methodology

As practical action research, this project was designed to focus on one specific issue (persuasive academic writing) in one specific classroom (English Grammar and Composition, BA year 1). The objective was to determine if SRSD could be used effectively to improve writing skills. Quantitative and qualitative data were collected in the form of student essays, student and teacher assessments, and student self-reflections.

Setting and Participants

Cameroon is officially a bilingual country divided into two sections linguistically, Anglophone and Francophone. The government school system uses English and French for instructional purposes. However there are over 270 distinct languages in Cameroon, including Cameroonian Pidgin English. These are the primary languages spoken in homes and communities. The seminary is located in the Anglophone area of Cameroon, and English is the language used for all professional purposes. The seminary is a theological institution with Bachelor of Arts and Master of Arts and Divinity programs. Students come from many ethnic and linguistic backgrounds, but almost all are from Cameroon with some students from neighboring Nigeria and Congo. Ages range from 19 to 46, and the vast majority of students are male.

As the researcher, I include my own demographic information only because it differs from the class and school demographics. I am an American white female with eleven years
teaching experience. I have taught expatriate and national students in primary and secondary institutions, as well as worked with mother tongue literacy programs for five years in Cameroon.

The English Grammar and Composition class in which this action research took place consisted of 25 male and 4 female students, totalling 29 students. All students were Cameroonian in nationality, and hailed from the Anglophone region of Cameroon. 9 students (7 male, 2 female) were selected as a sample size of the larger group for data collection, using systematic sampling.

**Procedures**

This action research took place in six weeks over an eight-week period of time during the second semester. The class met three hours per week in two sessions, lasting 1 hour and 2 hours respectively. The unit followed the 6 steps of SRSD, which are development of knowledge, discussion, modeling, memorization, and independent performance, repeating and reordering steps as necessary. Quantitative data, in the form of student essays and rubric-based student and teacher assessments, as well as qualitative data, in the form of student self-reflections, were gathered throughout the unit.

**Prior to the Instructional Unit**

Students were provided folders and asked to keep all their work from this unit in order to review it, evaluate it, and observe their growth in the writing process. Students completed the Initial Self-Reflection (Appendix A) answering questions about how they view themselves as writers, steps they take when writing, and their goals for writing. These were collected and analyzed thematically, and the results are discussed in the Data Analysis section.

Students were asked to write a 5-paragraph persuasive essay on education. The topic could be education in general or a specific aspect of education. There was no time limit, though
all students completed the essay within the scheduled 2-hour class period. This and all essays throughout the unit were scored using a 4-point rubric (Appendix B), assessing five traits of effective writing: ideas, organization, word choice, fluency, and conventions.

These two pre-assessments provided a baseline writing score, an understanding of students’ beliefs and goals, and information for guiding instruction. In the self-reflections, many students viewed themselves as unskilled writers lacking strategies for completing writing assignments, and many considered organization a weakness. In the student essays, many students included the basic structure of a 5-paragraph essay. However, many lacked effective style and necessary elements, including clear topic sentences, sufficient supporting details, and conclusions. All this encouraged me that SRSD, and POWER+TREE specifically, still aligned with goal of this research project, to provide students with strategies to write effectively for academic purposes.

**SRSD Instructional Unit**

Self-Regulatory Strategy Development generally follows 6 stages of instruction: develop and activate background knowledge, discuss the strategy, model the strategy, memorize the strategy, support the strategy, independent performance (Graham et al., 2006; Harris et al., 2002; Harris et al., 2013; Mason et al. 2011). When discussing strategies, this includes both writing strategies, such as TREE, and self-regulatory strategies, such as POWER. The stages do not necessarily go in order, and steps can be repeated as necessary throughout the unit. In this project, memorization of the strategies was encouraged and supported throughout the unit through repetition, but was not an explicit instructional stage.

POWER and TREE were exhibited on posters that hung in the classroom through the entire unit. The POWER poster simply displayed the mnemonic (Pick a topic, organize, write,
Develop and activate background knowledge. The first two sessions were dedicated to looking at good persuasive essays and discussing what made them good. After a brief overview of TREE, students were given three examples of persuasive essays. As a class, we read through each essay finding and marking the key parts, as shown on the poster, including the introduction, conclusion, reasons, and explanations of each reason.

I explained self-regulation, and we discussed its importance, including self-assessment. We discussed the fact that if they learn to assess their own writing, they could assess their future writing, finding what is good and what needs to be adjusted. Students were assigned to assess their initial essay for effectiveness. Using a checklist (Appendix D), students read through their essays looking for each TREE component, and completed the “Student” section of the checklist. Then I completed the “Teacher” portion of the checklist, looking for the same components. I then assessed their essay using a 4-point rubric (Appendix B), which provided a baseline quantitative score.

Discuss it. In the third classroom session, the use of strategies was explained in more depth. First, POWER and TREE were reviewed and then explained in more detail. The class discussed why using strategies such as these could be useful in their writing. Not only would they help in this class, but once learned and mastered, students could apply these strategies to other pieces of writing. We discussed how writing strategies and self-regulation, like the self-regulating they practiced in the previous session, would aid them in future assignments when they lack time to have their writing proofread in the writing lab, and can edit and revise their own work.
**Model it (POW + TREE).** I explained that I would demonstrate the POW, using TREE for organization. Since self-regulation is often an unseen cognitive process, I explained that I would demonstrate self-instructions, monitoring, and reinforcement by saying my thoughts aloud. Enthusiasm is important throughout SRSD, especially in this stage (Harris et al., 2002), so I demonstrated with energy and movement.

Using a subject familiar to all students, the topic was formed, “Why one should attend this seminary”. Applying a pre-writing activity, I wrote every idea I had about the topic. Then, explaining my thoughts, I grouped similar ideas together, and discussed the decision making process of sorting reasons and details to explain those reasons, as well as explaining which reasons were important and supportable. Then, using TREE, I organized the paragraphs, and then wrote the essay. Using self-speak, I explained writing decisions such as word choice, sentence fluency, sentence variety, grammar, and organization.

**Support it (POW + TREE).** Collaboratively, the class worked through each POW step to write on a new topic, the importance of tithing. Students offered input, and all ideas were accepted when writing our initial ideas. When deciding how to group ideas, students again offered ideas and most decisions were agreed upon by everyone. We narrowed down the three most important reasons to tithe: Tithing is a command, tithing brings blessings, the early church tithed. When we were uncertain about the order in which to list our 3 reasons, students voted. We organized the TRE outline together. When writing the essay, everyone offered input, and the class discussed differing ideas. Most of the writing was student generated, but as the instructor, I did offer suggestions and ask guiding questions.

**Independent performance (POW + TREE).** Students then independently wrote a new essay, using the strategies. Choosing from three topics, the importance of prayer, baptism, or
worship (topics familiar to theology students), students had one week to complete the assignment, which included a pre-writing activity, a completed TREE outline, and a complete essay.

**Discuss and model it (POWER + TREE).** The final two steps of POWER were discussed and modeled in the next session. The purpose and importance of revision were explained first, followed by a discussion of particular areas to be revised, specifically, Ideas, Organization, Voice, Word Choice, and Sentence Fluency. For each area, I modeled one or two examples and the thought process behind changing them. When discussing editing, I reviewed common grammatical mistakes and how to fix them. This included comma placement, pronoun clarity, pronoun-antecedent agreement, subject-verb agreement, verb tense, and apostrophe placement. The idea of reading one’s writing out loud was especially stressed, so that one is able to see and to hear their work. Students were introduced to editing and revising checklists (Appendix E) adapted from their textbook, “Writers INC”, by Sebranek, Kemper, & Meyer (2006).

**Support it (POWER + TREE).** After reading together a 5-paragraph persuasive essay in need of proofreading, the class collaboratively practiced editing and revising. We used the editing and revising checklists to assess the work and make changes.

**Independent performance (POWER + TREE).** After students completed their first independent essay (Essay 2) and brought it to class, they then were given the opportunity to independently practice editing and revising their work. Using the checklists previously modeled and supported, students spread out, read their work aloud, and made adjustments to their work. They then rewrote their essay and submitted a final draft.
Students then completed two more persuasive essays independently, using POWER + TREE. I supported students as necessary, and provided short lessons on specific difficulties that presented themselves in student writing, such as subject-verb agreement, verb tense, run-on sentences, and sentence fluency. For their fifth and final assessment (post-assessment), students submitted a complete and independently written persuasive essay from a list of education themed topics.

Self-Regulation

A key component of SRSD is self-regulation, as evidenced in the name itself. POWER + TREE are self-regulatory in nature as they offer a memorized order to the writing process to help students self-monitor. In this project, additional self-regulatory processes were added, including self-assessment and self-reflection.

**Self-assessment.** At two points in this project, students were asked to assess their own work. They reviewed their initial essay, looking for specific organization parts of TREE. After seeing their first and second essay scored on the 4-point rubric, students were asked to use the rubric to evaluate their third essay using the same rubric. Students then compared their assessment to my assessment in the third self-reflection.

**Self-reflection.** Students completed a total of four self-reflections (Appendix A), each evaluating different aspects of the writing and self-regulatory processes. This provided students with opportunities to reflect on their learning and growth and consider how they can improve. It also gave me insight as to how SRSD was working and if adjustments needed to be made. And finally, it provided qualitative data on the effectiveness of SRSD within this setting.
Data Analysis

Twenty-nine students participated in the SRSD unit. Using systematic sampling, 9 students were selected for qualitative and quantitative analysis. Every 3rd student from the alphabetical class list was selected, and for the purposes of this paper have been translated to letters A – I.

Each of the five student essays was assessed using a 4-point rubric (Appendix B). Final essays scores for all essays are compared in Table 1. Pre- and post-assessment rubrics, organized by separate writing traits (ideas, organization, word choice, sentence fluency, and conventions) and total score were compared to determine the effectiveness of SRSD within this classroom (Table 2).

Self-reflections did not correspond with assessments; they were analyzed separately. Self-reflections concerned students’ views of themselves as writers from the beginning of the unit to the end and students’ views on particular aspects of SRSD. These were studied and crosschecked, taking note of recurring words and phrases, and used to identify significant themes.

Findings

After using SRSD as an instructional method, this class demonstrated improvement in writing essays. Table 1 shows the total essay scores for all 5 of the essays independently written in this unit, including the pre-assessment and the post assessment, demonstrating overall improvement for most students. Self-reflections also indicate that students felt they improved in writing through the unit.
Writing Abilities

Writing abilities of students were assessed in the following 5 categories: *Ideas*, *Organization*, *Word Choice*, *Sentence Fluency*, and *Conventions*. Comparing the pre-assessment to the post assessment in Table 2, total scores increased in all but one student. Some students made slight increases, while others recorded large improvements in their writing scores.

Quite notable was Student A, increasing from 26 total points in the pre-assessment to 40 total points in the post-assessment, a perfect score. Also notable was Student G, with the lowest overall score of 23 in the pre-assessment, who increased his score to 36 in the post-assessment. The scores of Student D, which decreased from a total 30 points to a total of 28 points, demonstrate that not all students showed improvement in their writing abilities after the SRSD unit. However, in looking at student D’s performance on the third essay, one can see that this student showed improvement in previous essays (Table 1), but not in the final essay.

**Ideas.** It is not surprising that the trait of *Ideas*, the presentation of a clear topic with strong support, had the largest average combined score increase of all the traits, 1.9 points. Using SRSD, and specifically TREE, the idea of a clear topic is part of the repeated mnemonic, and was emphasized throughout the unit.

The first subsection of *Ideas* on the rubric was “Clear, focused topic & topic sentence.” Pre-assessment scores indicated that students earned an average of 3.1 in this area, which was a high number to begin with. That number increased to an average of 3.8 in the post-assessment, with all but one in the sample receiving 4 points, the highest possible score.

The second subsection, “Each paragraph supports the main ideas with strong, relevant details,” had the lowest overall score in the pre-assessment, with a 1.7 average. This increased to
3 in the post-assessment, which (along with a word choice subsection) was the largest variation in a single subsection, an increase of 1.2 points.

**Organization.** In addition to *Ideas*, another highly emphasized aspect of SRSD is *Organization*. Not only is the process of writing organized through POWER, but also there is a specific structure (TREE) for a 5-paragraph essay that students learn and practice. The combined subsections increased a total of 1.8 points from pre-assessment to post-assessment.

Both subsections of “Clear pattern of organization” and “Effective introduction and conclusion” made significant gains overall. Seven of the nine sample students received a score of 4 in “clear pattern of organization”. The post-assessment average score in this area was higher than “Effective introduction and conclusion,” (3.6 compared to 3.4), but “Effective introduction and conclusion” had a higher overall average increase (1 point compared to .8 points).

**Word Choice.** While not an over-emphasized writing trait within SRSD, significant improvement was made in this *Word Choice*, especially in the subsection “Precise language and carefully chosen words, avoiding repetition and redundancy.” This, along with the previously mentioned *Ideas*, had the highest gain in a single subsection, averaging 2.5 in the pre-assessment and 3.7 in the post-assessment. The subsection “Appropriate level of formality” increased a slight .3 points. However, that was the highest possible gain this category could make, as this was one of two categories in which all sample students received 4 points in the post-assessment.

**Sentence Fluency.** The first subsection of *Sentence Fluency* is “Complete and clear sentences that flow smoothly.” This area showed improvement overall shifting from an average of 3 to an average of 3.6. Also in *Sentence Fluency* was the subsection “Varied sentence
structures and lengths.” This subsection had a perfect average of 4 in pre-assessment and the same in post-assessment.

**Conventions.** This category was divided into “Punctuation and Mechanics (Spelling and capital letters)” and “Grammar”. These topics are not explicitly taught through Self-Regulatory Strategy Development, but were covered during the unit through mini-lessons on specific concerns that arose. The first category had very little gain, .2 points overall; and the second category had moderate gain of .7 points.

**Self-Assessment**

When students were asked to assess their work, it was met with almost universal disapproval. Most students complained that they could not do it, as they were submitting the essay because they thought it was their best work. However, students did complete the assessments (Table 3), and did not simply mark 4 in every category; and their total scores were not far from the teacher assessed total scores. The largest difference between student and teacher assessment was 3 points, and five differed by only 1 point. But in looking at the subsections, not all students recognized the specific strengths and weaknesses of their writing, as seen in the discrepancies between student and teacher assessment.

Students with lower overall scores (C, G, and F) had more room for variation in their scoring. While they recognized that their essay was weak in some areas and strong in others, those areas did not necessarily align with the areas that the teacher evaluated as weak and strong. Student G with the lowest total score differs from the teacher in 6 of the 10 categories. And for student F, the categories of *Ideas* and *Organization* are notable, as they underestimated *ideas* (3 and 1 compared to 4 and 2), and overestimated the subsection on introduction and conclusion with a perfect score of 4, while the teacher gave only a 2.
Students with the highest overall scores (A, E, and H) tended to assess their work with a more similar evaluation as the teacher’s assessment. Student A scored their work with 4 for every category but conventions, which received two 3’s. The teacher gave the same assessment with one exception, a 3 in Sentence Fluency. Student H only differed by 1 point from the teacher in 2 sections, grading their paper more harshly in Sentence Fluency and Conventions.

After comparing their self-assessments to teacher assessments, students reflected on the experience, considering what differed and why. The following statements were made in Self-Reflection 3, in answer to the question, “What can you do in the future to assess your work well?”

Student B: “In the future I should not focus more on marks but on that which is of help to me. I think I will learn from the assessment of the teacher to improve.”

Student C: “Check my punctuations, tenses, grammar, etc.”

Student E: “I need to check it for ideas, organization, word choice, sentence fluency and conventions. These guide pages I think will help me do a better assessment.”

Student F: “I will have to read the essay over to see some weaknesses in grammar, support of each point, effective conclusion and introduction so as to assess it well.”

Student I: “The most important thing is to reread my work after writing before editing the work. Also someone can also read my work before I can make the final copy.”

**Self-Reflections**

Self-reflections provide insight into the unseen aspects of the writing process. Through self-reflection, students consider their learning, management, and writing ability. In studying self-reflections 1, 2, and 4, four significant themes emerged.
Self-efficacy. The theme of self-efficacy understandably developed because students were asked in each of these reflections to consider themselves as writers. They considered their strengths and weaknesses, and without prompting, some considered their attitudes toward writing. The initial self-reflection had a wide variety of answers to the question, “How do you consider yourself as a writer?” They were almost all negative comments, such as “I find difficulties with…,” “I face challenges,” and ,“I know that I am not a good writer.”

By the end of the unit, however, these same students who wrote poorly of themselves had adjusted their answer to positive. One student simply changed his answer from “fair” to “good”, and another wrote in her final reflection, “I feel very good and more confident when I write now more than ever before.” Two students in the initial reflection discussed their willingness to try and desire to improve. By the end, they considered themselves “better” and “improved”. Student C considered his specific writing skills and listed his difficulties in the first reflection, but by the final reflection, he wrote, “I am very sure that I have improved my writing skills as compared to the time I was yet to come here.” Student I had the largest shift in self-efficacy, with his original response of “…not a good writer,” changing to, “I consider myself a good writer because the way I organize my work has greatly improved. The ideas that I have I can really express it out now based on POWER and the TREE method.”

Organization. In self-reflection 2, students considered the positive and negative characteristics of the writing unit, as well as specific aspects in which they had improved. Organization was the most common response. One student said, “I was so disorganized but now I have improved in the area of organization,” and another wrote, “It has improved in my style of presenting my work and organizing it.” Organization was implied in other comments like, “It has helped me in that I now know the importance of outline and how to link up my ideas.” Many
students also listed organization as a helpful part of the POWER and TREE strategy. Student D, whose overall score decreased in the post-assessment, wrote in the final self-reflection that her strength was to, “Organize work or ideas well.”

**Self-evaluation.** Another commonly mentioned helpful quality of POWER + TREE was evaluating one’s own work. “We have learnt in this course to write and self-evaluate the work,” said one student. Though students audibly complained about editing and revising their work prior to doing it, their reflections show that they found it helpful. It appeared that the idea of checking over one’s work was a new concept to some students, like the student who now knows, “I can check my work for coherence, flow, and so on,” and another who said he was able to “do some proper check out which I never did before.” One student remarked, “It has caused me to know that I always need to edit and revise my work after writing,” and yet another appreciated, “critical checking helps me realize errors.”

**Content over conventions.** There is a marked difference in the way students discuss writing in the first reflection and the last. When discussing specific parts of the writing process, most references in the initial reflection relate to surface features of writing, such as grammar, punctuation, spelling, and vocabulary. Much fewer references are made to writing as a whole and as a process. In the final reflection, though, references to conventions decrease, while many comments are made such as, “have good ideas to be developed,” “develop the body of my writing,” “bring good ideas and organize them effectively,” and, “organize the materials and develop them with good facts and examples.” A majority of students now viewed writing as more than words put together following grammar and spelling rules, but a multi-step process involving ideas, organization, fluency, word choice, and conventions.
Discussion

The research question of this action research project was: If Self-Regulated Strategy Development is taught, what will happen to the academic writing abilities of the students? Teacher assessments, student self-assessments, and student self-reflections demonstrate the effectiveness of SRSD within this context, specifically in the increase in writing scores and the positive feedback from students.

In examining the specific areas of growth in writing, there are some interesting trends. While it was noted that Ideas is specifically addressed throughout this unit, it is also worthy to note that the Ideas subsection, “Each paragraph supports the main idea with strong, relevant details” had the lowest overall score of any subsection, so it had the most room for improvement. Yet it still had the lowest overall average score on the final assessment. However, the scores improved, and I believe with more practice, could increase even more.

While the idea of paragraphs supporting the topic through strong details was emphasized repeatedly, Word Choice was not as frequently mentioned. It was therefore surprising that the Word Choice subsection, “Precise language and carefully chosen words, avoiding repetition and redundancy,” had such a large increase. In assessing essays, I wrote many notes that simply said, “Word choice,” indicating notes and assessments might not have only been read, but possibly affected students’ writing.

Within Sentence Fluency, “Varied sentence structures and lengths,” was not really a factor in this unit. Students had no problem with sentence variety at the beginning of the unit, nor did they have a problem at the end. The main issues with sentence fluency were with incomplete sentences and run-on sentences. Therefore, I included mini-lessons on these issues, and it appears to have helped.
The majority of the mini-lessons throughout the unit were on conventions, mostly in commas, quotation marks, verb tense, and subject-verb agreement. However, *Conventions* did not improve as much as other sections. Mechanics specifically had very little growth. Students continued to struggle with comma and quotation mark use, but they especially struggled with spelling. We did not discuss spelling in the lessons, and I simply marked their spelling mistakes in their papers. We discussed and practiced verb usage multiple times in the unit, but it did not appear to have a large impact on scores.

It was clear from the beginning of this unit that self-assessment was unusual and uncomfortable for students. This involved critical analysis, a didactic component possibly lacking in a government school system that values rote memorization. Many reacted negatively to any activity involving the evaluation of their own work, including editing, revising, and self-assessing. However, as we have seen from their self-reflections, the activity was valuable. The largest increase in total scores from one essay to the next occurs between the Pre-assessment and Essay 2, in which they first edit and revise.

In self-assessing Essay 3, students seemed to be aware of how well they scored overall. Students receiving lower marks from the teacher also scored themselves lower, and students receiving higher marks from the teacher scored themselves higher. Struggling writers however, were not able to always pinpoint where their writing was lacking or excelling. If struggling writers could recognize specifically where they need improvement, it might help them improve. This might be an area for further research.

**Implications**

This action research has demonstrated that SRSD is a valuable teaching strategy in this setting. It provides students with strategies, structures, and self-regulatory processes to guide
their writing. It was not difficult to implement, and the lessons were interesting enough to hold students’ attention. The mnemonics made it easy for students to remember and reproduce the strategies.

A large amount of practice is crucial to this teaching strategy. Students need opportunities to try what they’ve learned, evaluate what they’ve learned, and try again. There is still room for improvement, so it would be good, if time provides, to even offer one or maybe two more opportunities to practice these skills. In addition to practice, students received feedback. Each time students submitted an essay, I assessed them and returned them quickly, giving students feedback that could inform their next assignment.

In thinking about their writing, students shifted from focusing on surface features to content as a whole, but that doesn’t mean they forgot about conventions or that they no longer had problems with conventions. They still mentioned their need to improve in the areas of spelling, punctuation, grammar, and vocabulary, and the data affirms that.

The unit has already demonstrated value in many ways. It has provided a self-regulatory writing strategy that can be applied to other writing. When the class continued to the next writing unit, article and book reviews, students were already aware that any writing assignment is a process and we used POWER to guide our work. The unit also demonstrated that self-evaluation is crucial to the writing process. Students have continued to evaluate their work, but with much more ease than at the beginning of the unit. It might be helpful in the future to incorporate peer editing and revision to the unit.

Limitations

This action research took place in 6-weeks within an 8-week period in one “English Grammar and Composition” class at the BA level in a theological seminary in Cameroon. There
was no control group, and SRSD was not compared with other instructional methods. Therefore, it cannot be said SRSD was the only reason scores improved, or that scores improved more with SRSD than another teaching strategy. However, students did demonstrate growth. They wrote significantly better papers at the end of the unit compared to the beginning of the unit.

Within the class, nine students were chosen for data collection and analysis. It is therefore limited in its scope, and findings may not necessarily be applied to a wider context. Qualitative results, such as self-reflections, while informative to the teacher and students, also may not pertain to a larger population.

Other limitations include time, schedule, attendance, and cultural values. The length of the unit was affected by the institutional schedule; administrative demands interrupted the class schedule the second and third weeks of instruction, therefore causing the 6-week unit to be taught in 8 weeks. Also, all classes were scheduled in the afternoon, some of them late in the afternoon. This affected motivation and engagement in class activities and lessons. Attendance and tardiness were also factors, as they affected instruction and completion of assignments.

When reviewing the self-reflection surveys, one must consider the high cultural value of respect for authority within this setting. Respect mandates that those in lower positions, i.e. students, show deference to those in higher positions, i.e. teachers. Criticism of authority is not allowed. Therefore, answers to direct questions about difficulties and struggles with the instructional approach might not be completely forthright.

Culture must also be considered when looking at the teacher-student dynamic. With an American female as the teacher of an almost exclusively male class, there are some considerations. Males tend to be those in positions of authority in Cameroon, although there are other women as teachers at this school. Also, I speak with an accent, so there could be
communication issues. In addition, there are always cultural differences that people are unaware of that can affect how you interpret and evaluate a situation. However, having lived in Cameroon a total of five years, I am familiar with many cultural aspects, and I also adjust my speech to be understood; and having taught this same class the first semester, the students were familiar with me and we had a positive, respectful rapport.

As an action research project, the goal was to find a practical solution to a specific problem. This research, despite the limitations, has accomplished its goal. Teaching SRSD in this specific context has demonstrated value and efficacy in raising essay writing scores.
References


Table 1: Essay Total Scores

*Students were assessed using a 4-point rubric measuring ten writing characteristics (Appendix D) for each of their written essays throughout the unit, including the pre- and post-assessment essays. This table presents the total assessment scores of each essay, out of a possible 40 points.*

<table>
<thead>
<tr>
<th>Student</th>
<th>Pre-Assessment</th>
<th>Essay 2</th>
<th>Essay 3</th>
<th>Essay 4</th>
<th>Post-Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<td>36</td>
<td>37</td>
<td>/</td>
<td>40</td>
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<td>B</td>
<td>34</td>
<td>36</td>
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<td>C</td>
<td>26</td>
<td>36</td>
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<tr>
<td>D</td>
<td>30</td>
<td>32</td>
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<td>33</td>
<td>30</td>
<td>36</td>
<td>34</td>
<td>37</td>
</tr>
</tbody>
</table>
Table 2: Pre- and Post-Assessment Scores

Students were assessed in 5 categories of effective writing traits, based on a 4-point scale (Appendix D). Each writing category has two subsections, but due to space restrictions, the subsections have not been labeled here, but their labels can be found on the rubric (Appendix D). This table presents the students’ pre- and post-assessment scores, the average scores of each subsection and total scores, and the total difference in average scores from pre- to post-assessment.

<table>
<thead>
<tr>
<th>Student</th>
<th>Ideas</th>
<th>Organization</th>
<th>Word Choice</th>
<th>Sentence Fluency</th>
<th>Conventions</th>
<th>TOTAL</th>
</tr>
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<tbody>
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<tr>
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<table>
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<tr>
<th>Student</th>
<th>Ideas</th>
<th>Organization</th>
<th>Word Choice</th>
<th>Sentence Fluency</th>
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<th>TOTAL</th>
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<tbody>
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</tr>
<tr>
<td>C</td>
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<td>2</td>
</tr>
<tr>
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<tr>
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<td>3.6</td>
<td>3.4</td>
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<td>3.7</td>
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Difference | +.7 | +1.2 | +.8 | +1 | +.3 | +1.2 | +.6 | 0 | +.2 | +.7 | +7.1 |

*All decimals are repeating.
Table 3: Self and Teacher Assessment Scores (Essay 3)

Following Essay 3, students assessed their own essays using the 4-point rubric (Appendix D). The teacher also assessed the essays using the same rubric. This table presents the students’ self-assessments and the teacher assessments. Each rubric section has two subsections, but due to space restrictions, the subsections have not been labeled, but their labels can be found on the rubric.

<table>
<thead>
<tr>
<th>Student</th>
<th>Self Assessment Scores</th>
<th>Teacher Assessment Scores</th>
</tr>
</thead>
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<td>Ideas</td>
<td>Organization</td>
</tr>
<tr>
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<td>4 4</td>
</tr>
<tr>
<td>B</td>
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<tr>
<td>I</td>
<td>4 3</td>
<td>3 4</td>
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</table>
Appendix A

Self-Reflection Questions

Initial Self-Reflection:
1. How do you consider yourself as a writer?
2. When writing for school, what are your strengths?
3. What are your weaknesses?
4. What would you like to improve or learn in the area of writing?
5. When given a writing assignment, what steps (if any) do you take to complete the assignment?

Self-Reflection 2:
1. Did you find using POWER & TREE helpful in writing this essay?
2. What has been helpful about using this strategy?
3. Is there anything that has not been helpful? Explain.
4. Do you feel your writing has improved?
5. If yes, how has it improved?
6. In what areas of writing do you still need more improvement?

Self-Reflection 3:
1. When you compare your assessment to the teacher’s assessment, what are some differences?
2. Why do you think that is?
3. What can you do in the future to assess your work well?

Final Self-Reflection:
1. How do you consider yourself as a writer now?
2. What are your strengths?
3. What are your weaknesses?
4. When given a writing assignment in the future, what steps (if any) do you take to complete the assignment?
## Appendix B

### 4-Point Rubric

<table>
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<tr>
<th>Ideas</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>• Clear, focused topic &amp; topic sentence</td>
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<td>2</td>
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<td></td>
</tr>
<tr>
<td>• Each paragraph supports the main idea with strong, relevant details</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clear pattern of organization</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
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<tr>
<td>• Effective Introduction &amp; Conclusion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</table>

<table>
<thead>
<tr>
<th>Word Choice</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Appropriate level of formality or informality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>• Precise language and carefully chosen words, avoiding repetition and redundancy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sentence Fluency</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Complete and clear sentences that flow smoothly</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>• Varied sentence structures and lengths</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conventions</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Correct punctuation (Commas, periods, apostrophes, etc.) &amp; mechanics (capital letters, spelling)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>• Correct Grammar (subject-verb agreement, verb tense, pronoun – antecedents, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>/40</th>
</tr>
</thead>
</table>
Appendix C

**TREE POSTER**

**TREE**

**TOPIC**
- Introduce topic
- Define terms (if necessary)
- Give background information
- Topic Sentence (State your position)

**REASON**
- Give at least 3 reasons that support your topic

**EXPLAIN**
- Explain each reason using supporting details/examples/quotes

**ENDING**
- Restate main ideas
- Reaffirm your position
- One last thought
Appendix D

TREE Checklist for Initial Essay (Pre-assessment)

Student Checklist:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did I introduce the topic in an interesting way?</td>
<td></td>
</tr>
<tr>
<td>Did I define necessary terms?</td>
<td></td>
</tr>
<tr>
<td>Did I give background information?</td>
<td></td>
</tr>
<tr>
<td>Do I have a strong topic sentence?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reasons</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do I have 3 separate reasons to support my topic sentence?</td>
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</tr>
<tr>
<td>Are they strong and supportable reasons?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Explanations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do I have strong explanations for each reason?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Ending</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do I restate main ideas/reasons?</td>
<td></td>
</tr>
<tr>
<td>Do I reaffirm my opinion?</td>
<td></td>
</tr>
<tr>
<td>Do I offer a new reason? (If so, it does not belong in the ending)</td>
<td></td>
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</table>

Teacher Checklist:

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<tr>
<th>Topic</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Interesting Introduction?</td>
<td></td>
</tr>
<tr>
<td>Definition of necessary terms?</td>
<td></td>
</tr>
<tr>
<td>Background Information?</td>
<td></td>
</tr>
<tr>
<td>Strong topic sentence?</td>
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<table>
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<td>3 separate reasons?</td>
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<td>Strong and supportable reasons?</td>
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<td>Strong explanations?</td>
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<tr>
<td>Reaffirm opinion?</td>
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</tr>
<tr>
<td>New reason? (If so, it does not belong in the ending)</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E

*Edit and Revise Checklist*

**Revision Checklist:**

**Topic**
- Did I introduce the topic in an interesting way?
- Did I define necessary terms?
- Did I give background information?
- Do I have a strong topic sentence?

**Reasons**
- Do I have 3 separate reasons to support my topic sentence?
- Are they strong and supportable reasons?

**Explain**
- Do I have strong explanations for each reason?

**Ending**
- Do I restate main ideas/reasons?
- Do I reaffirm my position?
- Do I offer a new reason? (If so, it does not belong in the ending.)
- Have I used the appropriate level of formality?
- Do I sound interested in, and knowledgeable about my topic?
- Do I avoid unneeded repetition and redundancies?
- Are my sentences complete and clearly written?
- Do my sentences flow smoothly?
- Have I varied my sentence beginnings and lengths?

**Editing Checklist:**

- Do my sentences end with proper punctuation?
- Do I use commas correctly in compound sentences?
- Do I use commas correctly in a series and after long introductory phrases or clauses?
- Do I use apostrophes correctly?
- Do I punctuate quotations correctly?
- Do I start my sentences and proper nouns with capital letters?
- Have I checked for spelling errors?
- Do the subjects and verbs agree in my sentences?
- Do my sentences use correct and consistent verb tenses?
- Do my pronouns agree with their antecedents?
Ensuring Integrity for the Review of the Performance of Faculty

Conference Topic: Higher Education

Research Paper

Paper Session

The review process and procedures that govern the evaluation of full-time Faculty at National University for meritorious achievement (merit) is designed to assure consistent, objective, and equitable review of performance. The evaluation for merit includes a review of the full effort of the individual since the previous academic year deadline for the last completed evaluation for their rank at National University, considering the accomplishments of the rank sought.

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Ensuring Integrity for the Meritorious Review
of the Performance of Faculty

Submitted to the 2017 Hawaii International Educators Conference

Honolulu, Hawaii

Higher Education

Paper-in-Progress Session

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Abstract

The review process and procedures that govern the evaluation of full-time Faculty at National University for meritorious achievement has been designed to assure consistent, objective, and equitable review of the performance of Faculty. At this University, excellence in teaching is a central institutional goal. Simultaneously, excellence in scholarship and service are highly valued aspects of the role of full-time Faculty members.

Faculty must be mindful of expectations when negotiating their Faculty Development Plans (FDPs) with their respective Chairs to ensure they are allowed sufficient time to meet the expectations in all three areas. Deviations from these expectations should be clearly noted in the FDP and referred to when the faculty member applies for meritorious achievement. The evaluation of Faculty for reappointment includes a review of the full effort of the individual since the published deadline for the last completed evaluation.

In this paper, the process of evaluative review of faculty for meritorious achievement will be examined at National University, according to the University policies and procedures, by an evaluation calendar set up by the Provost, along with the success rate of faculty members achieving merit. The evaluation of Faculty for merit includes a review of the full effort of the faculty for the current academic year, commensurate with faculty member’s current rank at National University. The success rates of these results will be examined according to records compiled by the University Office of the Provost.
Ensuring Integrity for the Meritorious Review
of Faculty Performance

Background, History and Mission of National University

National University, a private university of 28,000 students with headquarters in San Diego, California is dedicated to making lifelong learning opportunities accessible, challenging, and relevant to a diverse student population in its mission statement. Its aim is to facilitate educational access and academic excellence through exceptional management of University operations and resources, innovative delivery systems and student services, and relevant programs that are learner-centered, success oriented, and responsive to technology. National University’s central purpose is to promote continuous learning by offering a diversity of instructional approaches, by encouraging scholarship, by engaging in collaborative community service, and by empowering its constituents to become responsible citizens in an interdependent, pluralistic, global community (National University General Catalog, 2016, p. 18).

National University was founded in 1971. The 1970s brought dramatic growth and change to colleges and universities across the United States, driven largely by the demands of baby boomers, minorities, and veterans to gain greater access to higher education. There was an overlooked demographic which encompassed all of those populations: the working adult. In 1971, National University was established to serve the needs of business executives, military officers, law enforcement officials, and others with the desire to learn while they earn. Its founder realized that few people could afford to put their life on hold for several years while they pursued a degree, so he tailored a flexible format of one-month long classes that accommodated the academically disenfranchised nine-to-fivers.
Performance of Faculty to Meet Growing Accountability Demands

An important and welcome change has taken place on all college and many university campuses over the last 30 years, except those with strong graduate schools of research: Teaching is being taken more seriously. Higher education institutions throughout the country have transitioned from providing lip service of the importance of teaching to sustained evaluation to decisions to evaluate and reward this concept. As never before, faculty members are being held accountable to provide solid evidence of the quality and effectiveness of their instruction. This solid trend has replaced the traditional role of the professor being hired to teach, and being rewarded for their research.

What has been behind this increased emphasis on the importance of quality teaching and effective instruction? The growing demands from students and parents facing spiraling tuition and college expenses, and the general public for increasing expenses of public colleges and universities. In addition, the rapid development of use of technology for offering online courses replacing on-site courses has dramatically changed the approach to instruction and altering the teaching role of professors. Probably the biggest demands increased teaching accountability have come from elected legislators and boards of public higher education institutions faced with unrelenting budgetary pressures from growing expenses of their operations. Consequently, both public and private higher education institutions are now under closer scrutiny faculty members teaching quality and instructional effectiveness. This has come from higher education administration and more significantly from regional and national accrediting agencies demanding assessment of instructional results on students.

Private for-profit institutions are under a different type of pressure to provide relevant programs for students finding employment and launching successful careers, along with increasing graduation rates as a condition of receiving continued federal funding and Pell Grants.
Some of these institutions have been hit with re-accreditation snags because of low graduate rates, too much emphasis on student recruitment as opposed to servicing already enrolled students.

These increasing demands and implementation have resulted from faculty member associations pushing back by demanding shared governance for fairness and equitable treatment from assessments and accountability, and taxpayer demands for more effective use of tax revenues. As a result, faculty meritorious achievement for merit pay have become increasingly complex in recent years in terms of assuring consistent, objective, and equitable review of their performance. In the face of these increasing complexities for delivering fair and objective review of faculty performance, how can faculty member performance and evaluation be objectively assessed?

**Early Research on Evaluation of Faculty**

Early research on how faculty performance is evaluated were based on reports from academic deans or vice presidents. One of the earliest studies was by Gustad (1961) and included a national sample of colleges and universities. Astin and Lee (1967) repeated the survey about five years later with a similarly extensive sample of all types of postsecondary institutions. Both studies asked administrators to indicate the importance of various sources of information in evaluating, first, faculty performance and, second, teaching performance. The results were analyzed by type of institution. In both surveys, the university deans of arts and sciences ranked department heads as the most important source of information.

In 1974, Seldin (1975) repeated the Gustad and the Astin and Lee surveys in 1974 with Academic deans in liberal arts colleges in order to examine changes that might have taken place in the eight-year period. The deans reported more emphasis on systematic student ratings in
evaluating teaching (an increase from 11 to 29 percent of the colleges) and slightly less emphasis on research in evaluating overall faculty performance. The increased use of student ratings in making decisions on faculty advancement was also reported in studies that included doctoral-level universities (Bejar, 1975; Boyd & Schietinger, 1976). A Southern Regional Education Board study found, in addition, that the major purpose of evaluation in doctoral-level universities was to make decisions on faculty advancement, rather than to improve instruction, and that department heads had greater responsibility than academic deans or vice presidents in making these decisions (Boyd & Schietinger, 1976).

**Three Page Merit Request Letter for Faculty Evaluation of Teaching**

For years of evaluating faculty performance for merit pay, there was ample evidence for research grants, conference presentations, professional journal publications and books and/or chapters, but little factual evidence and objective documentation for fair assessment and evaluation of teaching performance. More recently, a three page digital letter has been submitted by faculty members to honestly reflect on their evaluation of teaching performance through various means that will be explained later, but also reflect and provide validation for faculty scholarship, and service. This letter, submitted without documentation, has been an effective means for merit pay requests because of the high trust level between faculty members evaluating the letter and the university administration.

A Teaching section in the letter is a factual description and reflection of a professor’s accomplishments of teaching, service activities, and scholarship accomplishments, which collectively suggests the scope and quality of the professor’s performance. It allows the professor to briefly describe examples of accomplishments and present them in an organized manner for display to others for their evaluation. Furthermore, it provides an opportunity for a
description of the uniqueness of his/her teaching, service, and scholarship from a separate reflection from each, and providing documentations for support in each of three categories.

Why should faculty members spend time developing and organizing a Teaching Section in the letter of merit, which includes a summary of student ratings on quality of teaching, along with peer and administrative reviews. Because it makes good accountability sense to publicly and professionally document teaching in the same public manner that service and scholarship is presented and documented with artifacts. Merit request letters also elevate the importance of teaching on a par with service and scholarship.

What are the uses of faculty merit letters of request? Some uses may include developing a summary to change jobs to a different teaching position or a higher-level position, future employer requirements for finalist candidates, merit pay consideration, leaving a legacy of accomplishments upon retirement for successors, applications for grants or release time, for institutional use to provide data for their performance to their board of trustees, external organizations, accrediting agencies for re-accreditation, government agencies for grants, etc. However, the two most important reasons for a teaching summary are personal in nature: merit pay, and to enhance accountability of higher education institutions by showing continuous improvement of teaching. Standardization of teaching merit pay letters meaning that certain required components are needed for meritorious achievement and merit pay.

National University Guidelines for Faculty Evaluation

This three-page merit pay letter request model has been in place at National University for review by multiple evaluation channels for the evaluation for faculty member merit pay. This procedure has been approved by the University Faculty-Senate for their policies and bylaws, and adopted by the University Board of Trustees. Faculty achievement in the merit pay letter is
ENSURING INTEGRITY

presented and reviewed in the traditional three areas of higher education faculty evaluation: teaching, scholarship, and service, described in detail below.

Before the commencement of the merit letter preparation and review timeline in February, the Provost’s Office sponsors a merit letter in-service for interested faculty members. This provides faculty members the “know-how” in writing a correct letter outlining teaching achievements, scholarship summary, and activities summary from their Faculty Development Plan, which was previously submitted the prior June of the academic year.

The merit letter request provides a summary of successful teaching, including student, department chair (administrative), and peer reviews of teaching, a self-assessment by the faculty member. The primacy of teaching should mean, among other things, that excellence in teaching carries more weight in deliberations regarding merit than accomplishments in scholarship or service. Such evidence of teaching quality include, but not be limited to these documents:

- self-assessment, including commentary on peer and/or administrative reviews;
- commentary on innovative teaching methods or upon any relevant information regarding courses taught;
- brief reflection on student advising;
- summary of student evaluations and comments on the teaching/learning process

The second major component of the National University merit letter request summarizes Scholarship accomplishments. Teaching and scholarship being closely linked intellectual activities. A summary of scholarship are varied but follows norms and standards legitimized throughout higher education:

- Documented and available for circulation and publication;
- Available for professional peer review;
• Grounded within a body of established learning and in some way extends or changes a component of that knowledge;

• Based upon traditions of presentation of material, persuasion, refutation and both

• Interpretive rigor and interpretive differences;

• Significant and worthy of disciplinary or professional respect.

• Application of knowledge to problems or challenges in a discipline or community; or teaching, which results in acquisition and utilization of knowledge in the teaching/learning process rests first with the individual Faculty.

**Service** is the third major component of the National University merit letter request, which is defined as the work of Faculty, which employs professional expertise to meet the mission of the institution. Faculty carry out service in many ways: to the University and its schools and departments; to communities and organizations; to national or local academic and professional organizations. It establishes evidence regarding service to include a detailed self-assessment and documented activities such as:

• Organizing seminars, panels, or colloquia;

• Participating in and serving on departmental functions and committees that address and foster departmental goals and outcomes

• Developing training programs, continuing education programs, consulting;

• Chairing a department;

• Participating in the recruitment, selection, appointment and mentoring of full-time and part-time Faculty;

• Developing professional growth programs for full-time and part-time Faculty;

• Serving on the Faculty Senate, school and University committees, task forces, or
special projects;

- Leading community organizations in work relevant to one's academic discipline;
- Serving in leadership positions in professional organizations and societies;
- Assuming special administrative responsibilities or assignments;
- Participating in continuing education;
- Developing and implementing new academic programs;
- Leading effective academic program review.

**National University Steps and Timeline for Faculty Evaluation**

Faculty merit letter requests go through several evaluation steps with finite timelines to lend maximum objectivity, quality and fairness and equity for each faculty member seeking promotion and/or re-appointment. At every level, summary evaluation letters are sent to the faculty member who authored the merit letter for evaluation with copies to representatives of each of the five below levels of evaluation. The university requires a strict timeline submission schedule to assure completion of the process.

At each level, the faculty member has right to write an appeal, if she/he disagrees with the written report and recommendations at any one level. The written appeal is limited to correction of any inaccurate information submitted by any of the levels, and must be written to the next higher level in time for dossier consideration at that level.

The first evaluation step begins with a faculty member submitting his/her dossier to his/her **Department Chair**, who reviews and writes an evaluation on teaching, activities, and scholarship based on a rubric: not meeting expectations, meeting expectations, and exceeding expectations.
The second step is at the faculty-elected School Personnel Committee reviews and considers the Faculty review dossier and the Department Chair’s report in the context of reports of other Department Chairs. This Committee prepares a recommendation for each Faculty member seeking promotion. The committee seeks to ensure equity of evaluation across all departments of the school, then forwards its report to the appropriate School Dean for a similar dossier review, review of previously written reports by both the school personnel committee and department chair.

The third evaluation step is the academic school Dean, who reviews the faculty merit letter along with the reports from both the department chair and school personnel committee, based on the rubric found in the university board polices on faculty evaluation. The school Dean writes her/his report based on her/his evaluation of the faculty merit letter, and rates each of the components (teaching, scholarship, and service) along with exceeds standards, meets standards, or does not meet standards in teaching, scholarship, and service, and submits to Provost.

The fourth step of evaluation is at the Provost level, who also follows the same previously mentioned procedures, culminating in a written report for the university president. He evaluates the merit letter in each of the three areas as exceeds, meets, or does not meet standards.

The fifth and final level is the evaluation from the President, who also writes a report based on the recommendations of the previous four levels, and is considered the final decision.
ENSURING INTEGRITY

Spring 2016 Merit Recap Provost Recommendations

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<th>School</th>
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<th>EEM</th>
<th>EMM</th>
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<td>4</td>
<td>0</td>
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<td>189</td>
<td>295</td>
<td>64.4%</td>
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APC Notes for Teaching, Scholarship, Service

1. EEE means exceed standards in teaching, scholarship, and service
   EEM means “exceeds” standards in two categories, and “meets” standards. In one category
   EMM means “exceeds” standards in one category, and “meets” standards in two categories

2. All EEEs were recommended for 1% merit. The Provost raised two faculty from EE to EEE.

3. All EEs were recommended for .67% merit.

4. All Es were recommended for .33% merit.

*Faculty School totals derived from National University 2016 General Catalog; FT faculty only

Findings, Conclusions, and Recommendations

The above data shows a recent past year statistics of faculty merit pay attempts and successes in Spring Cycles during the 2015-2016 academic year when the two authors served on the School of Education Personnel Committee. As readily apparent, the success rate of full time faculty members seeking meritorious achievement is very high for several reasons:

1) Provost’s Office Dossier Development Workshop for faculty prior to each fall and spring cycle, which was well-attended by faculty merit pay candidates,

2) Multiple evaluation review levels of faculty merit pay letters for each level, which allows faculty members to submit additional information not included in original letters,
3) Peer assistance to faculty members developing and organizing their letters of merit, and

4) Dedication and determination of faculty members to submit complete letters for merit pay.

In addition to success of this process, faculty members believe that this process assures a consistent, objective, and equitable review of performance for effective teaching. In past years, merit pay has resulted in up to two percent salary enhancement for teaching, one percent for scholarship, and one percent for service, plus an overall two per cent “cost of living adjustment” for all faculty members.

Recommendations for the future include continued digital submission of merit letters online for quicker review of multiple levels as opposed to the traditional operation of development, and continued assistance of merit pay workshops for faculty candidates to assure their continued success.
**References**


National University General Catalog, (2016, p. 18)

National University Office of Provost Statistical Data on School of Education on Merit Letter Awards. June, 2016


Tracking Language Learning Behavior to Enhance Self-Regulated Learning

Many first year university students in Japan have difficulty finding the best way to study effectively as high school requires rote memorization of information in order for them to pass university entrance examinations (Kubota, 1999). Therefore, they do not acquire the skills and strategies needed to cope with university classes. The promotion of self-regulated learning (SRL) may be a key to solving such study related problems.

SRL emphasizes taking control over one’s own learning, and regulating and reflecting on actions towards one’s goals. Self-regulated learners are aware of their strength and weaknesses, motivated to challenge themselves and think of and implement various learning strategies. Tracking language learning activities is one of the components of SRL, on which very little research has been done. It fosters the acquisition of skills required for students' lifelong learning and future career, such as planning, organizing, and reflecting on their work and progress. Furthermore, teachers can monitor and support students' development more effectively. However, most online trackers are connected to a particular course or program; therefore, they do not enable learners (or teachers) to take note of their entire learning. We have developed an online tracker which does not limit its scope to studies related to a single course but attempts to cover the entire spectrum of students' learning, from the classroom to independent study.

This study included six classes of twenty students, from low, intermediate, and advanced levels and implemented daily tracking. The purpose was to define what, how, when and
how often students actually study in terms of homework and independent study. Second, we wanted to discover if and how beneficial the tracker was for them. We conducted pre- and post-study questionnaires based on Pintrich's conceptual framework (2004) and questionnaire “Phases and Areas for Self-Regulated Learning” (2000), and students tracked all English language study for a month. After the tracking period was finished, tracking data was downloaded and given to the students for them to consider and reflect on what they had achieved in their language studies.

The post-tracking data revealed that most students found the tracking useful. Many students wanted to continue tracking, while others reflected that they had often forgotten to track studies as the tracker had been troublesome to use. We as researchers found that online tracking is a powerful tool to check students’ language learning behavior, as it is easy to compile data. However, we also found that it was difficult to review the data with the students due to the limitations of the online survey's available functions. Making the tracker easier to use, designing alternative paper-based trackers and regular one-to-one consultations between the teacher and learners may help increase the number of students using and enjoying the benefits of study tracking.

References
Using PBL to close the opportunity gap for achievement and engagement with diverse and low-SES populations

Curriculum, Research and Development

Paper Session

Problem-Based Learning (PBL) provides meaningful, developmentally appropriate learning opportunities for all students. When utilized in diverse and low-SES schools, student achievement and engagement data and teachers interviews from the first two years of a five-year study indicate that PBL provides opportunities for students to learn content in new ways and allows teachers to see their students from a fresh perspective.

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Objectives
All students must become skilled in advanced reading and communication if they are to achieve expertise in a given field. Although early adolescence seems an ideal time to develop advanced reading and communication skills, it holds unique challenges for high-ability, low-income (HA-LI) students. These challenges include a drop in achievement for HA-LI students as they move through school (Xiang, Dahlin, Cronin, Theaker, & Durant, 2011), less engaging curriculum in low-income schools that fails to ignite the passion of high ability students (Gamoran, 2000) and a lower rate of differentiation and sustained intellectual engagement in low-income classrooms (Callahan, 2005). An additional issue challenging HA-LI students is that the peer culture in low-income populations often militates against achievement (Garcia-Reid, Reid, & Peterson, 2005). Students who are capable of achievement often seek to hide their ability (Bishop & Pflaum, 2005), and there may be little incentive to achieve.

The purpose of this paper is to explore how HA-LI middle school students can be served with developmentally appropriate, meaningful learning experiences that lead to content acquisition and advanced reading and communication skills.

Theoretical Framework

Curriculum for Gifted. Inquiry-based models of instruction are most effective for gifted education (Van Tassel-Baska & Brown, 2007). Central to the inquiry-based approach was engaging students in complexity and challenge by asking questions and pursuing answers that involved problem solving and decision making. Gifted students’ views on their schooling confirm that complexity and challenge is more satisfying (Gallagher, Harradine & Coleman, 1997; Kanevsky & Keighley, 2003; Siegle, Rubenstein & Mitchell, 2014). Needs of gifted students align with the design of Problem-Based
Learning.

**Problem-Based Learning.** Problem-Based Learning (Barrows, 1994; Barrows & Tamblyn, 1980) has gained credibility through hundreds of empirical studies conducted in medical school and P-12 classrooms. Problem-Based Learning capitalizes on students’ natural curiosity by beginning instruction with an ill-structured problem, which is designed intentionally to leave gaps in information for students to resolve through inquiry and investigation. Curiosity is a powerful motivator for students, as it is considered by some a basic instinct (Arnone, Small, Chauncey, & McKenna, 2011) and can benefit academic achievement (Kashdan and Yuen, 2007).

**Cognitive Outcomes**

PBL students retain learned content longer than students who receive more traditional instruction (Diggs, 1997). When PBL is properly designed and delivered, students acquire as much or more content as students who receive more traditional instruction (Horak, 2013; Finkelstein & Hanson, 2011; Feng, Van Tassel-Baska, Quek, Bai, & O’Neill, 2005). Superior learning gains are observed among PBL students on measures of conceptual reasoning (Tarhan & Acar-Sesen, 2013), and students in PBL groups also outperformed students in control groups in problem-solving (Finkelstein & Hanson (2011). The development of data literacy is an additional benefit of engaging students in PBL (Swan, et al., 2013).

**Non-Cognitive Outcomes.** The reported benefits of PBL extend beyond cognitive outcomes. Students in PBL classes develop social skills (Cerezo, 2004; Goodnough & Cashion, 2006), and there is evidence to suggest students’ sense of agency is affected as well. Students in the PBL classes reported increased motivation, self-
efficacy, confidence, enthusiasm, persistence, engagement, higher self-confidence, willingness to problem-solve and share knowledge in PBL settings (Belland, Glazewski, and Ertmer, 2009; Brush & Saye, 2000; Cerezo, 2004; Tarhan, Ayar-Kayali, Urek, & Acar, 2008).

Using PBL to serve HA-LI students. Projects PBLISS and Insights demonstrated the efficacy of PBL both as a platform for in situ identification and as an effective academic intervention with high-ability, low-income adolescents, (Gallagher, 1999; Gallagher & Bray, 2000; Gallagher & Gallagher, 2013). Project ExCEL was funded by Javits Gifted and Talented Program to test the efficacy of replicating and scaling up these first results. Thus, this presentation will focus on the use of PBL as an intervention for HA-LI students from the first year results of a five-year research program addressing multiple questions. The current study, based on Year 1 data, focuses on using PBL as the basis of instruction for high ability low income students in the English language arts classrooms. The operating hypothesis is that shifting curriculum to a PBL model in middle school language arts classrooms will result in the achievement and engagement of students of advanced academic ability.

Methods

Participants. In year one of our project, five 7th grade language arts teachers at one school in a Mid-Atlantic school district implemented PBL with their 385 students. During year two we expanded to an additional two schools in the same district, and also added 8th grade teachers at our original school site. At these three schools in year two there were a total of 1,485 7th grade students and 122 8th grade students. During year
two we also expanded into a second school district, located in the Southeast. The two schools in this district included three 7th grade teachers and their 466 7th grade students.

**Curriculum.** The PBL units used in Project ExCEL are adapted from the model presented by Barrows and Tamblyn (1980) for medical schools and is described in Stepien and Pyke (1997). The model adapted for P-12 described in Stepien and Pyke (1997) includes five phases: (a) Problem Engagement, (b) Inquiry and Investigation, (c) Problem Definition, (d) Problem Resolution, and (e) Problem Debriefing. Additionally, Gallagher (2001) distinguishes three key defining features of PBL instruction: (a) the ill-structured problem; (b) the teacher serves as a meta-cognitive coach; and (c) the student is the primarily stakeholder in the learning process. This model was used for the development of PBL units and the units that were implemented for this study had all been previously been through a rigorous process of piloting, revision and testing again.

The PBL units were selected by a collaborative team of teachers at each school. In years one and two *Black Death* (Gallagher, 2013) was implemented. During year two additional curriculum units were added, to include *Hull House* (Gallagher & Plowden, 2013), *All Work and No Play* (Gallagher, 2013), and *A Final Appeal* (Gallagher & Plowden, 2013).

**Procedure.** Teachers received 3 days of professional development prior to teaching the unit. Included in the professional development was general training in Problem-Based Learning, specific details about the unit *Black Death* (Gallagher, 2013), and a framework for thinking about indicators of exceptional ability. The latter included information organized around the categories in the Gifted Rating Behavior Scale:
Exceptional Ability to Learn, Exceptional Application of Knowledge, Exceptional Motivation to Succeed, and Exceptional Creative/Productive Thinking (Shaklee, 1993).

All seventh grade language arts teachers taught the PBL unit in the spring. Project staff observed several lessons during unit implementation to ensure fidelity to the PBL model. After completing the unit, teachers were asked to select students who they thought demonstrated exceptional academic potential that was not evident before the PBL experience. Students were separated into three groups: 1) students identified as gifted using traditional district criteria (TI), 2) students identified as having advanced academic Potential based on teachers’ perceptions of their performance during PBL (PBLi), and 3) remaining General Education (GE) students. The PBLi students were then randomly assigned to an 8th grade advanced class with PBL or an 8th grade advanced class.

Data sources

A variety of data sources were gathered in order to assess the effect on achievement and engagement. Quantitative measures were chosen to allow for analysis of student learning in English Language Arts (ELA), student motivation and student learning of PBL-unit content.

The comprehension section of the GATES (MacGinitie, MacGinitie, Maria, Dreyer, Hughes, 2000) was selected during year 1 to show changes in ELA achievement. The project also had access to state standardized test scores in English Language Arts (ELA) and end of course ELA grades.

During year 1 the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & McKeachie, 1991) was selected as the engagement measure, and specific sub-scales were selected for use in the project. Additionally, items were
modified to align them for use in a middle school PBL-classroom. The modified MSLQ (MSLQ-M) was administered in year 1 with Cohort 1 as a pre- and post-assessment of student engagement. During year 2, analysis of the MSLQ-M commenced, including a factor analysis to validate the scale for the team’s continued use.

Content measures for each of the PBL units were administered. This measure was collected as both a pre-assessment before the PBL unit, and again as a post assessment at the conclusion of the PBL unit.

Qualitative measures gathered for analysis included teacher interviews, a measure of PBL implementation and student embedded measures.

Results

Data Analysis. At the time of this proposal, year one data has been completed and year two data collection is ongoing. Three groups will be included in the analysis; traditionally identified gifted students (TI), Problem-Based Learning identified students (PBLi), and the remaining general education (GE) seventh grade students. Due to the limitations of this proposal length only a portion of our results are presented here. Additional year one results and the year two results (currently being compiled and analyzed) will be presented in the conference paper and presentation.

Quantitative data on Achievement. The content measure (administered before and after PBL) reflected learning overall and for PBL-identified students. For PBL-identified students who completed both the pre- and post- content test (n=38) there was a statistically significant difference in the pre-test (M=9.92, SD=2.84) and post-test (M=12.84, SD=1.82); (t(37)=7.15, p<.001, d=1.237). The effect size (d=1.237) suggests a large practical significance. Additional significant findings related to achievement on the
GATES assessment will be discussed in our final paper.

**Quantitative Data on Engagement.** Exploratory factor analysis of the updated MSLQ led to a 21-item scale loading on four factors. The new scale, (preliminarily labeled MSLQ-M-PBL) has four factor sub-scales, including Value of Content, Self-efficacy for Learning, Meta-cognitive Self-regulation, and Grade Expectations. Preliminary analysis of the pre-test MSLQ-M-PBL year 1 data indicates there are significant differences on some of the MSLQ-M-PBL factor sub-scales for multiple under-represented groups, including our target population.

**Self-efficacy for Learning.** Students classified as free and reduced lunch (FRL) scored significantly lower on the Self-Efficacy for Learning Sub-scale of the MSLQ-M-PBL pre-assessment when compared to non-FRL students. There was a statistically significant difference on the Self-Efficacy for Learning sub-scale of the MSLQ-M-PBL pre-assessment between FRL students (n=90, M=21.9, SD=4.8) and non-FRL students (n=256, M=24.0, SD=3.4); (t (123.424) = 3.870, p<.001). Students classified as English Language Learners (ELL) also scored significantly lower on the Self-Efficacy for Learning sub-scale of the MSLQ-M-PBL pre-assessment when compared to non-ELL students. There was a statistically significant difference on the Self-Efficacy for Learning sub-scale of the MSLQ-M-PBL pre-assessment between ELL students (n=107, M=22.3, SD=4.6); and non-ELL students (n=239, M=23.9, SD=3.5); (t (164.216) = 3.372, p=.001). These differences between ELL and non-ELL students and between FRL and non-FRL students were evident in later measures of MSLQ-M-PBL, suggesting that student beliefs about ability are an important element in understanding student learning.

**Qualitative data.** Teacher interview data for Cohort 1, 2B1, and 2B2 was
collected during year 2. Further data analysis of all interviews is ongoing. Preliminary analysis of interview data indicates that PBL helped teachers view student engagement and student learning from a new perspective.

Additional qualitative sources were collected from both the teachers and the students. These sources and the findings will be discussed in greater detail in the paper for this presentation.

**Significance**

This research explores the use of PBL to identify and serve high ability, low income students. Our ongoing analysis of data will allow further discussion regarding the implications of using PBL to identify and serve HA-LI students in comparison to serving these students in the traditional classroom.

Although PBL is established within the literature as impacting problem-solving, conceptual reasoning and non-cognitive skills, the targeted use of PBL with HA-LI students has been limited to a few prior studies. This research will provide evidence of the impact of PBL-instruction on students at all levels, including HA-LI students and ELL students. This study will contribute to the field of PBL research, as well as to our understanding of gifted identification of under-served populations.
References


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Empowering English Language Learners’ Academic Potential through Problem-based Learning: Leading Teachers with a Capacity-based Lens

ESL/TESL

Paper Session

This study investigates the impact of Problem-based Learning (PBL) on middle school English language learners’ (ELLs) academic potential and classroom engagement when teachers use a capacity-based lens for identification of potential. Findings from a federally funded grant, Project ExCEL, indicate that ELLs (n=121) demonstrated increased content knowledge and engagement in the PBL setting and through inquiry-based learning, teachers recognized their potential for advanced academic performance.

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Purpose

The purpose of this paper is to address how Problem-based Learning (PBL) provides a learning platform in which English language learners (ELLs) can thrive and their teachers have a new lens for seeing their academic potential. Culturally and linguistically diverse students enrich gifted programs and yet they continue to be an untapped resource. As deficit thinking still prevails, the identification of gifted students from culturally and linguistically diverse backgrounds remains a challenge (Ford & Whiting, 2008). Representation in gifted programs lags behind traditional populations, including other underserved populations (Ford, 1998; Donovan & Cross, 2002; Matthews, 2014). Adding complexity to the issue is the fact that many culturally and linguistically diverse students are also classified as low-income, another underserved population (Camarota, 2012).

This study builds on a social justice framework that supports how PK-16 teachers can use a capacity-based approach to observe academic potential in underserved populations, particularly students of culturally, linguistically, and socioeconomically diverse populations. ELLs may be typically overlooked in the traditional identification process, which generally relies heavily on verbally laden ability tests, in part because of the difficulty seeing past their language proficiency to their academic capacity. One concern is that dominant culture bias may be a factor contributing to a deficit perspective when using traditional measures and methods, even when incorporating multiple criteria such as checklists and observational scales. A multi-dimensional shift in identification practices that includes exploring practices showing promise to help make visible these students’ strengths, despite language and cultural differences, is an urgent and critical need. A literature review conducted by the National Center for Research on Gifted Education (NCRGE, 2016) found some early trends indicate success with identification using
strategies such as using universal screening and performance tasks. Universal screening procedures alone have shown to significantly increase representation for all underrepresented groups and particularly high-ability, low-income (HA-LI) language learners without a relaxation of criteria standards (Card & Giuliano, 2015).

In concordance with these potentially promising practices is the design of Project ExCEL, which uses Problem-based Learning (PBL) as a universal screening curriculum intervention for in situ identification. Project ExCEL, Experiences Cultivating Exceptional Learning (ExCEL), is a 5-year federally funded scale-up Javits grant that incorporates PBL in the English Language Arts classroom as an instructional method for in situ identification of high-ability, low-income middle-school students. Embedded in the in situ identification process are performance tasks and also the use of teacher judgments. Therefore, for Project ExCEL, the question becomes, how does PBL influence the performance and engagement of ELLs and give teachers a new lens through which to look for high-ability ELL students? When we prepare teachers to use PBL, do they broaden their perspectives of what high performance looks like across culturally, linguistically, and socioeconomically diverse students, and can they can better recognize the academic potential of ELLs?

**Theoretical Framework**

What the research show about effective instruction and curriculum for students generally apply for ELLs too (Goldenberg, 2008). ELLs can succeed and benefit from learning environments that are highly engaging, low stress, culturally appropriate, and conducive to risk taking (Castellano, 2003; Krashen, 1982; Lewis, Rivera, & Roby, 2012; Pereira & Oliviera, 2015). PBL is a form of inquiry-based instruction designed to motivate, engage, and set the stage for improving academic achievement and skills by capitalizing on students’ natural
EMPOWERING ELLS ACADEMIC POTENTIAL

curiosity by beginning instruction with an ill-structured problem. PBL provides ELLs with an opportunity to demonstrate multiple modes of ability in a way they might not otherwise in traditionally instructed classes. By raising the academic rigor of curriculum with the depth and complexity that is needed for understanding big ideas and examining different points of view and by providing a real-word, ill-structured problem to grapple with, PBL creates a learning environment that offers challenge where ELLs may thrive and are motivated to succeed. In turn, this allows for the attributes of giftedness to emerge and teachers to make observations of behavior that might not be typical in traditional classrooms.

In Projects PBLISS and Insights, Gallagher and colleagues demonstrated the efficacy of PBL both as a platform for \textit{in situ} identification and as an effective academic intervention with HA-LI adolescents (Gallagher & Bray, 2000; Gallagher & Gallagher, 2013). The \textit{in situ} identification process begins in the classroom as a universal screening for all students and one component of which involves the use of performance tasks, both of which have been cited as promising practices in addressing this issue (NCRGE, 2016). Project ExCEL builds on this model to give teachers the chance to expand the lens with which they view ELL students. Starting first with PBL instruction for all students as a universal screening procedure, then allowing students’ capacities to emerge throughout the PBL unit, teachers incorporate their professional judgment and use observations of the attributes of giftedness, as defined by Shaklee and Viechnicki’s model of the early assessment for exceptional potential (1995), to identify students with potential for success in advanced classes.

\textbf{Method}

The paper reports on the data analysis from Year 1 PBL implementation with Project ExCEL Cohort 1, which included one site school and six English Language Arts (ELA) teachers.
Participants were 385 consenting 7th grade students, of which 121 were ELLs. Demographic data provided by the school district show the overall school population was comprised of 18% African Americans, 42% Caucasians, 30% Hispanic/Latino, and 6% Asian. ELLs were 18% of the school population.

Project ExCEL uses a mixed methods approach that incorporates experimental design in the second year of participants’ involvement in the study. During the first year of implementation reported in this paper, all 7th grade ELA teachers implemented one PBL unit. Multiple sources of data were collected during the three-week unit. At its conclusion, teachers were interviewed and identified students that demonstrated attributes of giftedness during the PBL unit.

Project ExCEL provided initial professional development to Year 1 teachers about equitably identifying diverse students of underserved populations. Since then, targeted professional development was provided about recognizing potential in culturally and linguistically diverse students as to meet this emerging population. These trainings focus on understanding the gifted attributes of English language learners and how to identify them within the classroom and PBL environment. Through ongoing, site-based professional development, Project ExCEL strives to lead teachers to observe students with new lenses for seeing their potential and becoming critically conscious advocates for their learning and success.

Data Sources

Quantitative measures gathered for analysis included the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & McKeachie, 1991) and a standardized test of social studies content associated with the PBL units. Teacher interviews were conducted at the conclusion of the PBL unit for qualitative analysis. During the interviews,
teachers identified students they observed as showing high ability and academic potential during the PBL unit.

The MSLQ was used to measure student engagement and specific sub-scales were selected for use in the project. Additionally, items were modified to align them for use in a middle school PBL-classroom. The modified MSLQ (MSLQ-M-PBL) was administered in Year 1 with Cohort 1 as a pre- and post-assessment of student engagement. The content assessments were given to students prior to the PBL unit and at its conclusion. Questions were comprised from a database of released standardized test items and created by project curriculum developers. The teacher interviews were conducted at the conclusion of the PBL unit implementation, audio-recorded, and transcribed. Direct quotes that were representative of the emerging themes across the interviews were pulled to support our findings of teacher observations of ELLs during PBL.

Results

At the time of this proposal, Year 1 data analysis has been completed and Year 2 preliminary data analysis is ongoing. The findings from Year 1 are reported below.

Modified MSLQ-M-PBL

SPSS was used for the statistical analysis. A paired samples t-test was used to compare student MSLQ scores for specific items from before and after PBL implementation. For the ELL population (n = 121), several indicators showed a statistically significant higher response after learning through PBL than before. One example of these indicators is: I often question things I hear or read in this class to decide if I believe them. ELLs in our sample had a statistically significant higher response after learning through PBL on this indicator (M=4.376, SD=1.69) than before (M=3.832, SD=1.77), (t(100)=2.538, p=.013). Cohen’s effect size (d=0.314) suggests a moderate practical significance. This suggests that ELL students’ engagement in PBL
helped them think more strategically about learning.

**Content Assessment**

Gain scores were calculated from the difference in post-test and pre-test scores of the PBL content assessment. An independent samples t-test was used to compare the gain scores for ELL students (n=121) and non-ELL students (n=264) students in the sample. ELL students had statistically significant higher gain scores on the content assessment than non-ELL students, with ELL students (M=3.60, SD=4.19) gaining significantly more points on the post-assessment as compared to the pre-assessment than the non-ELL students (M=1.89, SD = 5.61), t(305) = 3.32, p=.001. Cohen's effect size (d=0.345) suggests a moderate practical significance. These findings indicate that all students gained significant content knowledge through engagement in PBL instruction. However, ELL students gained significantly more content knowledge through PBL, effectively closing the achievement gap on this assessment.

**Teacher Interviews**

At the conclusion of the three-week PBL unit, teachers were interviewed about their observations of student engagement and performance during inquiry-based learning. One teacher from Year 1 said how her ELL students rose to the occasion during PBL, sharing:

It was a really interesting dynamic because if you put them [ELLs] in a situation where there is enough structure, but a challenge, they will rise to it. But then also it was really interesting to see that we have made our classroom a safe place for them to be able to take chances…In one of those classes we have 26 kids and 20 of them speak Spanish at home.

Another teacher, from Year 2, shared her observations of ELLs demonstrating different academic capacities in PBL than in traditional instruction. She stated:
I noticed especially with my ELL students, sometimes in class, they'll ask about what a word means. But even more so now, they were very concerned with asking about what vocabulary meant, who this person was, and making sure that they had enough knowledge where they could get their work done or they could answer the question.

In regard to creating an equitable opportunity to observe students’ potential for gifted attributes, she also remarked, “Just like you have students that excel in different areas of assessment are different learners, this is another way to kind of mine and see who is gifted without necessarily taking the traditional routes. I think there's a sense of fairness and equity in that.”

Student participation in PBL instruction may allow teachers to see different qualities in student ability, particularly in ELLs. Of the 58 students that teachers identified as showing potentially gifted attributes during PBL, 14 (24%) were classified as ELL. The school’s overall ELL population makes up only 18% of the school, so our findings suggest that teachers were better able to identify gifted attributes as a result of student engagement in PBL, which typically does not happen with traditional identification practices.

**Scholarly Significance**

ELLs are among the fastest growing population of learners in the U.S. (NCES, 2013). Many school systems are struggling with an influx of students for whom traditional identification practices have not been effective. Giftedness extends to all cultures and languages and gifted education programs should reflect changing U.S. demographics (Shaklee & Baily, 2012; U.S. Department of Education, 2008). Thus, it is imperative to examine practices that serve to effectively identify and support this diverse population of ELLs in gifted programs for achieving an equal educational opportunity. Given the results from Year 1 of this study, PBL as a universal screening model has the potential to function as a viable social justice framework to
support a capacity-based approach to observe academic potential in underserved populations, particularly students of culturally, linguistically, and socioeconomically diverse populations.
References


The Past, Present and Future of Noncredit Education in California

The Past, Present and Future of Noncredit Education in California is a publication of San Diego Continuing Education (SDCE), the noncredit division of the San Diego Community College District. The California Community College Noncredit Offerings Survey was conducted in partnership with the California Community College Chancellor’s Office (CCCCO) Educational Services.

SAN DIEGO CONTINUING EDUCATION

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Availability of Alternate Formats
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Disclosures

Survey data do not include institutional size or demographics and are not disaggregated by site or region; therefore, interpretation of survey data is limited to a statewide summary of the findings. SDCE Office of Institutional Effectiveness supports use of survey data for benchmarking effective educational practices and for targeting and monitoring progress in quality improvement. This report is in the public domain. Authorization to reproduce it in whole or in part is granted.
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San Diego Continuing Education Institutional Effectiveness Staff
The California Community College system is the largest in the nation with 2.1 million students attending 113 colleges ("CCCCO Home Page," 2016), 67 percent of the students are of diverse ethnic backgrounds ("California Community Colleges Key Facts," 2016), and in 2014, 9.3 percent were enrolled in noncredit courses (Harris, 2016). Noncredit or adult education programs include various segments of higher education and have used terms such as extension, extended-day, part-time, adult, evening classes, and continuing education to describe these programs ("Noncredit at a glance," 2006). Adult noncredit education as part of the community colleges is included as a secondary mission to its primary mission of academic and vocational instruction, and according to Education Code Section 66010.4 ("California State Legislature Education Code," n.d.), includes:

> The provision of remedial instruction for those in need of it and, in conjunction with the school districts, instruction in English as a second language, adult noncredit instruction, and support services which help students succeed at the postsecondary level are reaffirmed and supported as essential and important functions of the community colleges.

> The provision of adult noncredit education curricula in areas defined as being in the state’s interest is an essential and important function of the community colleges.

> The provision of community services courses and programs is an authorized function of the community colleges so long as their provision is compatible with an institution’s ability to meet its obligations in its primary missions.

Noncredit programs primary purpose is to provide those “18 years or older with precollegiate-level knowledge and skills they need to participate in society and the workforce” ("Restructuring California’s Adult Education System," 2012) and serve the needs of the most underserved and non-traditional students by providing flexibility in course schedules and locations; noncredit enrollment eliminates financial barriers for students due to the zero costs and fees to attend along with the struggles these students may have in navigating the complicated financial aid process ("The Reemergence of Noncredit in the California Community Colleges," 2016), thus noncredit programs provide for the most underserved members of our communities. In addition, programming and services are closely aligned with both Student Equity (SE) and Student Success and
Report Program (SSSP) plan objectives in support of students enrolled in elementary and secondary basic skills, English as a second language, courses for persons with substantial disabilities, citizenship for immigrants, parenting, and short-term vocational classes.

With the equalization of Career Development and College Preparation (CDCP) noncredit program funding with credit FTES funding along with statewide decline in FTES, many colleges have begun intensive noncredit program development and expansion. By the spring of 2016, dozens of institutions had contacted San Diego Continuing Education (SDCE), the noncredit division of the San Diego Community College District, for guidance on how to build out their noncredit offerings.

It has become clear that with new initiatives and funding for noncredit, growth for California community colleges may increasingly center upon the expansion of adult education, and resources for colleges’ programming and operational infrastructure questions were not yet available. Therefore it was concluded that in order to support our colleagues around the state, exploratory research was critical in providing insight into adult education in California. The following key action items constitute the framework and intent of the report:

- Address the need to document the past structure and growth of adult education in California through an in depth historical study.

- Determine the current state of noncredit programming in California and any immediate plans by the community colleges for increase in noncredit offerings through a survey of instructional experts at each of the community colleges and institutions statewide.

- Explore recommendations for moving forward, both in future research and the future of community college noncredit education.

SDCE is creating the context and baseline data for subsequent surveys and reports, along with recommendations for the future of noncredit adult education research and practice to inform state enhancements in support of noncredit program growth. By exploring the history along with the current state of noncredit programs, services and students, we look towards supporting the mission of the community college, the most underserved population, and advocating for its future in California.
We must study our past to chart a positive direction for our future. As a basis for the recommendations for noncredit program development and expansion in this report, this chapter provides an abbreviated history of adult education in California and the United States from 1856 to 2016.


Since the birth of adult education, the federal government has played a role in supporting state-administered adult education programs. However, federal government was minimally involved in state-administered adult education programs until ratification of the Economic Opportunity Act (EOA) of 1964. For the past fifty years, federal and state agencies have worked in concert with professional adult education associations in their advocacy for increased accountability, standardization, and centralization. As a result, adult education practitioners now work collaboratively across districts and institutions to develop thoughtful plans, report outcome data, and meet ambitious objectives.

California adult education traces its beginnings to the early 1850s, and through the years, it has been an important part of the state’s educational system. Evening classes serving the educational needs of immigrants expanded through the decades into diverse educational programs to meet changing populations and the challenges of society. In California, adult education has been offered by a wide range of providers, most notably the adult schools in the public school system and the noncredit programs in the community colleges that in 1967 became a separate entity.

During the Great Recession (2008-2014), California adult education experienced catastrophic setbacks and positive advancements. This chapter explores the landmark legislation, organizational transformation, and curricular developments that assist California educational leaders invested in the
expansion of adult education in response to recent equalization of state funding for Career Development and College Preparation certificate programs.

The Gold Rush and Birth of a State: The Origins of Adult and Vocational Education

In 1848, Mexico and the United States of America signed a treaty to end the Mexican-American War, which gave the United States control over the territory that comprises the present Southwest region of the country, including present day Arizona, California, Colorado, Texas, New Mexico, and Utah (“California Admission Day September 9, 1850,” 2016).

Several days earlier, on January 24, 1848, gold had been discovered on the American River near Sacramento, sparking the start of the Gold Rush and precipitating rapid American westward migration. The national debate over slavery and the ensuing gold rush hastened California’s admittance to the Union. The exponential increase in population, caused by the Gold Rush, created a pressing need for civil government and public education (“California Admission Day September 9, 1850,” 2016).

In 1849, Californians sought statehood and, after heated debate on slavery in Washington, California entered the Union as a free (non-slavery) state by the Compromise of 1850. The 31st state on September 9, 1850 (Starr, 2007). This date is known as California Admission Day. Ever since, the Golden State’s rich history has been shaped by people of every ethnic background who traveled to California seeking economic, social, and educational opportunity (“California Admission Day September 9, 1850,” 2016).

The United States Department of Education’s Adult Education Office report—titled An American Heritage: Federal Adult Education, A Legislative History, 1964-2013—reports the federal government provided federal funding for adult education since the birth of the nation. The earliest federally supported adult education came in the form of math and military skills training for soldiers in the Continental Army, using the “General Welfare” clause in the U.S. Constitution. Albeit modest, this appropriation marked the entry of federal government support of adult education (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). Adult education for military and civilian employees has operated in various forms since the 1700s. Federal funding for nonfederal employee adult education and training began with the ratification of the Ordinance of 1787 and the first Morrill Act, passed in 1862.

The Morrill Act of 1862 was the first major federal effort to expand the federal government’s role in state-administered adult education programs. This legislation designates specific vocational programs authorized to receive land grants, which were awarded to states for the development of the public state colleges. The federal government mandated that colleges to be awarded grants must focus on workforce development for adult learners in two employment sectors: agriculture and mechanical arts (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). The University of California was founded in 1868 in Berkeley, born out of a vision in the State Constitution of a university that would “contribute even more than California’s gold to the glory and happiness of advancing generations” (“About UC Berkeley,” 2016).
California Department of Education’s (CDE’s) adult history project (2005), *Meeting the Challenge—A History of Adult Education in California: From the Beginnings to the Twenty-First Century*, reports that adult education began in California in 1856 during the state’s infancy. The first recorded adult school opened in 1856 under the authority of the San Francisco Board of Education (SFBOE) using state financing (“Beginnings - California Adult Education History,” 2005). Serving a largely immigrant population, the first adult school provided programming in elementary-level academic subjects with a focus on literacy and numeracy skills and vocational pathways in areas such as drafting and bookkeeping. During the mid-1800s, California immigrants came primarily from Italy, Ireland, and China. John Swett, a pioneer adult educator and the first principal of San Francisco’s adult evening school from 1868 to 1871, persuaded the school district’s governing body to offer adult education courses and programs at zero cost to students. Swett can be attributed for implementing tuition-free adult education in California, a tradition that has endured for over 150 years (“Meeting the challenge: A history of adult education in California,” 2005).

Through the remaining decades of the nineteenth century, most major California municipalities developed diverse adult education programs. Sacramento started to offer English as a second language (ESL) to Chinese adult students in 1872. Adult school programs in the present state capital expanded to include a wide array of academic subjects, bookkeeping, and electrical science. During the 1880s, Los Angeles, Oakland, and San Jose began providing adult education programming to their residents with a particular emphasis on immigrant populations. In 1898, the first recorded adult school for female students opened in Los Angeles. By the close of the century, adult evening schools had become institutionalized as elementary, vocational, and Americanization centers (“Meeting the challenge: A history of adult education in California,” 2005).

**The Progressive Era: The Legal Foundations of Adult and Vocational Education**

Reform efforts throughout the early 1900s professionalized secondary, adult, and vocational education in California. In 1902, an amendment to the California Constitution authorized the development of public secondary schools. In 1910, an additional provision to the state constitution mandated state funding for high schools. “The concept of free public education has come of age, and adult education was part of it” (“Meeting the challenge: A history of adult education in California,” 2005: 3). At the national level, similar trends emerged with ratification of the compulsory education acts in all states, with Mississippi becoming the last state to codify mandatory free public education in 1918 (Button & Provenzo, 1983; Cremin, 1961).

In *Board of Education v. Hyatt* (152 Cal. 515), the legitimacy of adult evening schools came before the courts after California Superintendent of Public Instruction Edward Hyatt denied funding for SFBOE’s Humboldt Evening School, established in 1896. California Supreme Court ruled in favor of SFBOE and ordered Hyatt to provide funding to adult education programs, thereby guaranteeing the right of evening adult schools to exist as a separate entity entitled to state financial support. In 1912, a similar case, *San Francisco v. Hyatt* (163 Cal. 346), affirmed the four-hour minimum day required for state funding of evening adult schools (“Meeting the challenge: A history of adult education in California,” 2005).
Also, in 1910, Fresno Junior College (currently named Fresno City College) became the state’s first community college, which ultimately transformed adult noncredit education in California. The college’s history began in 1907, when C. L. McLane, the superintendent of schools for the city of Fresno, identified a need for post-secondary education for the residents of San Joaquin Valley. The first class consisted of 20 students and three faculty (Fresno City College Facts & History, 2016). Public junior colleges initially were designed to teach the first two years of university study. In 1917, training in mechanical arts, agriculture, civic engagement, and commerce were added to their mission (Bruno, Burnett, & Galizio, 2016).

Throughout the Progressive Era (1890-1920), American politicians, journalists, professionals, and volunteers engaged in reform campaigns to address a variety of social problems associated with industrialization and immigration. Women activists, mainly from privileged backgrounds, emphasized advocating for a greater role for women in public life while championing the need to Americanize immigrant women (Cohen, 2016; Evans, 1997). In the tradition of national Progressive women leaders like Jane Adams, leading female California reformists advocated for adult education to facilitate the Americanization of recent immigrant populations. Mary S. Gibson, a member of the California Commission on Immigration and Housing, asserted the need to educate foreign-born women as a critical component of assimilating immigrant families (“Meeting the challenge: A history of adult education in California,” 2005).

Two additional steps taken by the California state legislature supported the expansion of adult education and reaffirmed the mission to serve disadvantaged immigrant student populations: (1) The Home Teacher Act of 1915 permitted

The first recorded adult school in California opened in 1856 under the authority of the San Francisco Board of Education using state financing

local school boards the authority to hire teachers to work with (predominantly female) adult students in their homes to learn about American standards of nutrition, hygiene, sanitation, and housekeeping. These teachers also provided guidance on the American political system and the citizenship process; (2) the Part Time Education Act of 1919 reinforced California’s commitment to adult education by mandating that schools provide continuing education for minors and basic education for adults (“Meeting the challenge: A history of adult education in California,” 2005).

The federal government also became involved in state-administered adult education programs with funding reserved for adult literacy programs. The ratification of the U.S. Immigration Act of 1918 assisted public educational institutions that offered English language, history, government, and citizenship programs for immigrants working toward naturalization. Since the birth of the nation, states frowned upon federal intervention in local education matters, but many states, including California, were willing to support the federal government having a limited role, and accepted funding in exchange for textbooks and other curriculum materials (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013 ; Barkan, 2013).

Passage of the Smith-Lever Act of 1914 established the Cooperative Extension Service and legislated matching federal funds with state, local, and/or institutional monies for the first time. Grants were awarded to adult education programs focused on four basic skills program categories: farming, marketing, family living, and community development (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013 ; “Smith-Lever Act of 1914,” n.d.). The historic roots of basic educational skills programs for adults are more difficult to trace than the roots of workforce development programs, which the federal government first supported with funding under the Morrill Act of 1862. “This is due in part to lack of general agreement about the meaning of the term ‘basic skills’ and in part to inclusion of basic education components in programs initiated for other purposes” (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013, p. 8).

The success of the Morrill Act of 1862 prompted progressive reformers to mobilize federal support for vocational programs at the high school level. This pressure culminated in passage of the Smith-Hughes Act in 1917, which provided federal grants to be matched by state funds to support occupational training in vocational program areas, including: agriculture, home economics, trades, and industries. Subsequent amendments expanded program areas to include health careers, fishery trades, national defense, and office job skills (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). The Smith-Lever and Smith-Hughes Acts ushered new funding for adult and vocational education, a federal commitment that would continue to rise throughout the twentieth century.

**America’s Transition to a World Power: The Professionalization of Adult and Vocational Education**

By 1920, E. R. Snyder, the first Commissioner of Industrial and Vocational Education, reported the number of adult evening schools in California had grown to 33. This growth in adult education programs is attributed largely to another Progressive reformer, Ethel Richardson, who served as Assistant Superintendent of Public Instruction in charge of Americanization. Richardson notably penned a practitioner’s guide, titled *Discussion of Methods for Teaching English to Adult Foreigners* and successfully advanced a 1921 law requiring
local school boards to establish Americanization classes when 20 or more adults requested them. This 1921 law remains a part of the California Education Code (Section 52540) (“Meeting the challenge: A history of adult education in California,” 2005).

Leon Richardson, Director of the University of California’s Extension Division, became increasingly involved with adult education reform efforts at the national level and helped spearhead the organization of the American Association of Adult Education in 1926. That same year Richardson authored a State Plan for Adult Education. As part of this state plan, the California Association for Adult Education was launched to advocate for the goals set forth in Richardson’s state plan. This organization existed until 1937 with offices in Los Angeles and Berkeley (“Meeting the challenge: A history of adult education in California,” 2005).

In 1927, the California Department of Education was reorganized to include the Division of Adult Education. Until 1930, Richardson served as the head of this new division, which housed immigrant education, vocational education, and child study/parent education. Richardson’s focus and the purpose of adult education shifted during this transitional period “from policies to remove educational handicaps toward the concept of organizing resources to improve the community” (“Meeting the challenge: A history of adult education in California,” 2005: 5). By the end of the 1930s, adult education transformed Americanization and vocational programs into evening adult schools and enrollment skyrocketed to more than a quarter million students. Many rural communities established local programs with a new emphasis on agricultural training. After World War I, increased interest in adult education for veterans emerged (“Meeting the challenge: A history of adult education in California,” 2005).

As the Great Depression began, adult education suffered in California. Throughout the 1930s, many K-12 districts dismantled their adult education programs, shifting limited fiscal resources to their elementary and secondary day programs. Junior colleges subsequently began to offer more programs under the umbrella of adult education. In 1931, legislation passed providing supplemental funds for adult schools, and until 1945 formed the basis for regulations governing adult education programs. This legislation required the appointment of principals to adult schools, which further professionalized these programs. During the 1920s and 1930s, many universities began offering specialized credentials, conferences, workshops, and publications for adult educators (“Meeting the challenge: A history of adult education in California,” 2005).

During the Great Depression, five federally-sponsored employment-related educational programs were implemented: (1) the Federal Emergency Relief Act, which included components of adult education and vocational rehabilitation; (2) the Works Projects Administration, which supported college-administered literacy and citizenship education; (3) the National Youth Administration, which administered programs for disengaged youth; (4) the Civilian Conservation Corps, which provided job training and employment to young people; and (5) the Bureau of Apprenticeship, which was designed to stimulate training of workers, initially in the building trades and later in other skilled occupations. Of these five federal initiatives, only the Bureau of Apprenticeship continued to operate after the nation’s economy rebounded (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).
A National Agenda: Federal Intervention in Adult and Vocational Education

The National Education Association (NEA) through its affiliated departments advocated for federal support for adult education (Luke, 1992; “An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). From 1933 to 1942, the federal government operated supplemental adult education to help address the impact of the economic crisis. Coordinated by the Works Progress Administration and supervised by the CSDE, federally funded adult education programs included literacy classes, vocational training, parent education, and early childhood education centers. The additional federal programs helped to increase adult education enrollments to over a half million in a state with eight million residents (“Meeting the challenge: A history of adult education in California,” 2005).

From 1940 to 1945, the federal government shifted the focus of federally funded adult education programs to support the training of defense workers. During this period, approximately one million Californians participated in pre-employment training to gain jobs in factories, farms, and offices. Adult education emphasized civilian defense, first-aid, flying, office skills, and truck driving and maintenance (“Meeting the challenge: A history of adult education in California,” 2005). The General Educational Development (GED) tests were first developed in 1942 by the Department of Defense in cooperation with the American Council on Education and the state of New York (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013; Mullane & Stewart, 2001, 3, 10-11). Between 1942 and 1947, only military members were eligible to take the tests. In 1947, New York became the first state to open the test to civilians. California was the last state to recognize and introduce the GED, in 1974. From the first 1942 Series through 2010, the GED program issued 18,251,070 credentials (Mullane & Stewart, 2001: xiii).

While the nation was engaged in World War II, leading adult education reformers and professionals came together to form the California Council for Adult Education. In 1945, the new Superintendent Roy E. Simpson reorganized CSDE, by eliminating the Division of Adult Education and moving adult education under the Division of Instruction. California Education Code (Section 12140) also established and mandated the adult education credential for teachers. Further, adult schools were provided the authority to charge fees. Rising post-war immigration and the return of American veterans led to programming that supported these growing student populations. By 1950, annual adult education enrollments grew to over 800,000 (“Meeting the challenge: A history of adult education in California,” 2005).

During this postwar period, the California State Department of Education (CSDE) housed adult education in the form of unified school districts, high school districts, or junior college districts administered by CSDE’s Bureau of Adult Education (BAE). BAE provided various supports to secondary school districts, which included the coordination of in-service training and the development of handbooks on methods and materials. BAE also offered leadership to assist with the development of standards and program evaluation instruments (“Meeting the challenge: A history of adult education in California,” 2005).

At the national level, NEA’s adult education department was renamed National Association for Public School Adult Education (NAPSAE) in 1952 and California adult educators provided national leadership through the 1980s. (Luke, 1992; “Meeting the challenge: A history of adult education in California,” 2005; “An American heritage—Federal adult education: A legislative
In 1954, California reactivated the State Advisory Committee on Adult Education, which produced a report titled *Guiding Principles for Adult Education in California Publicly Supported Institutions*. This report designated specific responsibilities to adult educational programs: supplemental and cultural classes; short-term vocational and occupational training; homemaking; parent education; civic affairs; citizenship; ESL; gerontology; civil defense; and driver education. High school and unified school districts offered high school diploma programs as well; however, junior college programs could offer only high school diploma pathways if requested by local high school leadership. Conversely, junior colleges offered lower level division courses in liberal arts. The 1950s notably led to increased programs in four primary areas: high school diplomas, older adult education, parent education, and citizenship.

In 1955, growing interest in adult education led to the creation of an Adult Education Section in USDOE (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). While the federal government committed resources to multiple adult education program areas, adult basic education, particularly in the area of literacy, became the primary focus during the fifties. The Library Service Act of 1956 encouraged libraries to take an active role in the administration of adult literacy programs. This legislation brought public library programs to rural communities. The 1964 Library Services and Construction Act (amended in 1970) called for the delivery of library services to economically and socially disadvantaged, handicapped, homebound, and institutionalized adults (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). This legislation led to the expansion of adult literacy and civics programs in public libraries across California (“Meeting the challenge: A history of adult education in California,” 2005).

During the 1950s, funding for adult education came from the federal government for designated vocational and basic skills programs; from the state in the form of apportionment based on average daily attendance, and from local school districts through property taxes. Adult education programs continued to charge reasonable fees for programs, except in three prohibited categories: elementary education, citizenship, and English as a second language.

### California’s “First” Golden Age of Adult and Vocational Education

The civil rights and progressive reform movements of the 1960s ushered in a new era for American education policy and the first golden age of adult education in California. From the birth of the nation through the mid-1900s, the federal government rarely interjected itself into local education politics and governance. “During the sixties the federal role in adult education leadership expanded because a heightened national consciousness had emerged concerning the need to improve the economic conditions of disadvantaged persons” (“Beginnings - California Adult Education History,” 2005: 16). Federal policy initiatives appropriated new types of funding for adult education, resulting in program expansion and a new direction for basic skills. President John F. Kennedy’s and President Lyndon Johnson’s antipoverty program in the 1960s led to authorization of three key pieces of legislation: (1) The Economic Opportunity Act of 1964; (2) the Adult Education Act of 1966; and (3) the Elementary and Secondary Education Act Amendments of 1968. “This first decade of the Adult Education Act was a time when people conducted impactful work. From the White House to Congress to federal officials to adult educators to the state and local learning environments, lives were changed through a common passion for adult education.” (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013, p. 15).
The Adult Education Section of the U.S. Department of Education recruited personnel with experience in adult continuing education, civil defense, lifelong learning programs, and adult literacy. Federal adult education initiatives during the 1960s focused primarily on three program areas: (1) the education of civilian and military government employees; (2) workforce development; and (3) basic skills, especially adult literacy. Summations of federal activities to support these three program areas follow (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013):

1. **Education of civilian and military government employees:** During the 1960s, the federal government invested first in adult education for military employees then in programming for civilian employees. During World War I (1914-1918), the military played a formative role in developing programs, curricular materials, and special instructional techniques for education of undereducated adults. During World War II (1939-1945), 300,000 illiterate men enlisted in the United States Army and provided a 90-day education program to address adult basic educational needs. In 1969, a similar program, called Project 100,000, was launched. The elements of this program (methods, materials, assessments, etc.) were disseminated to adult education programs across the United States for replication. The Department of Defense also formed general adult secondary education programs to help service personnel obtain high school credentials (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

2. **Workforce Development:** Federally funded adult education programs focused
on workforce development and job training gained broad support during the 1960s. The economic recession, the worst economic slump since the Great Depression, resulted in high unemployment. The economic downturn coupled with the civil rights movement, which called for social justice and economic equity, set the stage for progressive reform of vocational education. At first, legislative efforts aimed to stimulate economic growth and emphasized job training for unemployed heads of households with prior employment history. The Area Redevelopment Act of 1961 and Manpower Development and Training Act of 1962 (MDTA) were designed to support unemployed individuals who were displaced as a result of geographic shifts in demand for labor and technological innovation. However, these two legislative efforts never intended to meet the needs of the chronically unemployed or adults and opportunity youth who lacked essential basic skills for employment (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013; Kremen, 1974).

3. **Adult Basic Education:** Although federally funded adult basic education programs in California and across the nation served millions of Americans, millions more were excluded from participation. Many adults lacked basic educational preparation necessary for participation. Meanwhile, other adults were excluded from participation because of their age, geographical location, labor market status, or disability. In 1962, the U.S. House of Representatives’ Committee on Education and Labor convened hearings on categorical federal support for adult basic education. In 1964, unemployment rates improved, but African Americans, English language learners, and the undereducated were slow to benefit from the economic upturn (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

While the Civil Rights Act of 1964 effectively prohibited discrimination in employment practices based on race, sex, age, religion or national origin, a disproportionately high percentage of educationally and economically disadvantaged populations remained under and unemployed. Ratification of the Economic Opportunity Act in 1964 resulted in the development of the Adult Basic Education Program. The new federally funded adult education initiative was designed to address inequities of educational disadvantage by offering persons 18 years of age and older, the basic literacy and numeracy skills to increase their employment opportunities. This age was revised to 16 years of age by P.L. 91-230 in 1970; Elementary and Secondary Education Act Amendments, 1970 (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

The Economic Opportunity Act, approved August 20, 1964, implemented a number of reform efforts to address the cyclical poverty in America. This federal legislation included a host of new resources for helping families escape intergenerational poverty, which included several new federal grants for adult basic education. Adult basic and secondary-level education programs were subsequently implemented in all 50 states, the District of Columbia, and the colonies of American Samoa, Guam, Puerto Rico, the Trust Territory of the Pacific Islands, the Virgin Islands, and the Northern Mariana Islands. State and local education agencies could use federal funding to develop instructional programs. Funding was allocated specifically to hire and train professional adult educators, establish best practices, and develop new curriculum and programs (“An American heritage—Federal adult education:
Ratification of the Economic Opportunity Act (EOA) in 1964, and basic skills legislation, each set the stage for the federal government’s initiative in addressing adult illiteracy nationwide. Passage of Title II B of the EOA allocated federal funding for adult literacy programs that emphasized preparation for employment and institutionalized the federal government’s involvement in state-administered adult education. The changing needs of the workforce, the development of new technologies, and the rise of globalization prompted the federal government to allocate funding for state-administered adult education efforts ("An American heritage—Federal adult education: A legislative history 1964-2013," 2013).

Proponents of EOA focused on legal adult residents whose inability to read or write English constituted a substantial impairment to their ability to obtain or retain employment. State education agencies were primarily responsible for program supervision and coordination. Federally funded programs were to be held in public elementary and secondary schools or adult schools operating local instructional classes. The Director of the Office of Economic Opportunity administered Title II grants. To be eligible for a state grant award, the states had to develop thorough adult education plans ("An American heritage—Federal adult education: A legislative history 1964-2013," 2013). In response to Title II B, the CSDE composed the 1964-66 California Plan for Adult Basic Education ("Meeting the challenge: A history of adult education in California," 2005).

The Economic Opportunity Act of 1964 only funded adult education for two years. In 1966, the Adult Education Act was passed as Title III of the 1966 Amendments to the Elementary and Secondary Education Act of 1965 (ESEA). Federal support for adult education was institutionalized by the revised Adult Education Act, which modified the EOA adult education initiative by transferring the program to the supervision of the U.S. Office of Education and broadening the purpose of adult education by deemphasizing the vocational focus of the Act. The new adult education package emphasized special projects, staff development, and demonstration grants. Although the federal government would fund up to 90 percent of the costs for establishing or expanding programs, the states were required to maintain their previous levels of financial support, which meant states could not supplant existing programs with federal dollars. Special focus was placed on the education of American Natives and adults with disabilities ("An American heritage—Federal adult education: A legislative history 1964-2013," 2013). California used most of this new federal funding for basic skills and other innovative programming. New federal emphasis and financial support for basic skills shifted the focus of adult education toward people who were educationally and economically disadvantaged ("Meeting the challenge: A history of adult education in California," 2005).

In California, vocational program enrollments doubled and the number of occupations served by vocational education quadrupled primarily as a result of the Manpower Development and Training Act of 1962 (MDTA) and two other federal initiatives, the Vocational Education Act of 1963 (VEA), often referred to as the Carl D. Perkins Act, and the Work Incentive Program (WIP). These initiatives inextricably linked workforce to education. The MDTA provided extensive funding for job training and literacy programming (including ESL) targeting the unemployed. VEA allowed for federal involvement in vocational education, a role that continued until the 1990s, and resulted in consequential increases in funding to support the maintenance, extension, and improvement of existing and new vocational programs.
The Workforce Incentive Program under WIP provided employability training to adults receiving federal Aid to Families with Dependent Children (AFDC) (“Meeting the challenge: A history of adult education in California,” 2005).

Greater centralization and standardization of education by the federal government precipitated efforts to tighten up the administration of vocational education in California. In 1965, state legislation allowed school districts and counties the authority to establish Regional Occupational Centers (ROCs) and Regional Occupational Programs (ROPs), which provided apportionment for part-time job training certificate programs. ROCs and ROPs served upper level high school students and adults. By 1970, 24 programs had been developed statewide and approximately 28,000 students enrolled annually (“Meeting the challenge: A history of adult education in California,” 2005).

The sixties ushered in substantive changes in the administration of adult and vocational programs in California with ratification of the Donohoe Act, which implemented the California Master Plan (CMP). CMP established a three-tiered public higher education system for the state of California: (1) community college, (2) California State University, and (3) the University of California. Until 1967, CSDE’s Bureau of Adult Education (BAE) supervised adult and vocational educational programs offered in junior and community colleges. BAE approved new and revised course and program curriculum and tracked enrollment and attendance reporting (“Meeting the challenge: A history of adult education in California,” 2005). In 1963, “all statutes that pertained to junior colleges were placed in a separate section of the Education Code [Title 5] and established the Board of Governors of the California Junior Colleges which was subsequently renamed California Community Colleges” (“Noncredit at a glance,” 2006, 5). The sixties led to a post-World War II decline in civil defense courses and witnessed the rise of parent education and special adult education guidance services. While older adult courses were not recognized as a distinct program area, roughly one in five adult schools offered dedicated older adult courses on topics such as estate planning, health, and nutrition. Open-entry, open exit courses also emerged during this period, initially in large, urban districts (“Meeting the challenge: A history of adult education in California,” 2005).

The Evolution of the Adult Education Act

At the federal level, a series of presidents and a bipartisan body of lawmakers continued to elevate the importance of education policy and practice until the end of the 1970s. Between 1968 and 1978, five amendments were made to the Adult Education Act, which have had a lasting impact on basic skills in the United States.

With passage of the 1968 amendments, the federal government reaffirmed its focus on adult literacy. In response to the 1968 amendment, 20 adult education organizations established an advisory board of adult and continuing education experts to organize the Galaxy Conference in the nation’s capital. The conference was held in December 1969, and over 4,000 educators, leaders, and government officials attended; these engaged adult education professionals charted the future of adult education in the United States, resulting in the development of a priority list of “Imperatives for Action.” It was a “concerted effort by the field of adult education to accomplish the important task of providing new direction and emphasis to adult education as a vital segment of American education” (“An American

The 1972 amendments to Elementary and Secondary Education Act added sections authorizing grants for pilot demonstration projects, programs for high school equivalency, and programs to improve employment and educational opportunities for adult Native Americans. Congress also appropriated over $50 million in additional funding for state-administered adult education programs. By 1972, adult secondary education became a federally funded instructional program. The content of adult basic education and adult secondary education (ABE/ASE) was divided into six educational levels with four levels in ABE: beginning literacy, beginning basic, low intermediate, and high intermediate, plus two levels for ASE: low secondary and high secondary (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

Under President Gerald Ford, the 1974 amendments to Elementary and Secondary Education Act extended funding for existing adult education programs and called for expanded educational programming for designated populations of adult learners. These amendments required specialized instruction and services for adults with disabilities, institutionalized adults, citizens residing in select American colonies (including American Samoa, Guam, and the Virgin Islands), and non-English speaking residents. These amendments established the Office of Bilingual Education in United States Office of Education, the National Defense Education Act, and the Emergency School Aid Act. Federal support for adult education continued to increase under President Ford, evidenced by ratification of an omnibus education bill and new authorization for the president to convene a White House Conference on Education. By 1974, ABE/ASE enrollments grew to 965,000 (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

The 1978 amendments to the Elementary and Secondary Education Act under President Jimmy Carter placed a renewed emphasis on basic education, which included an expanded definition of ABE and supplemental grant funding. These amendments also established new state plan requirements and increased accountability. The new accountability mandates focused on data, demonstration activities, and program evaluation. Specialized funding for programs serving Indochinese refugees and adult immigrants were also included. The 1978 amendments mandated states to conduct intensive outreach to those most in need of basic skills instruction and to address the whole student by providing student-centered interventions, such as flexible schedules, transportation, and assistance with child care (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

On October 17, 1979, the Department of Education Organization Act became law as President Carter secured Congressional support for the establishment of the United States Department

The amendments to the Adult Education Act between 1968 and 1978 transformed American adult education systems. Congress, the White House (under both Republican and Democratic administrations), and education professionals shared a common passion for adult education during the first decade of the Adult Education Act. In one decade, adult education basic state grants increased from $31 million to $81 million. From 1977 to 1980, President Carter worked with Congress to increase state grant awards in increments of $10 million annually for three consecutive years. Adult education enrollments during the 1970s reached 11 million in ABE, ASE, and ESL. In 1975, enrollments in federally funded adult education programs grew to one million and by the end of the decade, total enrollment increased to almost two million students (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

During this same period, President Carter signed the Youth Employment and Demonstration Projects Act of 1977, designed to curtail skyrocketing increases in youth unemployment (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). This legislation followed the Comprehensive Employment and Training Act (CETA) of 1973, which provided support for disengaged youth (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). California, like many states, established program cooperative agreements with CETA; a hearing was held in Oakland California in 1977 by the House of Representatives referencing the positive outcomes of CETA in the Bay area to “underscore the need for a rational and comprehensive national full employment policy” (CETA Hearing, 1977: 1). A 1980 Vice Presidential Task Force brought renewed attention to opportunity youth, which resulted in the Youth Act of 1981 “to strengthen and improve efforts of local educational agencies and institutions in helping youth and young adults with special problems prepare for participation in the labor force” (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013, p. 8).

The Great Divide: The Role of K-12 and Community College in Adult and Vocational Education

In California, the governance structure of two-year colleges changed with passage of the Stiern Act of 1967, which established a new state coordinating agency to oversee junior colleges: the Board of Governors of the California Junior Colleges. From this point on, CSDE was no longer responsible for the administration of junior colleges. By 1967, 66 two-year college districts had been established. These districts served more than 600,000 students statewide. By 1970, junior colleges became known as community colleges (“Meeting the challenge: A history of adult education in California,” 2005).

Across California, local communities debated the role of the new community college system in the delivery of adult and vocational education. In some regions, school districts handed over responsibility of these programs to the colleges. Community colleges in San Diego, San Francisco, and Santa Barbara subsequently became major hubs of
adult education. These communities asserted that adult-aged students should be served by colleges while other communities insisted that pre-collegiate programs should be housed in the K-12 system. Many communities, such as Oakland and Los Angeles, fought to keep adult education under the authority of the K-12 school districts (“Meeting the challenge: A history of adult education in California,” 2005). California’s unwillingness to mediate this debate allowed local communities to determine the role of colleges and high schools in the management of adult education, which created long-standing division and conflict in many regions.

Federal regulations for state management of federal funds for vocational and adult education necessitated additional negotiations. The federal government expected all states to identify state boards to oversee federally supported vocational education funding and adult education funding. After separating the governance between adult education programs offered in the high schools and those offered by the community colleges, a Joint Committee on Vocational Education was formed, composed of three CSDE designees and three Board of Governor designees. Administration of adult education funds was resolved with the CSDE maintaining jurisdiction over the funds allocated to noncredit programs in the community colleges (“Meeting the challenge: A history of adult education in California,” 2005).

The delineation of functions of adult programs in school districts and community colleges caused on-going tension between local educational agencies in some communities. In the 1970-71 academic year, adult education programs were provided by 183 school districts and 94 community colleges. CSDE reported approximately one million unduplicated enrollments and the California Community College Chancellor’s Office (CCCCO) reported roughly a
half-million students participated in college adult education course offerings (“Meeting the challenge: A history of adult education in California,” 2005).

To address the unclear delineation of functions between CSDE and CCCCCO, Senate Bill 765 directed these two agencies to determine their respective roles in the delivery of adult education. In fall 1972 Senate Bill 94 was signed by the governor and officially took effect in March 1973. This legislation for delineation of functions required community colleges to have a formal agreement with their local K-12 providers to offer noncredit programming, which would otherwise be regarded as the purview of local school districts (“Meeting the challenge: A history of adult education in California,” 2005).

The Crash of 1978: Prop 13 Decimates Adult Education

As federal support for adult education grew exponentially during the late 1970s, California support for adult education experienced drastic cuts that all but dismantled existing state-funded programs. The sixties may have marked the first golden age of adult education in California, but the turbulent 1970s brought a series of dramatic changes in funding formulas, which resulted in a major restructuring of public education finance in the state. Almost yearly, state funding fluctuated causing uneasiness and apprehension amongst faculty and administration. A permissive ten-cent local tax created during the late 1960s was repealed in 1973. During this decade, cost of living adjustments were implemented to adult education programs in an arbitrary, erratic manner and did not match increases allocated to K-12 programs. Meanwhile, adult education enrollments skyrocketed, leading Governor Jerry Brown (who interestingly served on the Los Angeles Community College Board of Trustees from 1969-1971) to place a five percent cap on growth until legislators identified a long-term funding solution. In 1976, the disparate funding of adults under and over 21 was eliminated as adult education funding was equalized for all persons 19 and older and not currently enrolled in high school (“Meeting the challenge: A history of adult education in California,” 2005).

The passage of Proposition 13 in 1978 radically transformed public education finance in California for decades. This general election ballot initiative immediately reduced property taxes by more than 50 percent. The impact of this reduction in funding for public education devastated adult education programs across the state. State-funded adult education instructional programs were reduced to seven areas: elementary basic skills, secondary basic skills, adult substantially handicapped, short-term vocational education, citizenship, apprenticeship programs, and parent education. In 1979, funding for adult education was slashed by more than $350 million, enrollments reduced by a half million students, and 10,000 faculty members lost jobs. (“Meeting the challenge: A history of adult education in California,” 2005). Proposition 13 also established a distinct funding rate per student per district but maintaining the per student rates in effect in each district before Proposition 13 was passed. Thus, while each homeowner now paid one tax rate statewide, the per student apportionment varied considerably from community to community (Carroll, 2016; Turnage & Lay, 2006).

The Pro-Active Committee on Public School Adult Education, which became active under the California Council for Adult Education (CCAE), and the Adult Committee of Association of California School Administrators (ACSA) launched a counterassault in favor of adult education and secured 1979 “cleanup” legislation restoring ESL
and older adults as program areas eligible for funding. While minor gains were made by adult education advocates, enrollments have never again reached 1978 levels and the pernicious consequences of funding reductions in the 1970s were not fully addressed until 1992 (“Meeting the challenge: A history of adult education in California,” 2005).

Re-envisioning Adult and Vocational Education: The Anatomy of a Budding Academic Discipline and Legitimate Career for Professional Educators

The 1970s gave rise nationally to competency-based adult education (CBAE). The CBAE movement spread across the nation with strong support from California reformers. CSDE used federal funding from the Adult Education Act to promote CBAE through field-based staff development and localized curriculum development. While federal funding prompted the expansion of vocational education programs during this period, the passage of Proposition 13 in 1978 caused a significant decline in other adult education offerings in art, music, crafts, drama, foreign languages, and civic education (“Meeting the challenge: A history of adult education in California,” 2005). Academics helped to professionalize adult and vocational education during the post-war period—particularly the sixties through the eighties—as a result of increased research and scholarship on andragogy. While German educator Alexander Kapp first coined the term “andragogy,” Malcolm S. Knowles earned recognition as the modern father of andragogy by developing a theoretical framework for adult education during the 1970s. He is best known for using the terms “adult education” and “andragogy” synonymously and interchangeably. According to Knowles, andragogy is the art and science of adult learning, thus andragogy refers to any form of adult learning. In 1980, Knowles proposed four assumptions about the characteristics of adult learners (andragogy) that are different from the assumptions about child learners (pedagogy). In 1984, Knowles added the fifth assumption. These assumptions are that as a person matures: (1) his/her self-concept moves from one of being a dependent personality toward one of being a self-directed human being; (2) he/she accumulates a growing reservoir of experience that becomes an increasing resource for learning; (3) his/her readiness to learn becomes oriented increasingly to the developmental tasks of his/her social roles; (4) his/her orientation toward learning shifts from one of subject-centeredness to one of problem-centeredness; and (5) his/her motivation to learn is internal. (Knowles, 1984, p. 12).

Based on these assumptions, Knowles’ suggested four Principles of Andragogy as they apply to adult education: (1) adults need to be involved in the planning and evaluation of their instruction; (2) experience (including mistakes) provides the basis for the learning activities; (3) adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life; and (4) adult learning is problem-centered rather than content-oriented (Kearsley, 2010).

The expansion of scholarly research on andragogy led to an affirmation of CBAE. The first statewide CBAE conference took place in San Diego in 1974, sponsored by the federal Region IX ABE Staff Development Project and co-sponsored by CSDE. Throughout the 1970s, CBAE became the focus of a number of CSDE staff development projects, including the California Adult Competency Education (CACE) project, which led to composition CBAE: Process Model, an implementation handbook, and the California Competency (CALCOMP), a competency-based high school diploma completion program. Although more than 90 percent of adult education faculty were adjuncts (part-time), the professionalization of
adult educators led to a doubling in full-time faculty during the 1970s as well as an increased recognition of adult education as a legitimate career pathway for educators (“Meeting the challenge: A history of adult education in California,” 2005).

Changing demographics also informed adult education programming during the 1970s. A dramatic rise in the number of refugees from Southeast Asia after the conclusion of Vietnam War in 1975 led to increased demand for ESL and vocational offerings. With secondary migration, nearly 40 percent of the almost one million Southeast Asian refugees settled in California. Typical refugees arriving in the later years had little education and were often illiterate in their native language. In face of this mounting challenge, California educators acted promptly and provided a leadership role nationally on how to support these new immigrant populations. “A special curriculum was developed by the noncredit division of the San Diego Community College District, and its products were distributed through the county offices of education. San Diego continued to develop curriculum especially targeting the literacy level. Eventually this locally developed curriculum was published in a document entitled English for Adult Competency” (“Meeting the challenge: A history of adult education in California,” 2005: 42; Miller, 1991, p. 60).

These curricular developments prompted the formation of Vocational ESL (VESL) programming to provide limited English speaking refugees with targeted literacy skills to support their success in adult vocational training programs. VESL courses teach the general language for getting and keeping a job and the occupation-specific language required for educational and workplace success (“Meeting the challenge: A history of adult education in California,” 2005; Arnold, 2013).

Ushering in a New Culture of Centralization, Standardization, and Accountability

The period between 1979 and the early 1990s marked more than a decade of continual growth in congressional funding, state budgets, and adult student enrollment across the United States. Adult education enrollment rose by 47 percent between 1979 and 1993. Federally funded grants to states increased from $91 million in 1979 to $255 million in 1993. Congress also authorized $3.9 million for National Programs, $4.9 million for the National Institute for Literacy, $9.6 million for Literacy Training of Homeless Adults, and $19 million for Workplace Literacy Partnerships. State Literacy Resource Centers received $7.9 million in support and the allocation for Literacy Programs for Prisoners totaled $4.9 million. In 1988, National Programs, Training of Homeless Adults, and Workplace Literacy Partnerships were included in the federal appropriation. Over the next three years, federal adult education funding grew by 56 percent, from $134 million in 1988 to $241 million in 1991 (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

The roaring eighties marked a decade of ambitious education reform efforts. The National Commission on Excellence in Education issued a report A Nation at Risk: The Imperative for Educational Reform, which reflected the spirit of the nation. The report’s cover bore the words “An Open Letter to the American People” (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013; Gardiner, 1983). Policymakers, the media, and education reformers lobbied for serious solutions to America’s education divide. The Cold War and Space Age precipitated increased funding for and emphasis on math and science. Reforms of the 1970s included education dissemination centers, individualized reading programs, equity, bilingual adult education, and the introduction of computer technology. These decades set the

During the 1980s, education innovation focused on a variety of initiatives including: high school curriculum, whole language, old math vs. new math, a new national assessment of education progress, issues of governance, increased adult education program evaluation, and workforce literacy. Federal legislation during the 1980s expanded state programs for community schools and institutionalized adults, enacted a 20 percent cap on the use of funding for secondary adult education, and supported the expansion of adult ESL and older adult programs. This growth in targeted focused project funding paralleled efforts by President Ronald Reagan to reduce the federal role in education in support of localized state control. The Reagan administration combined 29 education-related categorical programs into block grants, which states could spend with fewer restrictions. In 1983, President Reagan championed the Adult Literacy Initiative, which called for USDOE to conduct a series of national conferences and convene to support increased collaboration amongst adult education providers to reduce adult literacy (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013; Gardiner, 1983).

Between 1983 and 1986, a series of scathing reports criticized American educational systems, providing President Reagan with ammunition for his campaign to strengthen state oversight of public education. The National Commission on Excellence in Education published a report titled: A Nation at Risk: The Imperative for Educational Reform resulting in what became known as “The Year of the Educational Reform Reports” (Flaxman, 1987a: 5). Three years later in The National Governors’ Association’s Center for Policy Research and Analysis, these issues remained with the publication of Time for Results: The Governor’s 1991 Reports on Education (Flaxman, 1987b). In response to these astonishing reports, 40 states established more stringent high school diploma requirements. The decline in American educational outcomes since the 1970s is largely attributed to the exponential increase in non-English speakers and a growing economic and educational divide between native-born citizens. According to a federal research study on literacy, roughly one out of eight Americans lacked basic literacy skills. The report revealed that many illiterate Americans held high school diplomas and the majority were under 50 years of age.

USDOE lobbied for passage of federal legislation to appropriate $421 million in state grant funds for adult basic education from 1985 to 1999. During the late 1980s, a record 11.6 million adults enrolled in federally funded ABE programs. In addition, two long-term Continuing Resolutions (1986 and 1987) enabled the Adult Literacy Act to continue. Before the end of his second term, President Reagan signed the Hawkins/Stafford Elementary and Secondary Education Act Amendments, which provided increased grant funding for workforce and literacy programs as well as increased USDOE program evaluation initiatives and requirements, which included the strengthening of evaluation requirements (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). Professional organizations championed the need for data and research to inform adult education reform.

The national professional organizations advocated for greater research in adult education and California educators provided leadership (“Meeting the challenge: A history of adult education in California,” 2005). NAPSAE was founded in 1952 to represent public school adult education and literacy

During the 1980s, scholarly contributions to the field of adult and vocational education dramatically shaped practice in California. CSDE fully embraced CBAE and used funding incentives to influence curriculum development and classroom instruction. CSDE, charged with oversight of federal funding from the Adult Education Act, mandated that local education agencies (LEA) interested in financial support develop a plan to institutionalize a competency-based approach in their programs. CSDE supported statewide implementation of CBAE by using federal funding for system-wide professional development, program assessment, and curriculum development (“Meeting the challenge: A history of adult education in California,” 2005).

The California Adult Student Assessment System (CASAS) was initiated in 1980 as a consortium of local educational agencies receiving Adult Education Act funding. The San Diego Community College District served as the lead agency. CASAS was developed to establish a comprehensive assessment system for CBAE-based adult education programs. By 1988, over 40 California LEAs local educational agencies and representatives from other states comprised the CASAS workgroup. The new standardized instrument included a pre-enrollment diagnostic and a post-program assessment for students in ESL and ABE basic skills courses. In 1986, CASAS moved out of SDCCD and transitioned into an independent nonprofit organization and has since been validated by the USDOE. CASAS is presently used across the United States to assess youths and adults in diverse settings, including programs in special education, career technical education, high school completion, workplace and family literacy (“Meeting the challenge: A history of adult education in California,” 2005).
Professional development support took the form of a *Handbook on CBAE Staff Development* in 1983 and a classroom observation tool known as the *Teaching Improvement Process* (TIP). Federal funding also supported development of a professional development academy to support ESL faculty known as the ESL Teacher Institute. Across disciplines, adult and vocational education professionals in California bolstered one another through formation of the Dissemination Network for Adult Educators (DNAE), which was established in 1981 and operated until 1988. The Association of California School Administrators (ACSA) functioned as the fiscal agent of DNAE. In addition to strengthening communication amongst adult and vocational education programs, DNAE allowed for participating LEAs local educational agencies to share approved curriculum across institutions. DNAE also championed the formation of the California GED Teacher Academy, which provided professional development for ABE/ASE faculty. When DNAE disbanded, the San Juan Unified School District housed the GED Teacher Academy (“Meeting the challenge: A history of adult education in California,” 2005).

With increased emphasis on employment outcomes, the 1980s fundamentally changed the business of adult education. During the 1980s, opposition to state welfare mounted. Social welfare services, which in the view of welfare historians includes public education, were slashed. In 1984, CCCCO began charging fees for the first time to students enrolling in community college. The new $5 per unit enrollment fee only applied to credit course courses. (Krop, Carroll, & Rivera, 1997). In 1986, California implemented Greater Avenues to Independence (GAIN) program as an educational initiative targeting recipients of state aid (“Working toward jobs: The California Greater Avenues for Independence (GAIN) program,” 1990). The Job Training Partnership Act (JTPA) of 1983 and the Job Opportunities and Basic Skills Training Program (JOBS)—a welfare reform initiative, created as part of the Family Support Act of 1988—made participation in adult education mandatory for the first time in history, targeting welfare recipients. The new culture of centralization, standardization, and accountability caused career counseling and workforce development to become core functions of adult and vocational education programs (“Meeting the challenge: A history of adult education in California,” 2005).

During the 1980s, a number of economic and social developments shaped adult and vocational program development and expansion. First, the workplace modernized rapidly. Low-skill job opportunities consequently declined as jobs requiring technical skills dramatically increased. American companies shipped manufacturing jobs overseas, relegating low skill workers to the service industry. Demographic shifts also formed the changing workplace of the eighties with a significant rise in immigrants arriving from Asia and Mexico. A rise in divorced and teen mothers led to a huge increase in single-parent families. More and more women entered the workforce throughout this period. Proportionately, greater numbers of immigrants, people of color, and females joined the workplace in California, but many of these new workers lacked formal education and basic literacy skills. Meanwhile, advances in healthcare resulted in a growing population of older residents; greater appreciation for the needs of adults with disabilities led to an increase in clients receiving state services; and the number of incarcerated adults tripled. All of these developments created new demands for educational services (“Beginnings - California Adult Education History,” 2005).

In 1982, “due to the passage of Proposition 13 and based on the state’s fiscal crisis and
recommendations from the Behr Commission, new legislation was passed that further restricted adult and noncredit instruction. An acknowledgment of funding disparities between the two systems of adult/noncredit instruction by the Behr Commission and by the Commission for the Review of the Master Plan called for “delineation of function” agreements between adult schools and community colleges. Community college noncredit reimbursements were reduced and categories for state support revised (“Noncredit at a glance,” 2006: 6; “Meeting the challenge: A history of adult education in California,” 2005).

By the mid-1980s, 1095 organizations provided adult literacy services in California, serving approximately 880,000 students. The community college system enrolled 21 percent of these students while adult schools served roughly 75 percent. Library and community-based programs educated less than five percent. Federal legislation created new opportunities for libraries to provide adult education services. In 1983, the Library Services and Construction Act allocated $2.5 million to launch the California Literacy Campaign (CLC). With increased emphasis on workplace literacy and civics education, 1988 amendments to the Adult Education Act increased funding for VESL (“Meeting the challenge: A history of adult education in California,” 2005).

The federal Immigration Reform and Control Act (IRCA) of 1986 granted amnesty to 1.6 million undocumented immigrants. To become eligible for permanent residence, applicants had to speak basic English and demonstrate knowledge of American history and government by passing a test or completing a 40 hour course to obtain a Certificate of Satisfactory Pursuit. More than half of amnesty applicants resided in California. The overwhelming majority of applicants spoke Spanish and came from Mexico. Between 1987 and 1991, more than one million students enrolled in citizenship courses. ESL became the largest adult school program. Insufficient space and qualified faculty created a huge burden for adult education providers. The Migrant and Amnesty Office of CSDE provided support with faculty training; SDCE and Hacienda La Puente Adult Education created curriculum that was disseminated statewide. Once these students obtained citizenship, many returned to school or college for job training and literacy skills (“Meeting the challenge: A history of adult education in California,” 2005).

During the 1980s the number of persons incarcerated in California tripled, and there was increased interest in adult education for offenders. By 1990 18 percent of persons housed in state prisons and county jails were served by adult education programs. California Department of Corrections (CDC) and the Youth Authority students received 11 percent of adult education funding. Typical adult education programs, such as high school equivalency, ESL, and over 50 vocational programs, were offered by school and community college districts statewide. In addition to these traditional adult education programs, specialized offerings were developed on prerelease transition, substance abuse prevention, health education, and victims’ rights. More than 50 percent of these students had not completed high school, and one-third did not speak English (“Meeting the challenge: A history of adult education in California,” 2005). For the first time under the National Literacy Act of 1991, states were required to set aside at least 10 percent of federal grant funding for corrections education. Funds also could be used to provide instruction and training for teacher personnel specializing in correctional education (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

Roughly one decade after the passage of Proposition 13 decimated adult education in California, voters passed Proposition 98,
mandating a percentage of the general fund for education. While Proposition 98 did not reserve a specific amount for adult education, the new law required the allocation of adequate funding for schools and colleges. As with most other legislative developments since 1980, increased emphasis was placed on accountability to ensure program quality ("Meeting the challenge: A history of adult education in California," 2005).

Outline of Recommendations

**IMPROVE ACCESS TO USERS:**

1. Funding to Meet Today’s Needs
2. Funding for Innovation and Performance
3. Community Adult Education Information Services
4. EduCard (Adult Education Access Card)
5. Linkage of Support Services to Increase Access

**IMPROVE ACCOUNTABILITY:**

6. Procedures for Adjusting Instructional Priorities
7. Quality Standards and Performance Measures
8. Integrated Adult Education Data System

**IMPROVE QUALITY AND RESPONSIVENESS:**

9. Program and Staff Development Support
10. Teacher Certification Appropriate to Adult Education
11. Facilities for the Future
12. Special Grants to Test Program Innovations

**IMPROVE PLANNING AND COORDINATION:**

13. Collaborative Planning
14. Adult Education Research and Planning Institute

Adult education programs in California were scheduled “sunset” or to be eliminated from the state budget on June 30, 1989. The legislature agreed to reauthorize adult education for another four years, but review of data compiled by CSDE for the Legislative Analyst’s Office highlighted a number of issues with the adult education system, from insufficient funding to inequitable access across all regions of the state. In response, CSDE
appointed a 26-member Adult Education Advisory Committee, which engaged in a strategic planning process that resulted in fourteen proposals that were then detailed in policy option papers. The proposals are presented in the following table (“Meeting the challenge: A history of adult education in California,” 2005).

In addition to developing the Strategic Plan, the Adult Education Advisory Committee produced the California State Plan for Adult Basic Education, which focused primarily on literacy skills and further emphasized collaboration amongst ESL and ABE providers. Meanwhile, model adult education programs in California earned national recognition. USDOE started to recognize outstanding adult education and literacy programs in 1985. Three California programs received a Secretary’s Award: Sweetwater Union High School District in 1988, Baldwin Park Unified School District in 1990, and Merced Adult School in 1992 (“Meeting the challenge: A history of adult education in California,” 2005). In 1990, “SB 1874 consolidated adult education. The references to 13th and 14th grades were deleted from the Education Code. Noncredit instruction and community services were added to the mission and functions of California Community Colleges” (“Noncredit at a glance,” 2006, p. 6).

The Institutionalization of Adult Education in California in the Nineties

Whereas 1980s education reforms emphasized adult literacy, the reform efforts of the 1990s advocated the pairing of adult literacy programs with postsecondary education and training. Policymakers and education leaders championed postsecondary education, work skill certification, and other industry-recognized credentials for undereducated adults as industry and business demanded specific skills and knowledge for their workers to compete effectively in a technology-based global economy. Applied, integrated basic skills in career technical education (CTE) programs linked workforce development with adult basic education/adult secondary education (ABE/ASE). Combining ABE with CTE provided exciting opportunities for dual enrollment and promising employment prospects for adult education students. New legislation also provided authority to grant-funded programs for dropout prevention and ASE skills improvement; established parent education programs for disadvantaged children, and modernized auditing procedures for the USDOE (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

Ratification of the Adult Education Amendments of 1988 (Title II) established new requirements for USDOE to submit a report on the definition of literacy and then report on the state of adult literacy nationwide. To fulfill these new requirements, USDOE’s Division of Adult Education and Literacy collaborated with the National Center for Education Statistics (NCES) to develop the 1992 National Adult Literacy Survey (NALS), a nationally representative household survey to ascertain adult literacy levels. In 1989, President George H. W. Bush convened an Education Summit with all 50 state governors to set education goals for the United States. In early 1990, President Bush announced the National Goals, which were subsequently adopted by the governors. Goal six of the National Goals set high expectations for adult education, ambitiously asserting: “By the year 2000, every adult in America will be literate and will possess the knowledge and skills necessary
to compete in a global economy and exercise the rights and responsibilities of citizenship” (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013: 20). To maintain national focus on America’s literacy crisis, President Bush and the governors formed the National Educational Goals Panel to prepare annual progress reports. The following year, policymakers enacted the National Literacy Act, designed to “to enhance the literacy and basic skills of adults, to ensure that all adults in the United States acquire the basic skills necessary to function effectively and achieve the greatest possible opportunity in their work and in their lives, and to strengthen and coordinate adult literacy programs.” (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013, p. 21).

The National Commission on Excellence in Education’s report *A Nation at Risk: The Imperative for Educational Reform* from the 1980s along with data collected for NALS evidenced the huge English literacy deficits amongst adult Americans and encouraged a strong federal response. The National Literacy Act of 1991 called for the formation of a National Institute for Literacy (NIFL). NIFL was established through an interagency agreement among the Secretaries of Education, Labor, and Health and Human Services and directed to: (1) maintain a federal clearinghouse for literacy; (2) provide technical assistance and training to adult education grant recipients; (3) foster research-based activities that would identify and validate effective instructional practices; and (4) disseminate evidence-based best practices (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

The National Literacy Act of 1991 established stringent accountability mandates, which increased state data reporting on three “indicators for program quality”: recruitment, retention, and improvement of students’ literacy skills. These three indicators required states to develop measurable performance standards. Furthermore, USDOE required states to develop performance standards in five additional areas: program planning, curriculum, instruction, professional staff development, and support services. In response to these new mandates, states started to report adult learner progress using standardized test data, teacher reports, job placement data, and portfolio assessment. States were required to use data from these indicators to evaluate local program effectiveness and identify programs needing assistance to make local funding decisions and, when necessary, to reduce or eliminate funding to under performing programs. In 1996, USDOE provided a framework for a system of program accountability, which led to the formation of National Reporting System project to establish an outcomes-based reporting system for the state-administered federal program in 1997 (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

As high rates of immigration from Asia and Latin America sustained, California waged a concerted attack on illiteracy during the 1990s. The immigrant education initiatives developed in the 1980s in response to amnesty received broad support during the 1990s as educators moved to implement the Strategic Plan. In 1990, the *California Education Summit Report* called for recognition of adult literacy as a national crisis and established ambitious annual goals to reduce the adult literacy rate by 50 percent in one decade. In accordance with the summit report, the USDOE called for a renewed focus on literacy through strategic planning at the state level in a report titled *America 2000: An Education Strategy* published in 1991 (“Meeting the challenge: A history of adult education in California,” 2005).
The federal America 2000 campaign prompted a number of research studies to support the campaign’s objectives. One such report, the Secretary’s Commission on Achieving Necessary Skills (SCANS), called for changes in adult education curriculum to meet the needs of employees in the modern workplace. The SCANS report recommended a three-part foundation for the development of quality adult education programs, which encompassed basic skills, [critical] thinking skills, and personal qualities, such as responsibility, ethics, interpersonal communications, and self-management (“Meeting the challenge: A history of adult education in California,” 2005).

A federally funded project charged with implementing the research infrastructure of California’s Strategic Plan and other state plans for adult education became known as the Adult Education Institute for Research and Planning. Working in consultation with an advisory committee comprised of representatives from adult schools, community colleges, industry, labor, and various community-based organizations, the Institute pursued three of the 14 proposals included in the Strategic Plan. First, Learning Networks were developed to help launch a statewide adult education database. Second, model program standards were developed, which eventually included performance indicators. Third, a renewed emphasis on workforce development prompted the CDE and CCCCCO to collaboratively compose four reports:

1. **Workplace Learning: Background Paper for California’s Workplace Learning Plan**, a review of workplace learning literature, research, and program experiences throughout the United States;

2. **California’s State Plan for Workplace Learning**, which resulted in 13 interrelated recommendations;

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**In 1990, the California Education Summit Report called for recognition of adult literacy as a national crisis and established ambitious annual goals to reduce the adult literacy rate by 50 percent in one decade.”**

A third federally funded initiative was the Adult Literacy Instructors’ Training Institute (ALIT), which was established to improve the quantity and quality of services for native English-speaking students in basic skills programs. Fourth, the ESL Teacher Institute continued to operate under the contract with the Association of California School Administrators (ACSA). Last, CDE worked closely with the California Council of Adult Education (CCAE) and ACSA to form two professional growth programs for adult education administrators: the Adult Leadership Training Program and the Executive Development Program (EDP).

During the early nineties, CDE’s Adult Education Unit convened a blue-ribbon committee to explore the needs of adult education providers and identify recommendations for the state legislature. For the first time in over three decades, the state budget included significant increases in funding for adult education reforms. Five issues took front stage:

1. Inequitable apportionment for adult education;
2. Elimination of a freeze placed on the development of new adult education programs (with an emphasis on elementary and secondary basic skills, ESL, and citizenship programs);
3. New legislation permitting the creation of innovative, alternative modes of program delivery;
4. New restrictions on high school concurrent enrollment; and
5. Greater protection for adult education funding during an economic downturn.

Three professional associations championed the 1992 adult education reforms, and therefore were instrumental in shaping adult education policy and
practice in California during the 1990s: California Council for Adult Education; the Association of California School Administrators, Adult Education Committee; and a new organization named the California Adult Education Administrators’ Association (CAEAA), which formed in 1990 with support from adult education administrators interested in policy advocacy. The Department of Education, the three aforementioned professional associations and most prominent adult education providers collectively endorsed reform legislation, which resulted in passage of three pieces of legislation in 1992 (AB 1321 [Wright], Ch. 1193, Stats. 1992; AB 1891 [Woodruff], Ch. 1195, Stats. 1992; AB 1943 [Lee], Ch. 1196, Stats. 1992). Most provisions became effective on July 1, 1993 (“Meeting the challenge: A history of adult education in California,” 2005).

Mid-decade, the Adult Education Policy and Planning Unit advocated for the removal of adult education from the status of a categorical program under the provisions of statutory “sunset” laws (“Meeting the challenge: A history of adult education in California,” 2005, p. vi). The state legislature embraced this recommendation in 1996 by ratifying legislation (AB 2255 Cuneen), which effectively eliminated the sunset clause on adult education programs. Despite the elimination of the sunset clause, this bill required CDE to review the effectiveness of the adult education program periodically, beginning in 2002 (“Sunset review report on adult education in California,” 1987).

While advancing the end of the sunset clause, CDE effectively institutionalized and professionalized adult education by using federal dollars to elevate the importance of this work within California’s public educational systems. The eldest of California’s federally financed adult education initiatives, CASAS, expanded operations to provide assessment to new partners such as the Immigration and Naturalization Service’s citizenship testing offices. CASAS also incorporated technology into its services.

Throughout the 1990s, the widespread rise of the Internet connected education professionals to one another and allowed for mass dissemination of best practices and instructional resources. In 1994, CDE relocated OTAN, the largest federally funded adult education initiative to the Sacramento County Office of Education. The mission of OTAN at the county office was to provide electronic collaboration, access to information, and technical assistance for literacy and adult education providers.

Multicultural education became central California education reform efforts. Two federally funded initiatives aimed to provide adult education faculty essential skills to support the academic success of disadvantaged student population. The Center for Applied Cultural Studies and Educational Achievement Adult Education Project published a manual on best practices for teaching adult African American students titled Seizing the Power of Experience: Utilizing Culture in the Achievement of Educational Excellence for African American Adults. The Latino Adult Education Services Project produced and piloted 30 resource modules to meet the educational needs of immigrants and non-immigrant adults with minimal formal education called Tierra de oportunidad (Land of Opportunity) (“Meeting the challenge: A history of adult education in California,” 2005).

Technological advances in the nineties also prompted the launch of the federally funded California Distance Learning Project (CDLP) in 1995 as a statewide adult education initiative to foster development of distance education (“Meeting the challenge: A history of adult education in California,” 2005). CDLP was launched to help
expand learner access to adult basic education services in California. This goal included four major tasks: (1) to build and promote a distance learning knowledge base; (2) to provide technical assistance with implementation of distance education programs; (3) to test new instructional delivery models; and (4) to facilitate the development of distance learning infrastructure statewide (“About CDLP,” 2005).

The National Literacy Act of 1991 marked the first nationwide efforts to increase literacy levels, provide measurable student gains, and implement a National Reporting System (NRS) to document successes. NLA appropriated federal financial support for the development of State Literacy Resource Centers (SLRCs). This SLRC program provided grants to states to improve the capacity of adult education and adult literacy providers to serve adults without secondary education credentials, and were designed to help states improve their ability to coordinate and expand literacy programs (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

With multiple educational systems responsible for the administration adult education programs, California established the State Collaborative Literacy Council, which represented the CDE, CCCC0, the State Library, the California Conservation Corps, the Employment Development Department, the Governor’s Office of Child Development and Education, and California Literacy, Inc. NLA also authorized formation of the National Institute for Literacy (NIL), which would later be reauthorized by the Workforce Investment Act of 1998 (WIA). NIL functioned as an interagency group led by the Secretaries of Education, Labor, and Health and Human Services and a nonpartisan ten-member advisory board. NIL focused on the expansion of national, regional, and state literacy services (“Meeting the challenge: A history of adult education in California,” 2005).

From 1966 until the 1990s, states administered their adult education programs under the requirements of the Elementary and Secondary Education Act. The three objectives set forth by Elementary and Secondary Education Act included: (1) basic literacy and numeracy for family and community success, (2) basic skills for the workplace success, and (3) high school completion. However, the federal agenda for adult education pivoted in 1998 with ratification of Public Law 105-220, the Workforce Investment Act (WIA). Authorization of WIA simultaneously repealed the Adult Education Act and established the Adult Education and Family Literacy Act (AEFLA), also referred to as Title II (“Meeting the challenge: A history of adult education in California,” 2005). WIA was designed to consolidate, coordinate, and improve employment, training, literacy, and vocational programs (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

WIA charted a major new direction for adult education and literacy in the United States as a reformation of the diversified and complex delivery system of ABE commenced. WIA contained five titles:

> **Title I** - Workforce Investment Systems (6 chapters)
> **Title II** - Adult Education and Literacy (4 chapters and 19 sections)
> **Title III** - Workforce Investment-Related Activities
> **Title IV** - Rehabilitation Act Amendments of 1998
> **Title V** - General Provisions
WIA reflected the emerging national belief that the economic needs of the country were inextricably linked to the success of education and employment programs for under served adult learners. This legislation aimed to foster greater cooperation and collaboration among various agencies with common “clients,” which led to this radical change in the delivery of education and workforce training. Title I, the significant component of the legislation called for the formation of a new “One-Stop” delivery system, based upon the needs of each Service Delivery Area (SDA) to be determined by the local Workforce Investment Board (WIB). WIA also identified required partners for provision of instructional services in SDAs. As key required partners, adult education providers became critical partners in the delivery of One-Stop services (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). In addition, in 1996, the California Community College system added to its mission: “Advancing California’s economic growth and global competitiveness through education, training and services that contribute to continuous work force improvement” (Bruno, Burnett & Galizio, 2016).

In response to the business and industry concerns about skill levels of current and future employees, the National Literacy Act of 1991 provided, for the first time, fiscal support for National Workforce Demonstration Programs (NWDP) to support effective partnerships between education organizations, business and industry, labor organizations, and private industry councils. NWDP were designed to address the literacy needs of under and unemployed adults to improve their job performance. Funding was also provided for support services such as transportation, counseling, and childcare (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

With passage of the Workforce Investment Act (WIA) of 1998, adult education, labor, and training organizations forged new alliances at the regional level to address the needs of their mutual clients;

“The new authority for adult education contained in WIA legislation made clear the congressional message: the adult education system needed strengthening to meet the job-training demands under the newly created workforce investment system. While retaining the commitment to the broad purposes of educating adults to function better in the family, in the community, and at work, Congress envisioned that adult education providers—local educational agencies, community colleges, community-based organizations, libraries, churches, and other nonprofit organizations—would be more actively involved in the development of a state job-training system. Ultimately, the goal of WIA is to help remove the barriers of low literacy skills from people who are seeking training and employment” (“Meeting the challenge: A history of adult education in California,” 2005, p. 87).

In addition to calling for integrated adult education programs (embedding literacy and numeracy skill building within vocational training) and interagency collaboration, WIA also mandated rigorous accountability for program outcomes. Through the National Reporting System, annual performance measures helped direct program improvement (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013). Student success data were collected by U.S. Department of Education and reported to the U.S. Congress. The three core performance indicators focused on (1) demonstrated gains in basic foundational skills; (2) post-secondary and workplace placement and success rates; and (3) high school diploma or equivalency completion data. WIA also called for a reduction in funding for statewide projects and proportionally increased funding for local providers (“Meeting the challenge: A history of adult education in California,” 2005).
While providing financial support for adult workforce development, federal policy makers also advocated for a significant reduction in welfare programs. Welfare “reform” was authorized under the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996. Under President Bill Clinton, Temporary Assistance for Needy Families (TANF) program supplanted Aid to Families with Dependent Children. TANF reduced the length of time adults could receive assistance to two years and required welfare recipients to actively seek work and educational opportunities. TANF also placed restrictions on cash assistance for legal immigrants, causing a noteworthy rise in applications for citizenship during the late 1990s (“Meeting the challenge: A history of adult education in California,” 2005; The Brookings Institution, 2002). Between 1995 and 1999, over two million welfare recipients enrolled in state grant programs and approximately 145,000 homeless adults received adult education services (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013; Adult education and literacy, data fact sheet, five year trends 1995-1999 pp. 3-4,” 2000).

In California, the Regional Workforce Preparation and Economic Development Act, more commonly known as the Welfare-to-Work Act of 1997 (Assembly Bill 1542), similarly replaced GAIN—which had few limits and restrictions—with CalWORKs, California Work Opportunity and Responsibility to Kids, which imposed strict eligibility requirements including engagement in work and education to ensure welfare would only be provided temporarily during times of crisis. Both TANF and GAIN aimed to discourage long-term dependency. Although these two “reform” efforts initially emphasized work over education. CDE granted authority to distribute CalWORKs funding to adult schools with a focus on basic skills, high school completion, ESL, and short-term career training (“Meeting the challenge: A history of adult education in California,” 2005).

During the 1990s, education finance reform efforts allowed for the expansion of adult education into underserved communities as innovative approaches to vocational and family literacy programs were developed across the country. Adult education theory and practice supported mass implementation of contextualized basic skills instruction. Intergenerational family literacy programs increased across the state. These programs were designed to end the cycle of generational poverty by tackling literacy at the family level. Advocates argued that improved parent literacy would lead to improved child literacy. Family literacy programs require coordinated collaboration between adult and early childhood educators. WIA’s authorization of the Adult Education and Family Literacy Act provided funding for family literacy priorities, which became a pillar of the California State Plan 1999–2004 (“Meeting the challenge: A history of adult education in California,” 2005).

The passage of Proposition 227 in 1998 all but dismantled bilingual education in public schools. However, this ballot measure earmarked ten years of funding for Community-Based English Tutoring (CBET) program. LEAs applied for CBET funding to establish literacy programs for hundreds of thousands of adults statewide for a decade (“Meeting the challenge: A history of adult education in California,” 2005). Despite state efforts to dismantle bilingual education, funding from the National Literacy Act expanded family literacy programs through Even Start programs to improve the educational opportunities of children and adults. This federal legislation called for the development of interdisciplinary programs that integrated early childhood education, adult literacy

Adult education enrollments doubled during the 1990s as a result of a number of factors, including: significant growth in immigration, which spurred an increase in need for ESL, citizenship, and vocational training; cuts to state and federal welfare programs, which led to spikes in high school diploma and short-term job training programs; additional federal funding for adult literacy and citizenship; and California’s bold 1992 adult education reform legislation, which fostered program development and expansion. Between academic year 1992-93 and 1998-99, adult education enrollments skyrocketed, increasing from 1,216,698 to 2,395,825. Adult education offerings in the 1990s focused primarily on ESL, high school diploma, and vocational programs ("Meeting the challenge: A history of adult education in California," 2005). In 1999, 44.5 percent of adults 17 years old and older nationwide participated in some form of adult education ("An American heritage—Federal adult education: A legislative history 1964-2013," 2013; “Digest of Education Statistics,” 2001, Table 359).

The delineation of functions of adult education providers in K-12 and community college districts remained contentious since the Donahue Act of 1960 moved the administration of community colleges from CDE to the Board of Governors ("Meeting the challenge: A history of adult education in California," 2005). This legislation change the name of two-year colleges from junior colleges to community colleges and focused the new system’s mission on transfer to university, and vocational and technical training for employment (Bruno, Burnett, & Galizio, 2016). Even though K-12 adult education providers had operated since the 1850s, noncredit adult education programs in community colleges “were similar in program offerings and standards by the late nineties” ("Meeting the challenge: A history of adult education in California," 2005, p. 113). When the U.S. Congress authorized WIA, many states shifted adult education from K-12 systems to their junior/community college systems. In 1997, a state-wide joint commission was formed to address legislative matters on adult and noncredit education in California, comprised of three representatives from CDE and three representatives appointed by the Board of Governors to foster development of a more cost-effective, integrated model. The Joint Board Committee on Noncredit and Adult Education offered 12 policy recommendations in five disciplines: ABE, ASE, ESL, parent education, and older adults:

1. Clarify joint authorization to offer noncredit and adult education.

2. Create a formal structure for joint development and implementation of a policy for noncredit and adult education.


4. Redistribute unused existing resources.

5. Encourage school and community college districts to make fair-share distributions.

6. Determine the cost of implementing endorsed changes.

7. Equalize reimbursement rates within and among segments of the adult education system, the kindergarten-through-grade-twelve system, and the community college credit and noncredit system.
8. Finalize and distribute program standards.

9. Develop a coordinated data system.

10. Clarify the scope of authorized instructional categories.

11. Permit reimbursement for work-based education.

12. Establish reciprocity for instructors in noncredit and adult education.

These recommendations received minimal support due to funding limitations and disagreement between the state legislature and the governor.

“Additionally in 1997, the Orange County Unified School District sued the Rancho Santiago Community College District because the Community College District did not meet their responsibility to develop a “mutual agreement” prior to establishing new courses for adults. The mutual agreement requirement was established in law. The court found that a mutual agreement was not needed between K-12 and community colleges because the mission of the Community Colleges included noncredit instruction. This decision, later affirmed by the Court of Appeals, essentially nullified the state law” (“Noncredit at a Glance,” 2006: 6). In 1998 the governor of California approved AB 1725, including the provision that “adult noncredit education curricula in areas defined as being in the state’s interest is an essential and important function of the community colleges” (FACCC, 1998, p. 18).

In 1999, the state legislature impaneled a Joint Committee to Develop a Master Plan for Education-Kindergarten through University. This committee’s 2002 report focused on accountability, standardization, and centralization and called for increased funding, collapsing ten adult program areas into four categories, adoption of an accountability system which included performance indicators in course standards, and a review of the overall governance structure and distinct faculty credential requirements. The draft California Master Plan for Education, composed in 2002, called for moving all adult education into the community college system. Protest from K-12 adult education providers followed. The final plan required the appointment of a state taskforce to explore the governance of adult education statewide (“Meeting the challenge: A history of adult education in California,” 2005).

The Politics of No Child Left Behind as the Point of No Return: Centralization, Standardization, and Accountability Reign in the New Century

During the 1990s, reformers on both sides of the political spectrum called for increased accountability, standardization, and centralization at all levels of public education. By 2000, adult education programs in California had enacted various mandates. For instance, civics and ESL programs had to provide evidence of student learning to receive federal funding and high school completion requirements became more stringent (“Meeting the challenge: A history of adult education in California,” 2005). Policymakers, the media, parents, and taxpayers demanded evidence of continuous improvement to justify funding for all state-supported educational institutions; K-12 schools, adult education providers, community colleges, and state colleges had to comply with mounting accountability initiatives. Progressives and conservatives found common ground in their support of standards-based education, performance-based accountability, and centralized-data reporting. Bipartisan support led to passage of the most recent update to Elementary and Secondary Education Act, No Child Left Behind in 2002, a federal K-12
education reform initiative that has fundamentally transformed public education practices in the twenty-first century (Peterson, 2013).

In 1997, Senate Bill 394 implemented outcomes-based accountability in California. A state council was convened to determine how to measure adult education, including key data elements, performance standards, internal reporting protocols and timelines, and public disclosure practices. The year after, the federal Workforce Investment Act of 1998 (WIA) reauthorized hundreds of career training and workforce services and expanded evidence-based ESL, civics, and basic skills programs (“Meeting the challenge: A history of adult education in California,” 2005).

California developed a plan to qualify for supplemental WIA funding, titled The Workforce Investment Act, Title II, Adult Education and Family Literacy Act: California State Plan, 1999-2004. This plan requested supplemental funding and established new program measurement indicators for five program areas: ABE, ASE, ESL (including family literacy), civics, and vocational education. Although California had used CASAS to report sample student performance outcomes in ABE, ASE and ESL since implementation of the National Literacy Act, the new WIA plan instituted data reporting for all students who attended a minimum of 12 hours. Despite the onerous task for collecting all student success data, California realized all negotiated WIA performance objectives for Title II-funded programs in ABE, ASE and ESL (which included civics and citizenship) (“Meeting the challenge: A history of adult education in California,” 2005).

Two significant developments in ABE and ASE fundamentally transformed the administration of high school diploma and equivalency programs. First, state and federal funding streams required the development of a more challenging high school equivalency instrument in 2002. The adoption of state academic content standards in English language arts, math, science, and social studies precipitated revisions to a national high school equivalency test, the General Educational Development (GED) exam. The content and activities included in the new GED test required demonstration of greater critical reasoning and older adults. The California State Plan, 1999-2004 appropriated ten percent of WIA funding for ASE. Beginning in the 2000-2001 federal fiscal year, new funding for legal immigrant education became available through WIA Title II. Amendments in 2002 to the California State Plan, 1999-2004 included a provision for English Language Citizenship (EL Civics) education. The revised plan also called for experimentation with non-standardized assessments, such as portfolios, journals, group projects, and oral presentations (“Meeting the challenge: A history of adult education in California,” 2005).

As adult education programs modernized, adult education providers increasingly relied on educational technologies and new media literacies. In 2001, CDE’s AEO, through OTAN, developed the California Adult Education Technology Plan, 2001-2004 (CAETP). Technological advances drastically transformed the operation and delivery of adult education programs and services. From online curriculum approval to distance education pilots, the early 2000s redefined the role of technology in adult education. Despite these innovations, limited student access to technology and faculty professional development created challenges for implementation of the CAETP (“Meeting the challenge: A history of adult education in California,” 2005).

During the early 2000s, state-funded programs were very similar to those authorized during the 1990s and included ABE, ESL, citizenship, civics, high school equivalency/diploma, vocational education, adults with disabilities, health and safety, home economics, parent education, and
authentic skills in the four core academic subject areas. To support a seamless transition of faculty teaching in ASE equivalency programs to new equivalency program outcomes, CDE established the California GED Collaborative that worked through the California Council for Adult Education’s GED Teacher Academy and the California Adult Literacy Professional Development Project (CALPRO) (“Meeting the challenge: A history of adult education in California,” 2005).

The second major development in performance-based high school completion reforms began with the Class of 2006 when—for the first time—California high school students had to pass a standards-based test to receive a high school diploma. K-12 students in California public schools were required to pass the California High School Exit Examination (CAHSEE) to demonstrate competency in grade-level skills in reading, writing, and mathematics to earn a high school diploma (“California High School Exit Examination (CAHSEE),” 2016). The content of the CAHSEE was based on content standards in English-language arts and mathematics that were adopted by the State Board of Education (SBE) in 2003. Adult high school diploma students were also required to pass the CAHSEE to graduate, which now required students to demonstrate competency in Algebra. In 2010, the CDE adopted the Common Core State Standards in English–language arts and mathematics (“California High School Exit Examination (CAHSEE),” 2016). Both K-12 developments have had lasting repercussions on adult and post-secondary institutions. While these new accountability initiatives raised academic expectations of students, they also created structural challenges for educational institutions and had negative consequences on students. (“California High School Exit Examination (CAHSEE),” 2016; “Meeting the challenge: A history of adult education in California,” 2005).

The New Politics of Noncredit Education: Career Development and College Preparation

Leading community college administrators advocated assertively for increased funding for community colleges during the early 2000s. For decades, the community college districts of California had disparate rates of funding. These disparities stemmed from a period of time when local boards of trustees had taxing authority and established different rates for each of their 72 districts. These different rates were made permanent in the community college system in 1978 with the passage of Proposition 13 that, among other changes, eliminated the taxing authority of local boards. In 2003, several California community college chancellors and presidents sought to remedy the disparity in FTES funding rates among the districts. Several prominent leaders in the community colleges led a campaign to equalize FTES funding across districts (Carroll, 2016; Turnage & Lay, 2006).

Under the leadership of San Diego Community College District Chancellor Constance Carroll, Ph.D., and Foothill-De Anza Community College District Chancellor Martha Kanter, 44 districts established the “Underfunded Districts Caucus,” which led ultimately to the passage of Senate Bill 361 in 2006, the new Budget Act, which provided equalized funding rates for 66 of the 72 community college districts. Although a number of districts that were funded at higher FTES rates opposed this effort, equalization was included in the legislation, which was signed by Governor Arnold Schwarzenegger who supported this effort. The new funding system required the Chancellor of the California Community Colleges to compute and finalize the equalization adjustment for credit FTES apportionment, which required an additional $240 million in ongoing funding for underfunded
community colleges. Following this successful effort, focus shifted to enhanced noncredit funding (Carroll, 2016; Turnage & Lay, 2006).

In 2006, the nine noncredit education categories eligible for community college funding established in California’s Education Code were:

- Elementary and secondary basic skills
- English as a second language
- Immigrant education (which includes citizenship and workforce preparation)
- Parenting
- Short-term career technical education
- Older adult programs (designed for residents over 55 years of age)
- Programs for adults with disabilities
- Health and safety
- Home economics

During the early 2000s, various groups of key stakeholders rallied in support of increased funding for noncredit programs. The groups included the Academic Senate for California Community Colleges (ASCCC), the participatory governance division of the faculty, the California Community College Chancellors Office (CCCCO), the state’s system office, and the Community College League of California (CCLC), the primary policy advocacy division of CCCCCO. The groups orchestrated the campaign to legislate enhanced (not equalized) credit-noncredit funding for programs leading to Career Development and College Preparation (CDCP). They argued that the disparity in funding between CDCP enhanced noncredit classes and programs at only 56 percent of the credit rate did not provide sufficient financial support for noncredit programs that were designed to support job readiness and transition to credit (“The Role of Noncredit in the California Community Colleges,” 2006; “Noncredit at a glance,” 2006).

In response to a request of the boards of the California Community College Trustees (CCCT) and Chief Executive Officers of the California Community Colleges (CECCCC), a workgroup of chief business officers (CBOs) from a diverse, representative sample of districts met for several months to issue recommendations on changes to the community college funding formula for noncredit programming. In 2004, the California Community Colleges CBO Workgroup on Community College Funding released the Report of the Workgroup on Community College Finance (2004), which recommended that the apportionment funding should be increased for CDCP courses to the full credit rate when funds were available to increase student success and completion. The workgroup recommended replacing the program-based funding distribution to community college districts with a simpler, more equitable method. The report recommended each district receive a basic allocation based on the number of colleges and noncredit centers along with an equalized rate for all credit and noncredit FTES. This recommendation “provides equitable funding while recognizing the unique circumstances surrounding the creation of our different districts” (“Report of the Workgroup on Community College Finance,” 2004, p. 1).

In 2006, ASCCC formally recognized that credit programs in a report titled “The Role of Noncredit in the California Community Colleges” had long overshadowed noncredit programming within California community colleges. ASCCC’s Educational Policy Committee revealed that even though noncredit generated approximately 10 percent of enrollment in the California community college system, many people outside and even within the system did not fully understand the importance of noncredit programs, nor how they
served California’s educational needs. During the early 2000s, most colleges offered few, if any, noncredit courses, and most that offered noncredit programs failed to recognize the full potential of noncredit (“The Role of Noncredit in the California Community Colleges,” 2006). The 2006 report by ASCCC introduced readers to the world of noncredit instruction, surveyed the status of noncredit instruction statewide, and examined a range of issues related to noncredit instruction (“The Role of Noncredit in the California Community Colleges,” 2006).

Based on the responses to the survey conducted by the Educational Policies Committee and related research, the 2006 ASCCC report issued the following recommendations:

**ON A STATEWIDE LEVEL:**

1. The Academic Senate for California Community Colleges should seek to better integrate the concerns and viewpoints of noncredit faculty and programs into its discussions and work through involvement of noncredit faculty in its committees and appointments.

2. The Academic Senate for California Community Colleges should work with the System Office on a plan to increase the number of full-time noncredit faculty in the system and the employment of full-time noncredit faculty in all noncredit programs.

3. The Academic Senate for California Community Colleges should promote the role that noncredit can play as a pathway to credit instruction and encourage the local articulation and linkages between credit and noncredit that creates these pathways.

4. The Academic Senate for California Community Colleges should continue to advocate for increases in noncredit funding to expand support for instruction in all approved noncredit areas.

5. Given the multitude of issues related to noncredit that need to be addressed, including investigation of the wide variety of issues raised in the noncredit survey conducted for this paper, the Academic Senate should establish an ad hoc committee on noncredit.

**ON A LOCAL LEVEL:**

1. Local senates should seek to better integrate the concerns and viewpoints of noncredit faculty and programs into its discussions and work through involvement of noncredit faculty in the local senate, its committees and appointments.

2. Local senates should work through local planning and budget processes and hiring processes to increase the number of full-time faculty serving noncredit programs and instruction.

3. Local senates should work through local planning and budget processes to ensure that augmentations in noncredit funding are used to expand support for noncredit programs and instruction at their colleges and districts.

4. Local senates should work with their curriculum committees and faculty to establish much needed and beneficial articulation and linkages between their colleges’ noncredit and credit programs to encourage and facilitate the movement of students from noncredit to credit.

5. Local senates should work with their colleges and districts to encourage and support data collection on noncredit programs and
students in order to better ascertain needs and provide documentation of the benefits of noncredit programs and instruction

(“The Role of Noncredit in the California Community Colleges,” 2006, p. 1).

The very structure of the community college system guaranteed that, while noncredit students were often the most in need of individual help and support, they received fewer interactions with faculty and support services than did their credit counterparts (“The Role of Noncredit in the California Community Colleges,” 2006). ASCCC joined forces with CCCCO and CCLC to call for additional funding and support for noncredit programs.

To support their noncredit lobbying efforts, CCLC argued that roughly 75 percent of new community college students arrive unprepared for college-level course work and require remediation. The policy advocacy organization asserted that if reimbursement rates were increased, the financial disincentive to offer primarily pre-collegiate credit instruction would discontinue. This approach would provide community colleges with an alternative option to address remediation and students with a different delivery method for instruction. Noncredit students would not pay fees to enroll in basic skills courses, which would be better designed and more appropriate for this student population. “Short, intensive formats with open-entry enrollment would be the norm rather than the traditional 16-week regular credit course. Instruction could be provided in an acceleration format or some other intensification environment which could be an option for CTE or Basic Skills courses” (“Noncredit Education Policy Brief,” 2014: 1). CCLC claimed that students would not pay fees for noncredit basic skills courses and could therefore delay the start of their financial aid eligibility “clock” and have only legitimate

The very structure of the community college system guaranteed that, while noncredit students were often the most in need of individual help and support, they received fewer interactions with faculty and support services than did their credit counterparts.

—“The Role of Noncredit in the California Community Colleges,” 2006).
Another significant development in the California community college system during the first decade of the millennium was the Basic Skills Initiative (BSI). In response to growing numbers of undereducated adult residents, the BSI was established in 2006. This initiative stemmed from both the development of the System Strategic Plan and the Board of Governors’ adoption of the Academic Senate recommendation to increase student success in English and mathematics. These two developments raised awareness about the very high numbers of students who did not progress successfully in developmental courses and therefore failed to complete their educational objectives (“Noncredit instruction: Opportunity and challenge,” 2009).

BSI led to annual grants to colleges to support innovative reforms in developmental ESL, English, and math programs. The first BSI grant, disseminated in 2006, supported the development of *Basic Skills as a Foundation for Student Success in California Community Colleges*, a review of extant literature that describes data-driven best practices in developmental education. The second grant funded a professional development component that involved Academic Senate and faculty-administrator collaboration in providing peer-to-peer training on the research-based best practices identified with funding from the first grant. The third grant most directly involved noncredit faculty and programs. A key objective of all three BSI grants focused on transitions from noncredit to credit programs (“Noncredit instruction: Opportunity and challenge,” 2009).

Under SB 361, funding was increased but not equalized for CDCP courses. CDCP courses were funded at roughly 75 percent, rather than the prior 56 percent rate, provided for credit courses. The rates for CDCP courses were set at $4,367 per FTES, enhanced non-credit at $3,092, and remaining noncredit at $2,626. This new instructional category “more clearly described the intention that the increased resources should target students whose goals are career development or college preparation” (“Noncredit instruction: Opportunity and challenge,” 2009: 10). SB 361 required that CDCP courses be sequenced and lead to certificates focused on transition to credit or employment. CDCP enhanced funding program categories included: ESL, ABE/ASE, short-term CTE certificates with high employment potential, workforce preparation pathways, and apprenticeships (“Exploring New Possibilities for Student Success through Noncredit,” 2014).

As a direct result of intense lobbying efforts, SB 361 also provided supplemental funding for noncredit instruction. “Although one part in a much larger bill, the legislation promised enhanced funding for certain noncredit “career development and college preparation” (CDCP) courses putting apportionment for those noncredit courses closer to an equitable par with other college transfer and career technical preparation efforts (“Noncredit at a Glance,” 2006: 6). Prior to the passage of SB 361, all noncredit instruction apportionment was funded by the state at the same level (“Noncredit at a Glance,” 2006). Disparate funding has been in place since 1981 upon recommendation of the Behr Commission. This new legislation created a new instructional category, named “CDCP,” and opened the door to the potential of equitable funding for noncredit instruction.

During the first decade of the new century, Governor Arnold Schwarzenegger and State Senator Jack Scott called for bipartisan credit classes count toward degree and certificate completion (“Noncredit Education Policy Brief,” 2014).
support for increased funding for five noncredit instructional program categories: ABE/ASE, ESL, immigrant education, programs for adults with disabilities, and short-term CTE certificates to be funded by a new “Adult Education Partnership” program. These five programs received support because they prepare underserved adult learners for transition to credit college programs, entry or re-entry into the job market, and critical citizenship and workforce skills for new Americans (“Noncredit Education Policy Brief,” 2014). Although courses for adults with disabilities were not designated as CDCP, the other instructional categories received enhanced funding under SB 361.

Advocates for a new Adult Education Partnership cited four arguments for their support of these five noncredit program categories. First, adults who lacked basic skills in reading, writing and computation were rarely successful in college-level coursework. Noncredit courses can provide the essential “bridge” to enable students to become college ready and ultimately increase the numbers of Californians who receive certificates and degrees. Second, advocates argued that immigrants with English language skills would be more productive members of society if they gained employment, became citizens or pursued further academic study. Third, reformers asserted that basic skills or vocational education for students with disabilities would enable them to achieve maximum independence. And fourth, short-term career technical education certificates would provide adults with the skills needed for job entry or re-entry as well as career advancement or change (“Noncredit Education Policy Brief,” 2014).

Passage of SB 361 in 2006 by the California legislature opened the door to the potential of equitable funding for noncredit instruction. Curriculum regulations in Title 5 changed to allow local certificate programs in noncredit. The system-wide Basic Skills Initiative also championed the important role noncredit programs can play in introducing more students to the wide range of programs and certificates available in community colleges. Two years after passage of SB 361, ASCCC convened an ad hoc taskforce on noncredit, which issued a report titled Noncredit Instruction: Opportunity and Challenge in 2009. This report highlighted that the promise of SB 361 and related advances had brought about minimal progress.

The 2009 ASCCC report highlighted three areas of concern: funding, student support services, and faculty working conditions. First, this report asserted that 2009 funding for noncredit programs was inadequate, despite improvement provided by SB 361. Second, ASCCC maintained that student supports were inadequate; noncredit student support services were missing or minimal. And third, noncredit faculty were not treated with the same level of dignity and respect as credit faculty: staffing levels of full-time noncredit faculty had not increased sufficiently; faculty workload expectations discouraged effective class preparation, monitoring of student work, and impromptu interactions; and faculty struggled to participate in program development and local governance because of their disproportionate teaching loads (“Noncredit instruction: Opportunity and challenge,” 2009). Noncredit faculty typically taught 25 hours per week while credit faculty were usually contracted to teach 15 hours per week.

During the height of the Great Recession, in 2008, ASCCC raised two important questions for consideration: First, why are there two systems (namely, the K-12 and community college systems) offering similar adult education programs with inconsistent funding mechanisms and linkages between them, and second, why is it that within the community college system there are two different funding mechanisms (credit vs. noncredit) for offering instructional services with the same outcomes? Later, the Legislative Analyst Office’s (LAO’s) report Restructuring California’s
Adult Education System issued in December 2012 and the Little Hoover Commission’s report Serving Students, Serving California published in February 2012 focused on the same two questions. From the perspective of these three bodies, the state of California provides seemingly similar educational services through two different agencies: adult education through the K-12 system and noncredit and credit instruction through the California Community Colleges (“AB 86: A Brief History and Current State of Affairs from the Noncredit Task Force,” 2014).

According to the LAO’s report, 52 percent of adult education in 2014 was offered through credit instruction at community colleges—with 14 percent of community college adult education delivered through noncredit instruction—and 34 percent provided by adult schools when evaluating full-time equivalent students. These educational services are concentrated in three areas: CTE, ESL and ABE/ASE. The LAO defined all programming below college-level English and intermediate algebra as pre-collegiate basic skills. The origins of this conflict between adult education and community college education institutions dates back to 1856 when the SFBOE established its first adult school, the “Center for Americanization,” to address the English language needs of its burgeoning population. Since the early 1900s, school districts in California were given legal authority to offer two distinct educational programs for adults: (1) adult schools focusing on immigrant education, basic skills and job skills; and (2) junior or community colleges covering the first two years of postsecondary education to high school graduates (“AB 86: A Brief History and Current State of Affairs from the Noncredit Task Force,” 2014).

Over the past 100 years, two paths to address the learning needs of California’s adult learners emerged. “Over the past century, Californians have regularly revisited these tracks resulting in a history of modifications that led to our current practices: K-12 schools are permitted to offer adult education programs and CCC districts may offer noncredit and credit courses and programs” (“AB 86: A Brief History and Current State of Affairs from the Noncredit Task Force,” 2014). No mutual agreement is required between these two systems within the same service area. Subsequently, local control has prevailed as common practice. With the passage of California Assembly Bill 86 in July 2013, community colleges and adult education providers in K-12 systems are again expected to determine how adult education providers (through a K-12 delivery system and noncredit in the community college system) can work cooperatively and collaboratively to address the vital needs of the state’s adult population (“AB 86: A Brief History and Current State of Affairs from the Noncredit Task Force, 2014”). Presently, there are 113 community colleges plus three noncredit centers in the California community college system serving approximately a half million students registered in noncredit programs. It should be noted here that not all community colleges uniformly offer noncredit instruction. Moreover, there are more than one million students in some form of pre-collegiate adult education (K-12, CCC credit instruction, CCC noncredit instruction) throughout California, represented by 500,000 full-time equivalent students (FTES), according to the LAO in 2012. The alignment and collaboration between the K-12 and community college adult education systems remains a point of contestation (“Restructuring California’s Adult Education System,” 2012).

LAO argued that the legislature should “promote collaboration between adult schools and community colleges by clearly defining the missions of the two systems.” For over a century, this debate has not gone unresolved and the alignment and collaboration between the K-12...
and community college adult education systems remains a point of contestation (“Restructuring California’s Adult Education System,” 2012). The LAO has advocated that the following courses that are offered at community colleges be categorized only as noncredit courses: (1) all English and ESL courses that are below transfer level, and (2) all math courses that are more than one level below transfer. The legislature responded in support of the recommendations of the LAO. (“AB 86: A Brief History and Current State of Affairs from the Noncredit Task Force,” 2014; “Restructuring California’s Adult Education System,” 2012). The continued discussion about governance over the two systems serving similar adult learner populations with similar needs led to the introduction and successful passage of the Education Protection Act, Senate Bill 860 and Assembly Bill 86 (“AB 86: A Brief History and Current State of Affairs from the Noncredit Task Force,” 2014).

At the federal level, the United States investment in adult education (ABE/ASE, ESL and CTE) has continued. Grants to states increased from $416 million in 2000 to $497 million in 2010, and total adult education funding increased from just over $500 million in 2000 to almost $640 million in 2010. Total student enrollment in adult education fluctuated from 2000 to 2010 but ultimately increased from approximately two million to nearly three million. Latinos comprised the largest group enrolled in adult education at 40 percent of enrollees in FY2010-2011, followed by whites at 26 percent and blacks or African Americans at 22 percent (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

In his 2013 State of the Union address, President Obama supported California’s workforce mission to close the skills gap and to provide technical training that industry needs (“Doing what matters for jobs and the economy — California community colleges,” 2016). In its Strategic Plan for FY2011-2014, the USDOE delineated six performance goals to reach President Obama’s 2020 education target. The first goal of the strategic plan focused on postsecondary education, career technical education, and adult education. Three priorities emerged: increased college access, quality, and completion by improving higher education and lifelong learning opportunities for youth and adults.

“To encourage the lifelong learning of Americans, it is important to focus not only on increasing the number of students earning degrees and credentials through postsecondary education, but also on encouraging every American to complete at least one year of education or workforce training, or its equivalent, beyond high school” (An American heritage—Federal adult education: A legislative history 1964-2013,” 2013, p. 30).


The Rise of the Platinum Age of Adult Education

In response to the effect of the economic crisis of 2008, on California public K-12 and community college systems, Governor Brown lobbied voters to support Proposition 30, The Schools and Local Public Safety Protection Act of 2012, which was approved on November 6, 2012. This proposition temporarily increased the state’s sales tax rate for all taxpayers and the personal income tax rates for upper-income taxpayers. Revenues generated from Proposition 30 are deposited...
into a newly created state account called the Education Protection Account (EPA). EPA funding has provided significant money to support adult education student success and program expansion initiatives for both K-12 adult education providers and community colleges (“Proposition 30 impact to state aid - principal apportionment (CA Dept of education),” 2015), and has ushered in the “Platinum Age” of adult education for California K-12 and community college providers.

ASCCC continued to advocate for equalization of career development and college preparation (CDCP) funding for select noncredit program categories. At a plenary session in 2014, ASCCC urged support for noncredit programs because they (1) focused on skill attainments and life skills, not grades; (2) are repeatable; (3) did not charge fees (meaning they are free to all residents); (4) are accessible to all; and (5) serve as a bridge to educational and career advancement (Lynch-Thompson, May, & Grimes, 2014). To address decimation of CTE, ESL and ABE/ASE programs during the economic downturn in 2008, the legislature and Governor Brown approved Senate Bill 860, the Education Omnibus Trailer Bill, which included equalization of CDP noncredit and credit FTES funding in 2014. The new legislation read,

“Beginning in the 2015-2016 fiscal year, career development and college preparation FTES shall be funded at the same level as the credit rate” [(Lynch-Thompson, May, & Grimes, 2014).; SB 860: Ed Code 84750.5 (d)(4)(A) (ii).] Apportionment dollars are not earmarked for credit or noncredit programming. Instead, local districts determine whether or not they wish to offer noncredit. Community colleges must offer credit course to meet accreditation standards under the Accrediting Commission for Community and Junior Colleges (Lynch-Thompson, May, & Grimes, 2014).

After decades of advocacy, SB 860 finally equalized funding for CDP noncredit and credit courses. For academic year 2016-17, these two groups of courses are funded at $5,004 per FTES. Other (non-CDP) noncredit courses are funded at $3,009 per FTES.

Although SB 860 equalized noncredit and credit funding, this legislation did not establish one set of faculty minimum qualifications or one method of attendance reporting for both noncredit and credit programs. State course approval requirements remain the same for credit and noncredit courses and certificates, but Title 5 maintained specific minimum qualifications for noncredit and credit faculty, reinforcing a tiered hierarchical system for instructional faculty that required credit faculty to possess more advanced educational credentials. Similarly, FTES calculation formulas were not aligned. Whereas noncredit FTES reporting requires counting every minute each student attends class, the FTES reporting formula for credit courses requires tallying total student enrollments on one single day during the semester (Lynch-Thompson, May, & Grimes, 2014).

To foster expansion of job and college readiness noncredit programs, the legislature set aside $25 million to support two years of planning across the state. The five categories championed under Governor Schwarzenegger’s 2007 plan were also the focus of Assembly Bill 86 (AB 86), which was signed by Governor Jerry Brown in 2014. AB 86, on July 1, 2013, called for the creation of Adult Education Consortium Programs and the establishment of regional consortia; to-date, 70 have been formed. Each regional consortium must consist of at least one K-12 school district and at least one community college district, with the goal of developing regional plans that serve community needs for adult education. As a result, the CCCCO and CDE, the agencies historically providing adult education,
education services, created an AB 86 Cabinet and Work Group to develop a Certificate of Eligibility (COE) for all adult education providers to respond with the intent to participate in regional consortia. Consortia may also incorporate other agencies, such as correctional entities or community-based organizations. Adult education program categories included in the AB 86 consortia planning grants were:

- ABE and ASE, including high school diploma or high school equivalency certificates;
- Classes for education of immigrants such as ESL, citizenship, and workforce preparation;
- Educational programs for adults with disabilities;
- Short-term career technical education classes with high employment potential; and
- Programs for apprentices

(“Comprehensive Adult Student Assessment Systems (CASAS) Adult Education Block Grant,” 2016).

The one-time planning funds provided under AB 86 resulted in the Adult Education Block Grant, which currently funds adult and career technical education across the state community college system (Lynch-Thompson, May, & Grimes, 2014).

Consortia are expected to address gaps in services for adult students. Each consortium is also responsible for evaluation of currently offered adult education programs within their geographical boundaries and for planning the integration of existing programs to create seamless transition paths to credit or workforce. This new legislation emphasized better program integration and improved student outcomes. During the establishment of these consortia, ASCCC advised local academic senates to evaluate the best curricular mechanism to support student success and achievement of basic skills outcomes and ensure clear articulation within the community college district from noncredit to credit instruction and clear articulation from the K-12 adult education system to the community college instructional offering. “Smooth bridging from noncredit to credit and from noncredit to workforce is fundamental for the success of many of the students in the community college system. Developing and implementing a successful bridging plan requires much thought, along with quality input and cooperation among many areas working collaboratively” (“AB 86: A Brief History and Current State of Affairs from the Noncredit Task Force,” 2014, p. 1).

As of November 2014, a second ASCCC plenary on SB 860 and AB 86 presented on the state of noncredit in California. This presentation took place shortly before equalized CDCP funding took effect in July 2015. ASCCC reported that 68 of 72 districts offered some form of noncredit, and that 85 percent of all noncredit courses statewide were in ESL. While most districts greatly reduced (and in some cases eliminated) noncredit offerings during the Great Recession, several districts continued to operate robust noncredit programs despite the lower rate of funding. The bulk of noncredit has historically been offered by five community college districts (listed in order of size): (1) San Diego; (2) San Francisco; (3) North Orange; (4) Rancho Santiago; and (5) Mount San Antonio (“Exploring New Possibilities for Student Success through Noncredit,” 2014). For the past two years, San Diego has led in the state noncredit FTES with more than 8000 full-time equivalent student enrollments (San Diego Continuing Education, Office of Institutional Effectiveness, 2016).
In alignment with AB 86, CCCCO, specifically the programs of the Division of Workforce and Economic Development, aimed to bridge the skills and jobs mismatch and prepare California’s workforce for twenty-first century careers. Governor Brown argued that community colleges should become essential catalysts in California’s economic recovery and jobs creation at the local, regional, and state level. In support of Governor Brown’s agenda for workforce development, CCCCO launched the “Doing What Matters for Jobs and the Economy” initiative, which developed a four-pronged framework to respond to the call of our nation, state, and regions to close the skills gap. The four prongs aim to:

> Give priority to jobs and the economy
> Make room for jobs and the economy
> Promote student success
> Innovate for jobs and the economy

The goals of “Doing What Matters for Jobs and the Economy” are to supply in-demand skills for employers, create relevant career pathways and stackable credentials, promote student success and get Californians into open jobs. This initiative called for a focus on priority/emergent sectors and industry clusters, recommended the scaling of effective practices; called to integrate and leverage programming between funding streams; promoted common metrics for student success; and removed structural barriers to execution (“Doing what MATTERS,” 2016).

The top 10 California sector priorities include advanced manufacturing; advanced transportations and renewables; agriculture, water and environmental technologies; energy, construction and utilities, global trade and logistics; health; information and communication technologies (ICT)/digital media; life sciences/biotech; retail/hospitality/tourism ‘learn and earn’; and small business. There are fifteen regional consortia and each have identified regional priority sectors in which to focus. (“Doing what MATTERS,” 2016). This has led to the creation of collaborative regional infrastructures to strategically address regional employment gaps while avoiding oversaturating each region with the applicable programming to support narrowing these skills gaps. In addition, funding streams has supported both local and regional approaches.

The Education Protection Account has given rise to the “Platinum Age” of adult education in the California community college system. In addition to equalized funding for CDCP noncredit and AEBG, the Education Protection Account—in lockstep with recommendations of “Doing What Matters for the Jobs and the Economy”—has financed four innovative initiatives to support noncredit student success and program expansion: (1) Student Success and Support Program; (2) Student Equity; (3) CTE Enhancement Funding; and (4) Strong Workforce.

**STUDENT SUCCESS AND SUPPORT PROGRAM (SSSP)**

SSSP (formerly Matriculation) is a CCCCO initiative that enhances student access to the community colleges and promotes and sustains the efforts of credit students to be successful in their educational endeavors. The goals of SSSP are to ensure that all students complete their college courses, persist to the next academic term, and achieve their educational objectives through the assistance of the student-direct components of the student success and support program process: admissions, orientation, assessment and testing, counseling, and student follow-up. The Student Success and Support Program (SSSP) unit provides coordination and leadership to the community colleges with
respect to credit and noncredit programs and services. SSSP funding was allocated in 2015 to support adult education in the statewide system ("Student Success and Support Program," 2016). SSSP funds have called for more accountability in the delivery of robust student supports to increase student access and foster greater rates of completion.

**STUDENT EQUITY**

Student Equity Planning is administered through the SSSP unit at the CCCCO. SSSP staff is responsible for the implementation of the Board of Governor’s Student Equity Policy and related regulations. College student equity plans focus on increasing access and course completion. ESL and basic skills completion, degrees, certificates and transfer for all students as measured by success indicators linked to the CCCCO Student Success Scorecard, and other measures developed in consultation with local colleges. “Success indicators” are used to identify and measure areas for which disadvantaged populations may be impacted by issues of equal opportunity based on ethnic/racial identity, gender identity, socioeconomic status, or designation as a foster youth, veteran, or student with disabilities. “Each college develops specific goals/outcomes and actions to address disparities that are discovered, disaggregating data for indicators by student demographics, preferably in program review. College plans must describe the implementation of each indicator, as well as policies, activities and procedures as they relate to improving equity and success at the college" ("Student equity," 2016: 1). Student equity funding allows colleges to focus on interventions and supports for some of the most disadvantaged credit and noncredit student populations. In 2015, noncredit programs became eligible to receive student equity funding.

**CTE ENHANCEMENT FUNDING**

In the 2014-15 budget signed by Governor Brown, funding was provided on a one-time basis to create greater incentive for California Community Colleges to develop, enhance, retool, and expand quality career technical education offerings that build upon existing community college regional capacity to respond to regional labor market needs. Noncredit and credit programs received significant funding to modernize career technical education programs.

**STRONG WORKFORCE**

In June 2016, the California legislature approved a budget that includes an additional $200 million for a workforce training program that takes aim at the looming skills gap across the state’s regions. Leaders from the California Economic Summit joined the 2015 Strong Workforce Task Force, a statewide effort led by CCCCO to update California’s workforce training programs. This body recommended more than two dozen improvements in the following areas:

> Student Success
> Career Pathways
> Workforce Data and Outcomes
> Curriculum
> Career Technical Education Faculty
> Regional Coordination
> Funding

Governor Brown and the legislature agreed that California’s community colleges are vital to the economy and that they play an important role in boosting our state’s economy by serving more than 2.6 million students each year. In fact,
one out of four community college students in the country is presently enrolled in a California community college, making it the nation’s largest system of higher education. The 113 community colleges and three noncredit institutions provide students with the knowledge and background necessary in today’s competitive job market. With a wide range of educational offerings, the colleges provide workforce training, basic skills courses in English and math, certificate and degree programs and preparation for transfer to four-year colleges and universities (“Doing what matters for jobs and the economy—California community colleges,” 2016; “Doing what MATTERS,” 2016).

In addition to these initiatives, the California High School Exit Examination (CAHSEE), formerly a graduation requirement for students in California public schools, was suspended effective January 1, 2016. Senate Bill 172 (Liu) was signed by the Governor to suspend the administration of the CAHSEE and the requirement that students pass the CAHSEE to receive a high school diploma for the 2015–16, 2016–17, and 2017–18 school years. Due to the change in academic standards, this new legislation required that schools grant a diploma to any pupil who completed grade twelve in the 2003–04 school year or a subsequent school year and met all applicable graduation requirements other than the passage of the high school exit examination. The law further required the state superintendent of public instruction to convene an advisory panel to offer suggestions to the superintendent on the continuation of the high school exit examination and on alternative pathways to fulfill the high school graduation requirements pursuant to Education Code sections 51224.5 and 51225.3.

In President Obama’s first address to Congress, he challenged America to meet an ambitious goal for education by 2020 to once again have the highest proportion of college graduates in the world. His administration has valued innovation, science, technology, and workforce development. In response to President Obama’s ambitious educational objectives, the Secretary of Education, Dr. Duncan, and USDOE staff developed an audacious Strategic Plan for 2011–2014 (“U.S. Department of education strategic plan - FY 2011-14: Draft for public comment,” 2012). This Strategic Plan outlined National Outcome Goals for Postsecondary Education, Career and Technical Education, and Adult Education to increase:

- Number and percentage of 25 to 34-year-olds who attain an associate’s degree or higher
- Number and percentage of students who complete a bachelor’s degree within six years
- Number and percentage of students who complete an associate’s degree or certificate within three years
- Number and percentage of adult education students who obtain a high school credential
- College access, quality, and completion by improving higher education and lifelong learning opportunities for youth and adults.

President Obama’s second term has focused on providing adult students and individuals with disabilities who are college and career-ready with the knowledge and skills necessary to pursue successful career pathways. Bills to reauthorize the Workforce Investment Act were introduced in 2013. The enactment of the Workforce Innovation and Opportunity Act (WIOA) by bipartisan majorities in Congress revitalized and transformed the public workforce system so that these efforts reflect the realities of the twenty-first century.
In line with this effort, the administration also proposed a competitive CTE Innovation and Transformation Fund, administered by USDOE, to incentivize innovation at the district level and support system reform at the state level.

In January 2015, President Obama announced his campaign for free community college. President Obama proclaimed: “Every American, whether they’re young or just young at heart, should be able to earn the skills and education necessary to compete and win in the 21st century economy.” (“FACT SHEET: White House Launches New $100 Million Competition to Expand Tuition-Free Community College Programs that Connect Americans to In-Demand Jobs,” 2016: 1). This announcement celebrated the 27 new free community college programs that have launched in states, and the additional investment of $100 million for America’s Promise Job-Driven Training grants (America’s Promise Grants) to connect more Americans to education and high demand careers. President Barack Obama’s announcement of the America’s College Promise initiative began a national conversation about college affordability (“Beyond Tuition: Reducing Financial Barrier to College,” 2016).

Federal grants will be awarded to pilot and scale innovative tuition-free partnerships between employers, economic development, workforce development boards, community and technical colleges and systems, training programs, K-12 education systems, and community-based organizations to “strengthen the pipeline of Americans ready for in-demand jobs, bridge students’ educational opportunities and employer needs, attract more jobs from overseas, and create more pathways for Americans to reach the middle class,” effectively marrying workforce to adult education and community colleges (“FACT SHEET: White House Launches New $100 Million...
Competition to Expand Tuition-Free Community College Programs that Connect Americans to In-Demand Jobs,” 2016, p. 1).

The California College Promise has charged local community colleges and districts to help fulfill the California College Promise for college completion by partnering with K-12 and university partners, college foundations and the private sector to increase access to underrepresented community members.

Although adult education is already offered at zero fees to state residents, the new Promise programs will offer additional options to individuals who complete noncredit certificates (“Beyond Tuition: Reducing Financial Barrier to College,” 2016). With renewed attention on the cost of college, one could predict that many districts will soon start to convert credit programs—particularly in ABE/ASE, ESL and CTE—to noncredit.

**Conclusion**

Adult education has been federally funded since the birth of the nation, beginning with basic education and skills training for military personnel during the American Revolution. During America’s first 100 years, federal adult education funding grew to provide training to military and civilian employees. Subsequent federal funding emphasized vocational and agricultural education and training. Significant federal funding for basic noncredit education of American adult citizens did not commence until the early 1960s (“An American heritage—Federal adult education: A legislative history 1964-2013,” 2013).

Federal adult education programs established in the 1960s focused primarily on adult literacy and targeted—and continue to target—through state grants and some national programs, those individuals who lack essential literacy skills required for employment and participation in America’s democratic system. Since the mid-1900s, all presidential administrations provided support for adult education, although their visions for these programs may have differed.

Since the 1960s, more than a dozen major congressional policies have been enacted to support the expansion of adult basic education and literacy programs.

California has offered state-supported adult education since 1856, less than one decade after becoming a state. Until 1967, the California State Department of Education oversaw all of adult education provided by the K-12 school districts and the emerging junior colleges. After the two-year colleges became an independent segment within California’s education system, responsibility for adult education continued to be shared by the public adult schools and the community college noncredit programs. Periodic initiatives have attempted to clearly define the missions of the two systems and to promote equity and collaboration to meet the educational needs of the state’s adult population. The most recent efforts of the Legislature are AB86, which led to the establishment of 70 Adult Education Regional Consortia consisting of multiple providers of adult education and Adult Education Block Grant funding, and SB860, which equalized credit and noncredit funding in the Community Colleges.

Over the past 166 years, the state of California has become the most diverse region in the world and a significant player in the world economy. As the fifth-ranked economy on the planet, the
political, economic, and social health of California has implications across the globe (Starr, 2007). Now, more than ever, California needs to lead in the delivery of relevant, sustainable adult education programming that leads to advanced education and job training in careers that provide livable wages.

With the community college system in growth mode, colleges are looking to CDCP noncredit for program development and expansion for enrollment and FTES. Also, with increased focus on equity and workforce, many colleges are piloting academic innovations through noncredit. The following chapter will provide the finding of SDCE’s 2016 survey on California Community College Noncredit Offerings, baseline for subsequent surveys, along with recommendations for the future of noncredit adult education research and practice to inform State enhancements in support of noncredit program growth.
San Diego Continuing Education (SDCE) has commenced this study and survey on California Community College Noncredit Offerings to advocate for current and future noncredit programming in community colleges throughout California. Noncredit programs support the most underserved students by removing barriers to entry and while they have always been funded by the State in some capacity, an intentional and unified approach for growth will benefit our institutions and communities in serving a greater number of our citizens.

Survey Methodology

PURPOSE

The purpose of the survey is to track the development and revision of instructional programming across the California Community Colleges in three key areas: current offerings and programming, current operational processes, and planned offerings and programming; which are reflected in the research questions:

1. What is the current state of noncredit offerings and programming across the California Community College system?

2. How are California community colleges and institutions managing their noncredit programming?

3. What plans for future noncredit programming have the California community colleges and institutions put in place?

The 2016 California Community College Noncredit Offerings Survey results are considered exploratory and are baseline data to inform California about the current state of noncredit programming. The survey will be modified and data collection will be repeated annually or semi-annually to then begin to longitudinally track changes and progress made in noncredit programming across California to address at least one additional future research question: What changes are occurring in noncredit offerings and programming within the California Community College system?

INSTRUMENTATION

In fall 2016, the SDCE Office of Institutional Effectiveness worked in conjunction with the SDCE Office of the President to provide feedback on the design of the survey instrument.
Face validity and content validity of the instrument was established through feedback from the SDCE Office of Institutional Effectiveness, the SDCE Office of the President, and CCCCO’s Educational Services, which included the following content experts: an SDCE administrator, SDCE classified staff member, former SDCE instructional dean and staff from the CCCCO’s Office of Educational Services.

Face validity and content validity were based on the following criteria:

1. Survey questions should be directly related to the purpose of the survey, which is to elicit information about current credit and noncredit instructional programming and future provision of noncredit instructional programs.

2. Survey questions should be factually based instead of perceptually based.

3. Survey questions should avoid addressing complex processes or systems that most survey participants won’t be able to answer, are not applicable to them, or are not representative of their knowledge base.

Readability and field tests on the survey instrument were conducted within the SDCE Office of Institutional Effectiveness.

The online survey instrument contained a total of 31 overarching questions or question sets and comprised: one set of open-ended respondent demographic/institutional background questions, 18 stand-alone forced choice questions, 11 question sets that each elicited yes/no responses to item lists, and one multiple-response question set. Moreover, at multiple points in the survey, 10 open-ended response options were included in support of additional comments. It should be noted that the number of questions respondents were actually directed to answer varied due to respondent prior response and structurally built-in skip patterns.

SURVEY POPULATION

A nonprobability purposive sampling approach was used to gather information from each of the 113 California Community Colleges and three ancillary divisions: Compton Center, North Orange School of Continuing Education, and San Diego Continuing Education. “Nonprobability sampling is a catch-all term referring both to samples of convenience (e.g., accessible, volunteer) as well as to more purposive methods of selection (e.g., judgment sampling, quota sampling)” (Field, Pruchno, Bewley, Lemay, & Levinsky, 2006: 567). Based upon the content of the questions and the specific expertise and level of knowledge required to identify broad instructional features of the institution, a hierarchical position-based approach was used in selecting potential respondents that would elicit accuracy in reporting. An expert panel was recruited with one chief instructional leader (CIO) at each institution invited to participate in the survey or designate another well-informed contact at the institution to complete the survey on their college’s behalf. A total of 116 respondents completed surveys for their college or institution, resulting in a 100% college/institution response rate.

DATA COLLECTION

SDCE’s Office of Institutional Effectiveness conducted an extensive campaign in June and July 2016 to engender survey completion from every institution in the state with the assistance of the Office of the President. A pre-notification was emailed to a compiled list of CIOs several days ahead of the start of data collection at the beginning of June. The pre-notification comprised a letter from SDCE President Carlos O. Turner Cortez...
informing potential respondents about the purpose and content of the survey, and requesting support for the statewide project. Initial email invitations were sent to CIOs containing unique links to the survey followed by several reminder emails during the first half of June. CIOs were asked to either submit their college’s survey themselves or designate another contact at the institution with substantial knowledge of noncredit programming to make the submission for the college. In the last part of June and throughout July a combined telephone and email follow-up campaign was initiated with the instructional offices of non-responding institutions to either encourage survey submission or to assign a new contact at the institution due to leadership time-constraints or change in leadership. All colleges submitted their responses by August 1, 2016.

The actual length of time to complete the survey was expected to vary considerably by college. For those colleges not requiring information collection from more than one source, the survey was expected to take approximately 5-15 minutes depending upon the extent of noncredit programming at the college. For colleges that needed to collect information from multiple contacts, length of time to complete is unknown. Contacts were provided emailed survey invitations to submit surveys online as well as hard copies of the survey instrument to enable question pre-screening and collection of accurate information as needed prior to submission of the survey. Hard copies of the survey instruments were provided as requested in the first weeks of data collection, and to all respondents in the phone/email phase of data collection.

ASSUMPTIONS AND LIMITATIONS

Due to the limited number of all-around instructional experts at each institution and the time it may take other staff to gather information from multiple sources, it was not feasible to conduct a full pilot study prior to data collection in this first year. Direct knowledge and expertise by respondents are assumed based upon data collection protocols to first select chief instructional officers as position-based specialists with broad bases of institutional knowledge, second, in replacing subjects with limited knowledge/experience based on referral, and third, in repeated recommendations to respondents to gather information from multiple sources at the institution if needed prior to survey submission.

For respondents requiring the collection of some information from multiple sources, length of time to gather the information is unknown; therefore, it is also unknown if completing the survey was an undue hardship on the respondent. Additionally, certain question items or subject items may require more consultation than others in order to collect accurate institutional responses.

It would be beneficial in the future if prior to revising the survey instrument, feedback is elicited from past survey respondents about challenges encountered in completing the survey with suggestions for the improvement of future surveys.

ANALYSIS AND REPORTING

Descriptive statistical analyses were conducted and questions were grouped into themes. For reporting purposes, results are not referred to in
question order; rather they are clustered into three sections that reflect the primary research questions stated previously:

1. Current Offerings and Programming
2. Current Operational Processes
3. Planned Offerings and Programming

Respondents are assumed to be agents for their institution that provide factual data about the institution. As such, the summary of the findings generally refers to the institution rather than to the respondent.

The Summary of the Findings generally center on positive/negative question response (yes/no); however, when a large percentage of respondents are unsure or choose not to respond to a question, it is noted. In many cases participants were not asked questions due to a preceding response. When appropriate, these respondents are included as part of the base cohort for that question.

**Highlight of the Findings**

The following is a summary of highlights from the survey findings:

**CURRENT OFFERINGS AND PROGRAMMING**

> Seventy percent of institutions are presently offering free noncredit courses

> ESL/ESOL noncredit programming is offered at just over half of the institutions statewide

> Career Technical Education (CTE) noncredit programming is offered at 28% of the institutions statewide

> The top five Career Technical Education pathways are included as priority sectors for the state of California and include:

  » Health
  » Information communications technologies (ICT) and digital media
  » Energy, construction and utilities
  » Small business
  » Advanced manufacturing and retail/hospitality (tied for 5th)

> Just 26% of the institutions who currently offer distance education offer it for noncredit

> Just 5% of the institutions who offer distance education offer hybrid or blended noncredit CTE programming

**CURRENT OPERATIONAL PROCESSES**

> Fifty-nine percent of the institutions with noncredit programming offer both regular and enhanced-funded courses

> The majority of the institutions with noncredit offerings confirmed that they do not charge fees for labs (85%) or for course materials (69%); however, less than half do not charge for textbooks (43%)

> Only 59% of the institutions with noncredit currently use CCC Apply

> Over half (54%) of the institutions with noncredit use a combination of managed enrollment and open entry/open exit to enroll their noncredit students
PLANNED OFFERINGS AND PROGRAMMING

> Among 31 institutions around the state not currently providing any form of noncredit, almost half (48%; 15 institutions) plan to begin offering noncredit within the next two years, with 14 institutions planning to offer noncredit ESL/ESOL for the first time and 12 institutions planning to offer noncredit CTE for the first time.

> Among the 81 institutions that are currently offering noncredit, the scope of noncredit offerings is expected to increase within the next two years. Thirty-seven institutions are planning to offer Career Technical Education for the first time, 16 are planning to offer ABE/ASE for the first time, 15 are planning to offer Ementus for the first time, and 13 are planning to offer DSPS for the first time.

Survey Results

RESPONDENT PROFILE

A total of 116 respondents completed surveys on behalf of their college or institution.

Among all survey completers, 72% were VPIs or VPAAs; 17% were deans, directors, or managers; 3% were presidents, provosts, or vice chancellors; 3% were curriculum specialists; 3% were supervisors, analysts, or other staff; and 2% did not provide a position title.


CURRENT OFFERINGS AND PROGRAMMING

Noncredit Offerings

Seventy percent (n=81) of all respondents (n=116) indicated that their institution is presently offering free noncredit courses, which excludes community services or not-for-credit.

INSTITUTIONS WITH NONCREDIT OFFERINGS

- 70% Offer noncredit
- 27% Do not offer noncredit
- 3% Unsure/No response
**Noncredit Offerings by Subject Area**

About half (51%; n=59) of all institutions (n=116) offer noncredit ESL/ESOL programming and over one-third (34%; n=40) offer disability student programs and supports (DSPS).

More than one-quarter of all institutions offer noncredit high school diploma or equivalency programs (ABE/ASE) (30%; n=35), noncredit career technical education (CTE) (28%; n=32), and/or noncredit for older adults (Emeritus) (27%; n=31).

Only a few institutions in the state are currently providing noncredit pre-apprenticeship offerings (3%, n=4).

**NONCREDIT OFFERINGS BY SUBJECT AREA**

Among 32 institutions currently offering noncredit CTE, the top five pathways are health (47%; n=15); information communications technologies (ICT) and digital media (38%; n=12); energy, construction & utilities (25%; n=8); small business (25%; n=8); and tied for fifth place are advanced manufacturing and retail/hospitality (16% each; n=5 each).
The top five noncredit DSPS pathways (among 40 institutions offering noncredit DSPS courses) are access technology instruction (55%; n=22), computer instruction (48%; n=19), independent living skills (48%; n=19), basic education (43%; n=17), and acquired brain injury specialized instruction (35%; n=14).

Among 31 institutions with noncredit Emeritus courses, the top five noncredit older adult pathways are music (71%; n=22); arts and crafts (68%; n=21); health and wellness (55%; n=17); body dynamics and the aging process (52%; n=16); and technology (45%; n=14).

Note: Some of the respondents were unsure about the types of DE programming their institution offers for their DSPS offerings. See Appendix C item response for details.
**Distance Education**

Ninety-seven percent of institutions statewide (112 out of 116 institutions) are offering distance education (DE) programming (credit and/or noncredit). Among these 112 institutions offering distance education programming (credit or noncredit), it is notable that only 29 (26%) confirmed that they offer noncredit distance education programming. When compared to the much higher number of institutions presently offering noncredit courses (n=81), it appears that distance education is a potential area of growth for noncredit programs and institutions.

**OFFER NONCREDIT DISTANCE EDUCATION**

- 65% Do not offer noncredit Distance Education
- 26% Offer noncredit Distance Education
- 9% Unsure/no response
Among 112 institutions offering distance education (credit or noncredit), 93% (n=104) offer web-enhanced course modes, 55% (n=61) offer fully online degree or certificate programs, and 42% (n=47) offer synchronous (live face-to-face) programs.

Thirty-four percent (n=38) of 112 distance education-supported institutions offer web-enhanced programming for credit and/or noncredit ESL/ESOL, followed by 9% (n=10) that offer web-enhanced programming for noncredit ABE/ASE, and 6% (n=7) that offer web-enhanced programming for noncredit CTE. Four percent each (n=5 and n=4, respectively) currently offer web-enhanced programming for DSPS and Emeritus.

About one in five (19%; n=21) of 112 distance education-supported institutions presently offer hybrid or blended programming for credit and/or noncredit ESL/ESOL and only 5% (n=6) offer hybrid or blended programming for noncredit CTE. Even fewer institutions currently offer hybrid or blended programming for noncredit ABE/ASE, DSPS, or Emeritus (n=3, n=2, and n=1, respectively).

Only about a handful (5%; n=6) of the 112 distance education-supported institutions offer fully online credit and/or noncredit ESL/ESOL, and fewer offer fully online noncredit DSPS or CTE (n=2 and n=1, respectively). There are no institutions that presently offer fully online courses for noncredit ABE/ASE or Emeritus.

COURSES/PROGRAMS OFFERING DISTANTCE EDUCATION PROGRAMMING

Note: Some of the respondents were unsure about the types of DE programming their institution offers for their DSPS offerings. See Appendix C item response for details.
CURRENT OPERATIONAL PROCESSES

Funding

Among 81 institutions with noncredit offerings, 59% (n=48) offer both regular and enhanced noncredit courses, 32% (n=26) offer only regular noncredit courses, and 9% (n=7) offer only enhanced noncredit courses.

FUNDING FOR NONCREDIT COURSES
Among noncredit programs/institutions (n=81), the majority do not charge fees for labs (85%; n=69) or for course materials (69%; n=56); however, fees for textbooks tends to be split more evenly, with 47% (n=38) charging for textbooks, 43% (n=35) not charging for textbooks, and 10% (n=8) unsure or providing no response.

### NONCREDIT COURSE FEES

<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Pay fees</th>
<th>No fees</th>
<th>Unsure/No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td>47%</td>
<td>43%</td>
<td>10%</td>
</tr>
<tr>
<td>Labs</td>
<td>7%</td>
<td>85%</td>
<td>7%</td>
</tr>
<tr>
<td>Course Materials</td>
<td>21%</td>
<td>69%</td>
<td>10%</td>
</tr>
</tbody>
</table>

*Note: Some percentages do not total 100% due to rounding error.*

### Staffing

Among the 81 institutions in the state with noncredit programming, nearly half have the same service area requirements (minimum qualifications) for credit and noncredit faculty (49%; n=40) and the same salary tables for credit and noncredit faculty (48%, n=39).

### MINIMUM QUALIFICATIONS FOR CREDIT AND NONCREDIT

- **49%** Same
- **4%** Unsure/no response
- **47%** Different
Among the 81 institutions with noncredit programming, over one third of respondents (35%; n=28) were unsure what their institution’s noncredit full-time contract teaching load was set at or did not respond to the question. However, a rough estimate of full-time teaching load could be presumed from the 53 respondents who confirmed their institution’s load. Thirty percent (n=24) cited a full-time contract teaching load of 15 or below and 22% (n=18) cited a full-time contract teaching load of 25.

FULL-TIME NONCREDIT TEACHING LOAD

Note: Percentages do not total 100% due to rounding error.
Admissions and Registration

Over half (59%; n=48) of the 81 institutions with noncredit have the same admissions process for their credit and noncredit programs. Likewise, over half (59%; n=48) of the institutions with noncredit use CCC Apply for their noncredit program(s) or institution.

The majority of those using CCC Apply (83%; 40 out of 48 institutions) for noncredit have the same admissions process for credit and noncredit.

CREDIT/NONCREDIT ADMISSION PROCESS

- 59% Same
- 37% Separate
- 4% Unsure

USE OF CCC APPLY IN NONCREDIT

- 59% Use CCC Apply
- 36% Do not use CCC Apply
- 5% Unsure
**Enrollment Management**

Over half (54%; n=44) of the institutions with noncredit (n=81) use a combination of managed enrollment and open entry/open exit to enroll their noncredit students and one-quarter (25%; n=20) use only an open entry/open exit system.

**ENROLLMENT MANAGEMENT**

![Enrollment Management Pie Chart]

Fewer than one third (30%; n=24) of institutions with noncredit (n=81) offer combined sections of parallel credit/noncredit courses with both credit and noncredit students enrolled in the same classroom.

**COMBINED CREDIT/NONCREDIT COURSES**

![Combined Credit/Noncredit Courses Pie Chart]
**Grading**

Approximately three out of five (57%; n=46) institutions with noncredit (n=81) do not award grades in any of their noncredit courses and about one in six (14%; n=11) award grades in all noncredit courses.

Close to one quarter (23%; n=19) of the institutions provided another response, the majority of whom indicated that some courses are graded and others are not, all courses use progress indicators (e.g. Pass, No Pass, Satisfactory Progress) or they use a combination of the standard grading and progress indicators.

**GRADES AWARDED IN NONCREDIT COURSES**

- 57% No courses are graded
- 23% Other
- 6% Unsure
- 14% All courses are graded

**Certificates**

Over one third (37%; n=41) of the 112 institutions with credit and/or noncredit ESL/ESOL programming presently have state-approved stackable certificates in place.

**STACKABLE ESL/ESOL CERTIFICATES**

- 61% Do not offer stackable ESL/ESOL certificates
- 37% Offer stackable ESL/ESOL certificates
- 3% Unsure/don’t know

*Note: Percentages do not total 100% due to rounding error.*
**Partnerships**

Among 35 institutions with ABE/ASE noncredit programs, 68% (n=24) have a partnership in place with local K-12 district(s).

**K-12 ABE/ASE PARTNERSHIPS**

Among 40 institutions with noncredit DSPS offerings, 30% (n=12) have a partnership in place to conduct workplace training or internship opportunities for students. Similarly, among 32 institutions with noncredit CTE, about one in four (28%; n=9) have a partnership in place to conduct workplace training or internship opportunities for students. Fewer workplace training or internship opportunities are in place for older adult students, with only 6% (n=2) of the 31 institutions that offer Emeritus courses, also providing workplace training or internships.

**WORKPLACE TRAINING/INTERNSHIP**

- DSPS: 30%
- CTE: 28%
- Emeritus: 6%

*Note: Some respondents were unsure if their institution offers workplace training/internship opportunities for their DSPS programming. See Appendix C Item Response for details.*
PLANNED OFFERINGS AND PROGRAMMING

Among 31 institutions around the state not currently providing any form of noncredit, close to half (48%; n=15) plan to begin offering noncredit within the next two years.

Forty-five percent (n=14) of those not currently offering any form of noncredit (n=31) plan to offer ESL/ESOL for the first time within two years and 39% (n=12) plan to offer CTE for the first time within two years. DSPS, ABE/ASE, and Emeritus are each included in a limited number of college’s plans for future offerings, with each being mentioned by three or fewer colleges.

PLAN TO PROVIDE NONCREDIT IN NEXT TWO YEARS
Among institutions currently offering noncredit in another subject area

Among the 81 institutions that are currently offering noncredit, the scope of noncredit offerings is expected to increase within the next two years. Thirty-seven institutions are planning to offer noncredit CTE for the first time (76% of those not yet offering CTE; 37 of 49 institutions), 13 institutions are planning to offer noncredit DSPS for the first time (36% of those not yet offering DSPS; 13 of 36 institutions), 16 institutions are planning to offer noncredit ABE/ASE for the first time (36% of those not yet offering ABE/ASE; 16 of 45 institutions), and 15 institutions are planning to offer noncredit Emeritus for the first time (33% of those not yet offering Emeritus; 15 of 46 institutions).

Note: Institutions were not asked about ESL/ESOL future plans.
The majority (79%; n=88) of the 112 institutions with credit and/or noncredit distance education programming have plans to move to Canvas as part of the Online Education Initiative; however, nearly 20% (n=22) of those responding were unsure about their institution’s plans, likely yielding a much higher rate of transition to Canvas.

**PLANS TO MOVE TO CANVAS**

Note: Percentages do not total 100% due to rounding error.

The majority (68%; n=27) of the 40 institutions with DSPS offerings have interest in developing Career Development and College Preparation (CDCP) certificates for students with disabilities, while nearly one quarter (23%; n=9) were unsure about their institution’s interest. Only 10% (n=4) of institutions stated no interest in developing CDCP certificates for students with disabilities.

**INTEREST IN DEVELOPING DSPS CDCP CERTIFICATES**

Note: Percentages do not total 100% due to rounding error.
Less than half (45%; n=14) of the 31 institutions with Emeritus offerings have interest in developing Career Development and College Preparation (CDCP) certificates for older adults, while nearly one quarter (23%; n=7) were unsure about their institution’s interest. Nearly one third (32%; n=10) of institutions stated no interest in developing CDCP certificates for older adults.

**INTEREST IN DEVELOPING EMERITUS CDCP CERTIFICATES**
Based on the enclosed history of noncredit adult education and the findings of the California Community College Noncredit Offerings survey SDCE administered on the current status of adult education in California, SDCE’s Office of Institutional Effectiveness makes the following as recommendations on the future of noncredit adult education in the community college system along with improvements to the research design for SDCE’s future research.

**Recommendations for Future Research on Noncredit Adult Education in Community Colleges**

- Triangulate research methods in future years to further expand the yield and breadth of findings, while validating the data through cross verification of multiple methods of quantitative and qualitative research. Interviews with key CEOs from large noncredit institutions, colleges with large noncredit programs, and colleges or institutions growing their noncredit programs may prove informative, as would focus groups with other stakeholders such as Academic Senate presidents and CTE deans.

- Amend the existing annual survey to collect data on the size of programs at each institution offering noncredit to yield a more precise picture of the non-credit offerings across the state.

- Amend the existing annual survey to collect more robust data on noncredit pre-apprenticeships and apprenticeships.

- Research why only 70 percent of ABE/ASE programs have K-12 ABE/ASE partnerships.

**Recommendations for the Future of Noncredit Adult Education in Community Colleges**

**AN AUTHENTIC COMMITMENT TO EQUITY AND SOCIAL JUSTICE CALLS FOR INCREASED RESOURCES FOR ADULT EDUCATION**

- As colleges rebuild their infrastructure—specifically with respect to facilities, technology, and instructional equipment, ensure that equitable funding is identified for noncredit adult education programs.
> Based on the need for on-demand programming, create an attendance infrastructure for online education that allows for open access enrollment and attendance tracking.

> To provide noncredit programs with a more reliable funding model, implement a census-based formula for managed enrollment classes to determine non-credit FTES.

> Continue to fund CDCP offerings at an equalized rate, and include DSPS and emeritus programs that focus on transition to credit or workforce.

> Eliminate the two-tiered adult education system and fund all adult education program categories at the same rate. These programs serve our most needy residents and provide valuable educational opportunities. We should demonstrate our commitment to equity and social justice by taking these programs off the chopping block and ensure their financial sustainability. Non-CDCP program faculty and staff worry that their programs will be eliminated each year as continued funding becomes more difficult for institutions to manage.

> Allocate 20 percent of Statewide FTES annually for noncredit adult education to incentivize the expansion of these vital programs.

MODERNIZE NONCREDIT CURRICULUM AND INSTRUCTION

> After years of debate, clarify the role of the K-12 and community college systems in the delivery of noncredit adult education to minimize conflict between systems.

> As colleges work to develop and expand noncredit, CCCCO should develop greater infrastructure to support noncredit program development, including the:

  » Localization of the noncredit program approval process to expedite the ability of noncredit program to respond to industry demands;

  » Modification of CurricUNET (or other system) to mainstream noncredit course approval process; and

  » Identification of greater support for instructional program design.

> Shift basic skills instruction to noncredit system-wide to allow students to allocate their financial aid to complete a degree program and transfer-level credit courses.

> Locally, expand articulation agreements to support seamless transition from noncredit to credit programs.

> Appropriate state funding to support the development and dissemination of Open Educational Resources (OER) to enhance resources for noncredit students and reduce the textbook fees required by some certificate programs to improve curriculum portability across colleges.

> Expand noncredit pathways for inmates in jails and prisons to reduce recidivism and foster successful reentry.

> Increase non-credit distance education offerings to support the educational needs of adults in the military, in isolated rural communities, and working adults who need alternative delivery models.
> **STRENGTHEN NONCREDIT STUDENT SERVICES**

> Noncredit students typically come from more diverse and socioeconomically disadvantaged backgrounds. They therefore require more intensive and extensive student services. An equitable distribution at the state level for SSSP and SEP funding would provide supplemental financial support for noncredit.

> Qualify noncredit adult learners for federal Pell Grants as was done recently for high school students enrolled in community college.

> Earmark restricted funding to provide dedicated mental health services to noncredit students.

> Engage in targeted outreach to veterans, adults with disabilities, ex-offenders, the marginally housed, immigrants, refugees, opportunity youth, foster youth, the unemployed, and single parents to ensure noncredit programs serve our most vulnerable residents.

> Reinvent and fund non-credit career counseling and implement workforce services to support students with career exploration, transition, placement, and success.

> **MARRY NONCREDIT ADULT EDUCATION TO WORKFORCE DEVELOPMENT**

> Increase AEBG and Strong Workforce funding specifically to support noncredit program development and expansion.

> Institutionalize bridges between industry and education by creating competence-based certificate programs across the state, aligned with industry side competency-based and employee-recognized certifications.

> Strengthen partnerships with regional WIOA-funded workforce development boards to support long-term job placement.

> Modify Title 5 to allow for noncredit internship opportunities without instructor presence to augment experiential learning opportunities for job seekers. Ideally, these internships would also provide stipends.

> Continue to emphasize CTE program development and expansion in alignment with the Deputy Navigator Sectors (as identified by CCCCCO) the Priority Sectors (as identified by the regional workforce development boards) with a focus on noncredit.

> Provide State support to develop a noncredit infrastructure (e.g. Strong Workforce) to track workforce placement.

> **CHAMPION AND CHERISH NONCREDIT FACULTY**

> As noncredit faculty tend to work with the most needy student populations, strengthen the voice and influence of noncredit faculty, equalize the compensation and teaching load of noncredit and credit faculty. There is no distinction in compensation and load for classified employees and administrators. Similarly, there should be no distinction in contracts for noncredit faculty. Maintaining a tiered system places more value on credit faculty and marginalizes the essential work of noncredit faculty.

> To strengthen noncredit programming, increase faculty leadership by allocating state funding to hire 500 noncredit contract faculty system-wide.

> ASCCC should continue to be a strong advocate for noncredit programs and faculty.
PROVIDE SYSTEM SUPPORT FOR INSTITUTIONAL EFFECTIVENESS

> Create a single system for reporting community college, adult education, and workforce outcomes to minimize overhead, maximize efficiency, and marry these three disconnected systems.

> Based on the need to comply with accountability measures, identify retention and success rate definitions for non-credit to better align and standardize non-credit across the state.

> Improve the quality, accessibility, and utility of student outcome and labor market data to support students, educators, colleges, regions, employers, local workforce development boards, and the state in CTE program development and improvement efforts.

ESTABLISH A CONCERTED STATEWIDE MARKETING AND BRANDING CAMPAIGN

> Based on the challenges of community understanding of non-credit education and funding mechanisms, provide the infrastructure and funding to market provide outreach programs specifically for California non-credit programs. Many, if not most, Californians are unaware of the free educational opportunities community colleges offer that could transform their lives.

> Noncredit adult students are not exclusively from lower income communities. A statewide branding and outreach campaign should be developed to de-stigmatize the image of adult education to encourage employed adults to enroll in certificate programs to advance their careers.
References


Bruno, J., Burnett, T., & Galizio, L. (2016). Participating effectively in district and college governance; A presentation by ASCCC and CCLC to SDCE.


Carroll, C. (2016). Personal Interview conducted by Dr. Carlos Turner Cortez with Chancellor Dr. Constance Carroll.


Comprehensive Employee and Training Act (CETA), Subcommittee on Employment Opportunities, Committee on Education and Labor House of Representatives, 95th Cong (1977)


Smith-Lever Act of 1914, PL 95, (n.d.)


## Appendix A
### Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAACE</td>
<td>American Association for Adult and Continuing Education</td>
</tr>
<tr>
<td>ABE</td>
<td>Adult Basic Education</td>
</tr>
<tr>
<td>ACSA</td>
<td>Adult Committee of Association of California School Administrators</td>
</tr>
<tr>
<td>ACSA</td>
<td>Association of California School Administrators</td>
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<tr>
<td>AEFLA</td>
<td>Adult Education and Family Literacy Act</td>
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<tr>
<td>AFDC</td>
<td>Aid to Families with Dependent Children</td>
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<tr>
<td>ALIT</td>
<td>Adult Literacy Instructors’ Training Institute</td>
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<tr>
<td>ASE</td>
<td>Adult Secondary Education</td>
</tr>
<tr>
<td>BAE</td>
<td>Bureau of Adult Education</td>
</tr>
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<td>BSI</td>
<td>Basic Skills Initiative</td>
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<tr>
<td>CAEAA</td>
<td>California Adult Education Administrators’ Association</td>
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<tr>
<td>CAETP</td>
<td>California Adult Education Technology Plan, 2001-2004</td>
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<td>CAHSEE</td>
<td>California High School Exit Examination</td>
</tr>
<tr>
<td>CALCOMP</td>
<td>California Competency</td>
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<tr>
<td>CALPRO</td>
<td>California Adult Literacy Professional Development Project</td>
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<tr>
<td>CalWORKs</td>
<td>California Work Opportunity and Responsibility to Kids</td>
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<td>CASAS</td>
<td>California Adult Student Assessment System</td>
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<tr>
<td>CBAE</td>
<td>Competency-Based Adult Education</td>
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<td>CCAE</td>
<td>California Council for Adult Education</td>
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<td>CCAE</td>
<td>Council of Adult Education</td>
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<td>CCCCO</td>
<td>California Community College Chancellor’s Office</td>
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<td>CDC</td>
<td>California Department of Corrections</td>
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<td>CDCP</td>
<td>Career Development and College Preparation</td>
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<td>California Department of Education</td>
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<td>CDLP</td>
<td>California Distance Learning Project</td>
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<td>CETA</td>
<td>Comprehensive Employment and Training Act</td>
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<td>CLC</td>
<td>California Literacy Campaign</td>
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<td>CMP</td>
<td>California Master Plan</td>
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<tr>
<td>COE</td>
<td>Certificate of Eligibility</td>
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<td>CSDE</td>
<td>California State Department of Education</td>
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<tr>
<td>CTE</td>
<td>Career Technical Education</td>
</tr>
<tr>
<td>DNAE</td>
<td>Dissemination Network for Adult Educators</td>
</tr>
<tr>
<td>EDP</td>
<td>Executive Development Program</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>EOA</td>
<td>Economic Opportunity Act</td>
</tr>
<tr>
<td>EOA</td>
<td>Vocational Education Act of 1963</td>
</tr>
<tr>
<td>ESEA</td>
<td>Elementary and Secondary Education Act of 1965</td>
</tr>
<tr>
<td>ESL</td>
<td>English as a second language</td>
</tr>
<tr>
<td>FTES</td>
<td>Full-time equivalent students</td>
</tr>
<tr>
<td>GAIN</td>
<td>Greater Avenues to Independence</td>
</tr>
<tr>
<td>GED</td>
<td>General Educational Development</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communication technologies</td>
</tr>
<tr>
<td>IRCA</td>
<td>Immigration Reform and Control Act of 1986</td>
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<tr>
<td>JOBS</td>
<td>Job Opportunities and Basic Skills Training Program</td>
</tr>
<tr>
<td>JTPA</td>
<td>The Job Training Partnership Act of 1983</td>
</tr>
<tr>
<td>LEA</td>
<td>Local education agencies</td>
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<tr>
<td>MDTA</td>
<td>Manpower Development and Training Act of 1962</td>
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<tr>
<td>NALS</td>
<td>National Adult Literacy Survey</td>
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<tr>
<td>NAPCAE</td>
<td>National Association for Public Continuing Adult Education</td>
</tr>
<tr>
<td>NAPSAE</td>
<td>National Association for Public School Adult Education</td>
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<td>NCES</td>
<td>National Center for Education Statistics</td>
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<td>NEA</td>
<td>National Education Association</td>
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<td>NIFL</td>
<td>National Institute for Literacy</td>
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<td>NRS</td>
<td>National Reporting System</td>
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<td>NWDP</td>
<td>National Workforce Demonstration Programs</td>
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<tr>
<td>OTAN</td>
<td>Outreach and Technical Assistance Network</td>
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<td>PRWORA</td>
<td>Personal Responsibility and Work Opportunity Reconciliation Act</td>
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<td>ROCs</td>
<td>Regional Occupational Centers</td>
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<tr>
<td>ROP</td>
<td>Regional Occupational Program</td>
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<td>SBE</td>
<td>State Board of Education</td>
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<tr>
<td>SCANS</td>
<td>Secretary’s Commission on Achieving Necessary Skills</td>
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<td>SDA</td>
<td>Service Delivery Area</td>
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<td>SDCE</td>
<td>San Diego Continuing Education</td>
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<td>SE</td>
<td>Student Equity</td>
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<td>SFBOE</td>
<td>San Francisco Board of Education</td>
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<td>Student Success and Report Program</td>
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<td>SSSP</td>
<td>Student Success and Support Program</td>
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<td>TANF</td>
<td>Temporary Assistance for Needy Families</td>
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<td>TIP</td>
<td>Teaching Improvement Process</td>
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<tr>
<td>USDOE</td>
<td>United States Department of Education</td>
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<td>VEA</td>
<td>Vocational Education Act of 1963</td>
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<td>VESL</td>
<td>Vocational ESL</td>
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<td>Workforce Investment Act of 1998</td>
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<td>Workforce Investment Board</td>
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<td>WIOA</td>
<td>Workforce Innovation and Opportunity Act</td>
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<td>WIP</td>
<td>Work Incentive Program</td>
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</table>
Appendix B
Survey Instrument

California Community College Noncredit Offerings
Survey Instrument

Thank you for your participation. The survey should take no more than 10-15 minutes to complete. The information you provide will help to support program development and student success and will be shared in a summary report to all participating institutions.

1. Please fill in the following contact/institutional information (*contact information will be used to build an accurate contact database and will not be shared with participating institutions*):
   a. Name of Institution:
   b. District:
   c. Name of survey completer:
   d. Title:
   e. Email:

Distance Education

2. Does your institution presently offer distance education courses? *If no/unsure/don’t know, skip to next section*
   Yes
   No
   Unsure/don’t know

3. Does your institution presently offer the following distance education course modes?

<table>
<thead>
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<th></th>
<th>YES</th>
<th>NO</th>
<th>UNSURE/ DON’T KNOW</th>
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</thead>
<tbody>
<tr>
<td>a. web-enhanced courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. online course offerings</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>c. fully online degree or certificate program(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. synchronous (live face-to-face) programs(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. noncredit</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>f. Please specify any additional distance education course modes that your institution presently offers.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
4. Is your district/institution planning to move to Canvas as part of the Online Education Initiative?
   Yes
   No
   Unsure/don’t know

**English as a Second Language/English to Speakers of Other Languages**

5. Does your institution presently offer English as a Second Language (ESL) or English to Speakers of Other Languages (ESOL)? [If no/unsure/don’t know, skip to next section]
   Yes
   No
   Unsure/don’t know

6. Does your institution presently offer the following ESL/ESOL programming?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>UNSURE/DON’T KNOW</th>
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</thead>
<tbody>
<tr>
<td>a. web-enhanced courses</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>b. hybrid or blended</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>c. fully online</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. noncredit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   e. Please specify any additional ESL/ESOL programming types that your institution presently offers.

7. Does your institution presently have state-approved stackable certificates for ESL/ESOL in place?
   Yes
   No
   Unsure/don’t know
8. Does your college presently offer free noncredit courses (not including community services or not-for-credit)? [If yes, skip to next section; if no/unsure/don’t know, skip to end of survey; if no, but will in next two years, answer next question]

Yes, both regular and enhanced noncredit

Yes, but only regular noncredit

Yes, but only enhanced noncredit

No, but we will provide noncredit in the next two years

No, and we have no immediate plans to provide noncredit

Unsure/don’t know

9. Which of the following noncredit courses and/or programs do you have plans to provide in the next two years? (Select all that apply) [Skip to end of survey]

Career technical education (CTE)

English as a Second Language (ESL) or English to Speakers of Other Languages (ESOL)

High school diploma or equivalency, also referred to as Adult Basic Education/Adult Secondary Education (ABE/ASE)

Older adult education (55+), also referred to as Emeritus

Students with disabilities education, also referred to as disability student programs and supports (DSPS)

Other, please specify:

Unsure/don’t know
11. Does your noncredit institution or program use CCCApply?
   Yes
   No
   Unsure/don’t know

12. How do students enroll in your noncredit courses and programs?
   Managed enrollment
   Open entry, open exit
   Both. It depends upon the specific program.
   Unsure/don’t know
   Other, please specify:

13. Are students awarded grades in your noncredit courses?
   Yes, all courses are graded
   No, none of the courses are graded
   Unsure/don’t know
   Other, please specify:

14. Does your institution charge the following fees for noncredit course offerings?

   a. textbooks
   b. labs
   c. course materials
   d. Please specify any additional noncredit course fees charged.

15. Are the following items the same for your credit and noncredit faculty?

   a. service area requirement (minimum qualifications)
   b. salary table
16. What is the full-time teaching load for noncredit faculty
   - 15 or below
   - 18-20
   - 21-24
   - 25
   - Unsure/don’t know

17. Does your institution/district offer combined sections of parallel credit/noncredit courses? (credit and noncredit students enrolled in the same classroom)
   - Yes
   - No
   - Unsure/don’t know

---

**Adult Basic Education/Adult Secondary Education**

18. Does your institution presently offer noncredit high school diploma or equivalency program(s), also referred to as Adult Basic Education/Adult Secondary Education (ABE/ASE)? [If yes, continue; if no/unsure/don’t know, skip to next section]
   - Yes
   - No, but we will provide noncredit ABE/ASE in the next two years
   - No, and we have no immediate plans to provide noncredit ABE/ASE
   - Unsure/don’t know

19. Does your institution presently offer the following noncredit ABE/ASE programming?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>UNSURE/ DON’T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. web-enhanced courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. hybrid or blended</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. fully online</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   - d. Please specify any additional noncredit ABE/ASE programming types that your institution presently offers.
20. Does your institution or district presently have a partnership for ABE/ASE with local K-12 district(s)?
   - Yes
   - No
   - Unsure/don’t know

### Career Technical Education

21. Does your institution presently offer noncredit career technical education (CTE) program(s)? [If yes, continue; if no/unsure/don’t know, skip to next section]
   - Yes
   - No, but we will provide noncredit CTE in the next two years
   - No, and we have no immediate plans to provide noncredit CTE
   - Unsure/don’t know

22. Are any of the following noncredit CTE pathways offered at your institution?

<table>
<thead>
<tr>
<th>Pathway</th>
<th>YES</th>
<th>NO</th>
<th>UNSURE/ DON’T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. advanced manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. advanced transportation and renewables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. agriculture, water and environmental technologies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. energy, construction and utilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. global trade and logistics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. information communications technologies (ICT) and digital media</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. life sciences/biotech</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. retail/hospitality/tourism “Learn and Earn”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. small business</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
23. Does your institution presently offer the following noncredit CTE programming/opportunities?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>UNSURE/DON’T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. web-enhanced programming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. hybrid or blended programming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. fully online programming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. workplace training or internship opportunities for students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. pre-apprenticeship programs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

f. Please specify any additional noncredit CTE programming types or student opportunities that your institution presently offers.

Disability Student Programs and Supports

24. Does your institution presently offer noncredit courses and/or programs for students with disabilities, also referred to as disability student programs and supports (DSPS)? [If yes, continue; if no/unsure/don’t know, skip to next section]

Yes

No, but we will provide noncredit DSPS in the next two years

No, and we have no immediate plans to provide noncredit DSPS

Unsure/don’t know

25. Are any of the following noncredit DSPS pathways offered at your institution?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>UNSURE/DON’T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. basic education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. computer instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. access technology instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. art instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. acquired brain injury, specialized program instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. pre-vocational instruction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. specialized instruction for veterans with disabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. independent living skills</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
26. Does your institution presently offer the following noncredit DSPS programming/opportunities?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>UNSURE/ DON’T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. web-enhanced programming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. hybrid or blended programming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. fully online programming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. workplace training or internship opportunities for students</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. Does your institution have interest in developing Career Development and College Preparation (CDCP) certificates for students with disabilities?

Yes
No
Unsure/don’t know

**Emeritus**

28. Does your institution presently offer noncredit courses and/or programs for older adults (55+), also referred to as Emeritus? [If yes, continue; if no/unsure/don’t know, skip to end of survey]

Yes
No, but we will provide noncredit older adult education in the next two years
No, and we have no immediate plans to provide noncredit older adult education
Unsure/don’t know
29. Are any of the following noncredit older adult pathways offered at your institution?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>UNSURE/DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. retirement living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. arts and crafts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. music</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. social studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. health and wellness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. body dynamics and the aging process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. consumer education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. nutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. literature/writing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30. Does your institution presently offer the following noncredit older adult programming/opportunities?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>UNSURE/DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. web-enhanced programming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. hybrid or blended programming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. fully online programming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. workplace training or internship opportunities for students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Please specify any additional noncredit older adult programming types or student opportunities that your institution presently offers.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. Does your institution have interest in developing Career Development and College Preparation (CDCP) certificates for older adults?

Yes
No
Unsure/don't know

Thank you very much for completing the survey!
2. Does your institution presently offer distance education courses?

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

3. Does your institution presently offer the following distance education course modes?

3a. Web-enhanced courses

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure/don’t know</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

3b. Online course offerings

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

3c. Fully online degree or certificate program(s)

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure/don’t know</td>
</tr>
<tr>
<td>No response</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
3d. Synchronous (live face-to-face) programs(s)

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure/don’t know</td>
</tr>
<tr>
<td>No response</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

3e. Noncredit

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure/don’t know</td>
</tr>
<tr>
<td>No response</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

4. Is your district / institution planning to move to Canvas as part of the Online Education Initiative?

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure/don’t know</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

5. Does your institution presently offer English as a Second Language (ESL) or English to Speakers of Other Languages (ESOL)?

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
6. Does your institution presently offer the following ESL / ESOL programming?

6a. Web-enhanced

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure/don’t know</td>
</tr>
<tr>
<td>No response</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

6b. Hybrid or blended

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure/don’t know</td>
</tr>
<tr>
<td>No response</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

6c. Fully online

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
</tr>
<tr>
<td>No response</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
6d. Noncredit

<table>
<thead>
<tr>
<th></th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>59</td>
</tr>
<tr>
<td>No</td>
<td>51</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td>Not asked</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>

7. Does your institution presently have state-approved stackable certificates for ESL / ESOL in place?

<table>
<thead>
<tr>
<th></th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>41</td>
</tr>
<tr>
<td>No</td>
<td>68</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>3</td>
</tr>
<tr>
<td>Not asked</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>

8. Does your college presently offer free noncredit courses (not including community services or not-for-credit)?

<table>
<thead>
<tr>
<th></th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, both regular and enhanced noncredit</td>
<td>48</td>
</tr>
<tr>
<td>Yes, but only regular noncredit</td>
<td>26</td>
</tr>
<tr>
<td>Yes, but only enhanced noncredit</td>
<td>7</td>
</tr>
<tr>
<td>No, but we will provide noncredit in the next two years</td>
<td>15</td>
</tr>
<tr>
<td>No, and we have no immediate plans to provide noncredit</td>
<td>16</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>3</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>
9. Which of the following noncredit courses and / or programs do you have plans to provide in the next two years? (Select all that apply)

<table>
<thead>
<tr>
<th>Course / Program</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language (ESL) or English to Speakers of Other Languages (ESOL)</td>
<td>14</td>
</tr>
<tr>
<td>Career technical education (CTE)</td>
<td>12</td>
</tr>
<tr>
<td>Students with disabilities education, also referred to as disability student programs and supports (DSPS)</td>
<td>3</td>
</tr>
<tr>
<td>High school diploma or equivalency also referred to as Adult Basic Education / Adult Secondary Education (ABE / ASE)</td>
<td>2</td>
</tr>
<tr>
<td>Older adult education (55+), also referred to as Emeritus</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note 1. Counts represent the frequency of responses, not the frequency of respondents as categories are mutually exclusive and may be selected more than once.

*Note 2. 15 respondents were asked the question based on previous response ‘No, but we will provide noncredit in the next two years.

10. Does your noncredit institution or program have a separate admissions process from credit?

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>30</td>
</tr>
<tr>
<td>No</td>
<td>48</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>3</td>
</tr>
<tr>
<td>Not asked</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>

11. Does your noncredit institution or program use CCCApply?

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>48</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>4</td>
</tr>
<tr>
<td>Not asked</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>
12. How do students enroll in your noncredit courses and programs?

<table>
<thead>
<tr>
<th>Managed enrollment</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open entry, open exit</td>
<td>20</td>
</tr>
<tr>
<td>Both, It depends upon the specific program.</td>
<td>44</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>2</td>
</tr>
<tr>
<td>Not asked</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>

13. Are students awarded grades in your noncredit courses?

<table>
<thead>
<tr>
<th>Yes, all courses are graded</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, none of the courses are graded</td>
<td>46</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>5</td>
</tr>
<tr>
<td>No asked</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>

14. Does your institution charge the following fees for noncredit course offerings?

14a. Textbooks

| Yes | 38 |
| No | 35 |
| Unsure / don’t know | 8 |
| Not asked | 35 |
| **Total** | **116** |
14b. Labs

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>6</td>
</tr>
<tr>
<td>No</td>
<td>69</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>3</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
</tr>
<tr>
<td>Not asked</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>

14c. Course materials

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>17</td>
</tr>
<tr>
<td>No</td>
<td>56</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
<td>6</td>
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<tr>
<td>Not asked</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>

15. Are the following items the same for your credit and noncredit faculty?
15a. Service area requirement (minimum qualifications)

<table>
<thead>
<tr>
<th>FREQUENCY</th>
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</tr>
</thead>
<tbody>
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<tr>
<td>Not asked</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
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</tbody>
</table>
15b. Salary table

<table>
<thead>
<tr>
<th>FREQUENCY</th>
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<tbody>
<tr>
<td>Yes</td>
</tr>
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<tr>
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<tr>
<td>Not asked</td>
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</table>

16. What is the full-time teaching load for noncredit faculty

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<td>25</td>
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<tr>
<td>Not asked</td>
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<td><strong>Total</strong></td>
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</table>

17. Does your institution / district offer combined sections of parallel credit / noncredit courses? (credit and non-credit students enrolled in the same classroom)

<table>
<thead>
<tr>
<th>FREQUENCY</th>
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</thead>
<tbody>
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<tr>
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</tr>
<tr>
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<td><strong>Total</strong></td>
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</table>
18. Does your institution presently offer noncredit high school diploma or equivalency program(s), also referred to as Adult Basic Education / Adult Secondary Education (ABE / ASE)?

<table>
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<th>Response</th>
<th>Frequency</th>
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</thead>
<tbody>
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<td>35</td>
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<tr>
<td>No, but we will provide noncredit ABE / ASE in the next two years</td>
<td>16</td>
</tr>
<tr>
<td>No, and we have no immediate plans to provide noncredit ABE / ASE</td>
<td>29</td>
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<td>1</td>
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<tr>
<td>Not asked</td>
<td>35</td>
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<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

19. Does your institution presently offer the following noncredit ABE / ASE programming?

19a. Web-enhanced

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<tr>
<th>Response</th>
<th>Frequency</th>
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</thead>
<tbody>
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<tr>
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<td><strong>Total</strong></td>
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</tbody>
</table>

19b. Hybrid or blended

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3</td>
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<tr>
<td>Not asked</td>
<td>81</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
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</tbody>
</table>
19c. Fully online

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<tr>
<td>Not asked</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

20. Does your institution or district presently have a partnership for ABE / ASE with local K-12 district(s)?

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<tr>
<td><strong>Total</strong></td>
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21. Does your institution presently offer noncredit career technical education (CTE) program(s)?

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<tr>
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<tr>
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22. Are any of the following noncredit CTE pathways offered at your institution?

22a. Advanced manufacturing

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<tr>
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<td>84</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
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</tbody>
</table>
22b. Advanced transportation & renewables

<table>
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<tbody>
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</tr>
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<td><strong>Total</strong></td>
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22c. Agriculture, water, & environmental technologies

<table>
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<tr>
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<tr>
<td><strong>Total</strong></td>
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</table>

22d. Energy, construction, & utilities

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<tbody>
<tr>
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</tr>
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<tr>
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<td><strong>Total</strong></td>
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</tbody>
</table>
22e. Global trade & logistics

<table>
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<th>FREQUENCY</th>
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22f. Health

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<td>84</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

22g. Information communications technologies (ICT) and digital media

<table>
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<th>FREQUENCY</th>
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<td>Not asked</td>
<td>84</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
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</tbody>
</table>
22h. Life sciences / biotech

<table>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
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22i. Retail / hospitality / tourism “Learn and Earn”

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<td>84</td>
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<tr>
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22j. Small business

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<td>Not asked</td>
<td>84</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
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</tbody>
</table>
23. Does your institution presently offer the following noncredit CTE programming / opportunities?

23a. Web-enhanced programming

<table>
<thead>
<tr>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Unsure / don’t know</td>
</tr>
<tr>
<td>Not asked</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

23b. Hybrid or blended programming

<table>
<thead>
<tr>
<th>FREQUENCY</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
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<tr>
<td>Not asked</td>
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<td><strong>Total</strong></td>
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</tbody>
</table>

23c. Fully online programming

<table>
<thead>
<tr>
<th>FREQUENCY</th>
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<tbody>
<tr>
<td>Yes</td>
</tr>
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<tr>
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<tr>
<td>Not asked</td>
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<td><strong>Total</strong></td>
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</table>
23d. Workplace training or internship opportunities for students

<table>
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<th>FREQUENCY</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
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<td>No</td>
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<td>No response</td>
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<tr>
<td>Not asked</td>
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<tr>
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</table>

23e. Pre-apprenticeship programs

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<tbody>
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</tr>
<tr>
<td>Not asked</td>
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<td><strong>Total</strong></td>
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</table>

24. Does your institution presently offer noncredit courses and / or programs for students with disabilities, also referred to as disability student programs and supports (DSPS)?

<table>
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<tr>
<th>FREQUENCY</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>No, but we will provide noncredit DSPS in the next two years</td>
</tr>
<tr>
<td>No, and we have no immediate plans to provide noncredit DSPS</td>
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<tr>
<td>Not asked</td>
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<tr>
<td><strong>Total</strong></td>
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</table>
25. Are any of the following noncredit DSPS pathways offered at your institution?

25a. Basic education

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<tr>
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<td>76</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
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25b. Computer instruction

<table>
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<td>76</td>
</tr>
<tr>
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<td><strong>116</strong></td>
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25c. Access technology instruction

<table>
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<tr>
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<th>FREQUENCY</th>
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<tbody>
<tr>
<td>Yes</td>
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### 25d. Art instruction

<table>
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<tr>
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<td>Not asked</td>
<td>76</td>
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<td><strong>Total</strong></td>
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### 25e. Acquired brain injury, specialized program instruction

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### 25f. Pre-vocational instruction

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<tr>
<td>Not asked</td>
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<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>
25g. Specialized instruction for veterans with disabilities

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<th>FREQUENCY</th>
</tr>
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<tbody>
<tr>
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</tr>
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<td>Not asked</td>
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25h. Independent living skills

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<tr>
<td>Not asked</td>
</tr>
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</table>

26. Does your institution presently offer the following noncredit DSPS programming / opportunities?

26a. Web-enhanced programming

<table>
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<th>FREQUENCY</th>
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</tr>
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<tr>
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### 26b. Hybrid or blended programming

<table>
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### 26c. Fully online programming

<table>
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### 26d. Workplace training or internship opportunities for students

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</table>
27. Does your institution have interest in developing Career Development and College Preparation (CDCP) certificates for students with disabilities?

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<tr>
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<tr>
<td>Not asked</td>
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</table>

28. Does your institution presently offer noncredit courses and / or programs for older adults (55+), also referred to as Emeritus?

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No, but we will provide noncredit older adult education in the next two years</td>
</tr>
<tr>
<td>No, and we have no immediate plans to provide noncredit older adult education</td>
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29. Are any of the following noncredit older adult pathways offered at your institution?

29a. Retirement living

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<tbody>
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29b. Arts and crafts

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29c. Music

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29d. Social studies

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### 29e. Communications

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### 29f. Technology

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### 29g. Health and wellness

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29h. Body dynamics and the aging process

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29i. Consumer education

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29j. Nutrition

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29k. Literature/writing

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30. Does your institution presently offer the following noncredit older adult programming / opportunities?

30a. Web-enhanced programming

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30b. Hybrid or blended programming

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</table>
### 30c. Fully online programming

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### 30d. Workplace training or internship opportunities for students

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<tr>
<td><strong>Total</strong></td>
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### 31. Does your institution have interest in developing Career Development and College Preparation (CDCP) certificates for older adults?

<table>
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</table>
Appendix D
Verbatim Open-Ended Comments

**Question 3:** Please specify any additional distance education course modes that your institution presently offers.

1. All modes
2. Hybrid
3. Hybrid (campus & online meetings)
4. Hybrid (online/face-to-face)
5. Hybrid courses
6. Hybrid courses (partial online; partial face to face)
7. Hybrid/Blended
8. Mesa College doesn’t offer a DE communication or lab science course so this prevents the college from offering a fully DE degree transfer program.
9. Mostly asynchronous courses within regular terms.
10. Not sure if your web-enhanced is the same as a hybrid. For me web-enhanced is a face to face that uses online resources in the course. We offer hybrid classes which are mainly online with some face-to-face contact but the majority of the course is online.
11. Telepresence
12. TV synchronous with other campuses
13. We are planning to develop online noncredit courses in the future.
14. We do offer some courses via ITV whereby we provide a two-way video conference link between classrooms at two locations, however this does not typically fall under distance education as defined by the ACCJC.
15. We have degree and certificate programs that are attainable 50% or more online.
16. We would like to offer noncredit distance education and are trying to work with the funding formula to see how we can best initiate the program.

**Question 6:** Please specify any additional ESL / ESOL programming types that your institution presently offers.

1. Dual roster ESL
2. ESL lab classes
3. Lap top and iPad lab based courses in noncredit ESL
4. Not-for-credit intensive English program (West Language Academy)

5. We have ESL lab-type classes taught in the Learning Resource Center using computers and software, and we also have laptops available for student checkout while in the Resource Center.

6. We offer both credit and noncredit ESL programs.

7. We work through the West Kern Adult Education Consortium to coordinate their not-for-credit offerings as pipelines to college.

Question 9: Which of the following noncredit courses and / or programs do you have plans to provide in the next two years? (Other specified)

1. concurrent supplemental instruction
2. Planning for basic skills in English and Math
3. The enhanced non-credit courses
4. We are looking into options. We are learning more about noncredit and wish to offer some. We currently have noncredit in our Math Lab to provide tutoring and faculty support and are looking at introducing new curriculum for noncredit for Writing Reading across the Curriculum. We also need to revise our Learning Skills program for students with learning disabilities and update our ESL curriculum. Faculty has been attending meetings with adult school partners as part of AB86/104 to consider student and community needs.

Question 12: How do students enroll in your noncredit courses and programs? (Other specified)

1. CCCApply is available to Noncredit students but most enroll using paper applications
2. Enrolled through regular priority dates through the SIS and classes are open-entry/open-exit.
3. moving to managed enrollment
4. We only offer one non-credit class and that is supervised tutoring

Question 13: Are students awarded grades in your noncredit courses? (Other specified)

1. CDCP courses and some non-CDCP noncredit courses are graded; some non-CDCP courses are ungraded.
2. Courses that meet for over 30 hours receive grades
3. Currently only enhanced noncredit courses award grades.
4. Graded as positive attendance.

5. Just our adult high school classes.

6. Not all non-credit is graded

7. P, NP, or IP

8. Pass/Fail

9. some are graded, and some are pass/no pass

10. some are graded, others are not

11. Some courses are graded, others are not.

12. Some courses are graded, some courses are pass/no pass

13. Some courses generate grades of credit or no credit. Other courses do not generate grades (just positive attendance hours).

14. Some with progress indicator

15. They are P/NP

16. They can receive progress indicators but not grades.

17. We use progress indicators based on Pass, No Pass and Satisfactory Progress.

18. We use progress indicators in all NC courses (P, SP, NP)

19. we were part of the non-credit grader pilot and I thought we were doing transcripted grades—but a problem with our student system means it wasn’t happening

**Question 14:** Please specify any additional noncredit course fees charged.

1. If textbooks are required students would need to purchase them.

2. In a few of our older adult courses there are materials fees.

3. No fees, but students would be responsible to pay for books, labs or materials.

4. Students purchase texts and materials via the bookstore or online ordering, just like credit. We charge the health fee $18, student activity fee $1, and a waiveable $5 student representation fee.

5. Textbook fees are an option to buy if student wants to have the textbook.
6. Textbook rental

7. uniforms

8. We don’t charge a fee for the textbook but students are responsible for getting the text.

9. we will be adding courses that will have textbooks and fees within 2 years

**Question 19:** Please specify any additional noncredit ABE / ASE programming types that your institution presently offers.

1. Face to Face only

2. GED students progress through content in a web-enabled portal in a proctored face-to-face environment.

3. We offer a basic math and English course with a web based lab component imbedded in the course

**Question 23:** Please specify any additional noncredit CTE programming types or student opportunities that your institution presently offers.

1. Non credit fire science

2. specifically work readiness

3. We are working on developing more pathways and internship component through AEBG funding.

**Question 26:** Please specify any additional noncredit DSPS programming types or student opportunities that your institution presently offers.

1. DSPS students are not provided specialized non credit courses, they are able to enroll just like any other student. They are provided noncredit tutoring.

**Question 30:** Please specify any additional noncredit older adult programming types or student opportunities that your institution presently offers.

1. We offer courses in music, communications, nutrition, etc., but not pathways.
1. Are we making a difference? What is the impact of an online postgraduate palliative care course on the professional lives of alumni?

2. Deb Rawlings and Kim Devery

3. Flinders University, Adelaide, South Australia

4. Palliative and Supportive Services, Flinders University, GPO Box 2100, Adelaide, 5001, South Australia, Australia

5. deborah.rawlings@flinders.edu.au; kim.devery@flinders.edu.au

6. Abstract:

Are we making a difference? What is the impact of an online postgraduate palliative care course on the professional lives of alumni?

Introduction

As Higher education educators we aim to advance the knowledge, skills and critical thinking abilities of post graduate students who chose to study with us. Importantly, our graduates then apply this advanced knowledge and skills in their professional lives. Palliative care has been described as “an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness” (World Health Organisation, 2015). The discipline of Palliative & Supportive Services in the School of Health Sciences, Flinders University, offers post-graduate courses in Palliative Care and in Palliative Care in Aged Care, both of which have been offered exclusively by distance education (online) since 2002. Students are mostly clinicians from a diverse range of settings, geographical locations and country of origin. Courses are not discipline –specific, rather our students work together virtually and collaboratively as they would in practice.

Research Objectives

1. To explore whether the Flinders University Palliative Care (or Palliative Care in Aged Care) Course has an impact on the professional lives of alumni

2. To explore whether the Flinders University Palliative Care (or Palliative Care in Aged Care) Course has empowered alumni to change work or clinical practice – either the way in which they themselves work, or by influencing organisational changes.

3. To find out if anything is missing from the courses, either content in topics or topics themselves

Methodology

This was a one-time (retrospective) online survey administered to alumni who had the experience of studying postgraduate palliative care within the past 10 years. The survey was
administered to 426 alumni – the only email addresses available. To increase response rates information regarding the survey was provided via e-newsletters relevant to the sector. Ethics approval was received from Flinders University (project: 7154). A total of 76 responses were received.

Expected Outcomes

Early indications from the data are that the courses are having a long term impact on practice, and students’ ability to affect change. Students are reporting that they have developed, influenced, or participated in, decision making, mostly within their team or workplace. This extrapolation of individual responses allows us to see what is happening in the sector and will contribute to broader strategic planning for the future.
1. Online communities of practice in a postgraduate topic and the provision of unique learning experiences with real world applications

2. Deb Rawlings and Kim Devery

3. Flinders University, Adelaide, South Australia

4. Palliative and Supportive Services, Flinders University, GPO Box 2100, Adelaide, 5001, South Australia, Australia

5. deborah.rawlings@flinders.edu.au; kim.devery@flinders.edu.au

6. Abstract:

Online communities of practice in a postgraduate topic and the provision of unique learning experiences with real world applications

Introduction

Palliative care has been described as “an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness” (World Health Organisation, 2015). The discipline of Palliative & Supportive Services, Flinders University, offers post-graduate courses in Palliative Care and in Palliative Care in Aged Care, both of which have been offered exclusively by distance education (online) since 2002. In one of our topics we were prompted by student responses to a new online learning activity to further explore how communities of practice work when no face to face interaction is available. The students all work clinically and their interactions have real world applications which can help change care at the end of life. In our teaching we observed impressive student interaction that entailed critical analysis, reflection on and synthesis of complex information, problems, concepts and theories – and we wanted to know more.

Research Objectives

1. To learn more about how students learn from each other's experiences

2. To contribute to existing knowledge on online learning communities

Methodology

This is a 5 year retrospective study of de-identified online forum posts as approved by the ethics committee (Flinders University: Project 6292). Contact with students was made by an administration officer in Palliative & Supportive Services at the end of semester with the
research information. They were asked to return a consent form in a reply-paid envelope. Return of the consent form indicates their willingness to have their information de-identified and used in the research.

Expected Outcomes

Four years of data is currently available with the remaining data to be collected at the end of 2016. This paper will focus on the study methodology and look at the facilitation of online communities of practice.
Developing Small Talk Strategies for EFL Students through Animated Films

Seo Eun-mi
Howon University

I. INTRODUCTION

Communicative competence means to develop four strategies: grammatical competence, linguistic competence, discourse competence and strategic competence. EFL students need to learn how to deal with four competences. Strategic competence means how to speak correct expressions in the various situations. Films can be important authentic materials to learn important expressions. Small talk strategies will be helpful to manage successful conversation with other English speakers. Through various situations, students will learn how to lead conversation with the people around the world. In this paper, several situations will be chosen in the films to teach small talk strategies.

It is important for EFL students to develop communicative competence through animated films. Ultimate goal of this study is to teach small talk strategies in English. Classroom activities using Frozen are suggested for students to develop communicative competence.

Animated feature films can be effective tool to study English. Children enjoy watching animated films and learn authentic English expressions easily. Adult students also can use animated films to develop small talk strategies. Paietta (2007) suggests that “cinema is a powerful medium in the world today. Sometimes it is difficult to judge when a film reflects its society and when a film affects its society. Watching a film can have more of an impact than reading a book, especially in this digital age when people claim they do not have enough time for reading.”(p. 1). Most animated feature films have been produced based on the books. Children’s literary books can be important tool to study English, especially for the EFL students who have limited English proficiency.

There are many excellent animated feature films produced by Hollywood. Children and also adults can learn a lot of useful expressions through animated feature films. In this paper, the researcher is going to use musical film Frozen (2013) to teach small talk strategies. The examples of animated musical films are Beauty and Beast (1991), Aladdin (1992), Frozen (2013) and others. It is a good opportunity to appreciate music and culture through films. In this paper, songs and lyrics will be applied to teach small talk strategies.
II. USING FILMS IN THE EFL CLASSROOM

Speaking English is more than short communication in fragmented patterns. Using fragmented and unnatural recorded conversation, students cannot get carry quality communication. In the current society, students should be able to express their thoughts in English. They need to learn real communication which is used in the English speaking countries. To accomplish these goals, the authentic materials should be used to help students. Students are supposed to be exposed to the authentic and natural environment. When students are exposed to the films with different themes, they can learn expressions of different topics. EFL students need to be knowledgeable in various topics if they want to carry conversation with other educated people in the international occasions. They need to be equipped with solid knowledge which means the importance of background knowledge of the world. The more students have knowledge about the various topics, the better they can carry quality communication with other educated people from the different countries.

Films can be excellent authentic textbooks since movies deal with all aspects of possible human lives. According to Seferoglu (2008), "feature films are contextually rich sources of authentic material which can be exploited in the language classroom" (1). Film based syllabus can be created using similar themes. Costanzo (1992) suggested the following themes: film and literature, leading themes including growing up, the back experience, overcoming handicaps, school days, nature versus the human race, the world looks at war. In English classes, creating thematic based teaching with recent movies can be used so that students can get the most of it through movies. In this paper, the researcher chose films on music or musical films.

III. DEVELOPING SMALL TALK STRATEGIES

Various types of music have been used to please human beings throughout the history. Musical films are produced based on lyrics and tunes which most people enjoy in the daily life. When students are exposed to the music and lyrics, they tend to lower the affective filter and eventually they tend to recite lyrics automatically. This will lead to successful language learning. Musical films are all about music and story. They are composed with songs and story lines. The representative musical films are based on the animated films produced by Walt Disney Pictures. When children watch these kinds of musical films, they become familiar with the lyrics and music. Eventually, they can learn English and useful expressions. Frozen (2013) is an animated musical fantasy comedy film. Frozen is based on Hans Andersen’s fairy tale Snow Queen. Most people enjoyed watching this film and they loved songs such as Let it go and For the first time in forever.
Several situations to use the English effectively will be chosen to teach useful expressions for EFL college students. Even children enjoy using various expressions and they like to use them in the meaningful situations. For example, students can learn the following small talk strategies through Frozen:

a) How to propose
   Hans: Can I say something crazy? Will you marry me?
   Anna: Can I say something crazier? Yes!

b) How to be polite:
   Kristoff: What is the magic word?
   Sven: Please!

c) How to make a joke:
   Kristoff: Hang on. You mean to tell me you got engaged to someone you just met?!

d) How to apologize:
   Anna: I am so sorry about what happened. If I’d known.
   Elsa: No, it’s okay. You don’t have to apologize….

First time in Forever, Reprise
Anna: Please don’t slam the door. You don’t have to keep your distance forever.
   Cause for the first time in forever, I finally understand.
   For the first time in forever, we can fix this hand in hand.
   We can head down this mountain together.

IV. CLASSROOM APPLICATION

Animated musical films can be useful medium to teach small talk strategies. While listening to the music and lyrics, students can learn the useful expressions effectively. The following ways can be applied in the English classroom.

a) Developing listening comprehension using trailer of the films.
b) Developing reading comprehension using short clips of the films
c) Developing speaking comprehension using role plays
d) Developing presentation skill
e) Developing writing: dictation, writing reflective journal
It is important to choose various short clips to teach different situations in the classroom. The more students are exposed to the meaningful situations, the better they can learn useful expressions which they can use in the real life situations.

V. CONCLUSION & IMPLEMENTATION

Developing small talk strategies is important for EFL students to manage successful conversation with other English speakers. Through various situations in the animated feature films, students will learn how to lead meaningful conversation with the people. In this paper, several situations were chosen in Frozen to teach small talk strategies. It is important for EFL students to develop communicative competence to be successful in the global society. Classroom activities using Frozen are suggested for students to teach small talk strategies.

REFERENCES


Applicable level: college

Keywords: content-based learning, dialogue learning, script for understanding dialogue
Saudi Arabia is now starting initiatives for inclusion of children with disabilities in public schools and preschools. This study aims to investigate to what extent are preschool teachers ready for inclusive practices in their classes by asking five research questions; one for each area covered by the Organizational Change Recipients' Beliefs Scale: discrepancy, appropriateness, efficacy, principal support, and valence. Preschool teachers in Jeddah, Saudi Arabia will be contacted to fill an online survey. Quantitative data will be used to report teachers’ responses on the five areas targeted in the survey to indicate their readiness for implementing inclusive practices. Qualitative data from the open-ended question will be analyzed using a content-driven, thematic analysis.

Key words: inclusion, inclusive education, preschool teachers, readiness for change
An Empirical Assessment of the Study Process Questionnaire: A Business School Application

An Extended Abstract

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An Empirical Assessment of the Study Process Questionnaire: A Business School Application

The purpose of this study was to investigate the learning approaches utilized by students in an undergraduate business program. The first objective was to conduct an empirical analysis of the Study Process Questionnaire (Biggs 1978, 1987) to assess the reliability and validity of the scale and determine support for the two-approach vs the three-approach model of learning. The second objective was to develop a classification schema to determine the degree to which business students adopt a consistent learning approach or a hybrid learning approach in the course of their studies.

Consistent with Biggs’ original model, this study showed support for six learning constructs in the three-approach model. Cronbach’s alpha, factor loadings produced by exploratory factor analysis and model fit statistics produced by confirmatory factor analysis provided evidence that the Study Process Questionnaire is a reliable scale, demonstrating unidimensionality, convergent validity, discriminant validity and measurement model validity.

The classification analysis, however, suggested not all students adhere to a consistent learning approach. While the majority of the students were classified as surface approach (surface motive and surface strategy), deep approach (deep motive and deep strategy) or achieving approach (achieving motive and achieving strategy), 46% of the respondents were classified as favoring a hybrid learning approach. As detailed in this study, a significant number of surface motivated and deep motivated students were likely to pursue an achieving strategy and the achieving motived students were equally split between the adoption of a surface or achieving strategy.
The study concludes with a call for research to help determine if this result validates the two-approach model where the achieving approach is split between the surface and deep factors (e.g., Niles, 1995; Watkins & Dahlin, 1997) or if a student’s learning strategy is influenced by factors other than motivation such as the learning environment and context (e.g., Jackling 2003; Baeten, Dochy and Struyven, 2013).

References


Service Learning in Pacific Island Contexts: How Tertiary-Level Institutions Address Community and Indigenous Issues

I. Introduction

Service learning is a well-established and remarkably prevalent feature of American secondary and post-secondary education, yet it has received relatively little attention in Japanese educational contexts. While it has been adopted by a handful of schools, service learning remains an unfamiliar concept to many teachers and administrators in Japan. Accordingly, the purpose of this paper is to: a) introduce the principles and practice of service learning to educators in Japan; b) provide examples of successful service learning programs and activities at tertiary-level institutions in the U.S., particularly in the Pacific region; c) describe how these programs address community needs and, in some cases, promote awareness of indigenous issues, traditions, and values; and d) show how participation in service learning activities may be beneficial for Japanese students. Based on this discussion, recommendations for constructing culturally-appropriate service learning programs in Japan will be provided.

II. Introduction to Service Learning

A. What is service learning?

1. Definitions

Definitions and descriptions of service learning are abundant and evolving. Some examples will serve to illustrate this point and the concept itself:

“Service learning is a teaching and learning method that connects meaningful community service experiences with academic learning, personal growth, and civic responsibility. Service learning enhances what is taught in the college by extending student learning beyond the classroom and providing opportunities for students to use newly acquired skills and knowledge in real-life situations in their own communities” (Franco, 2002, p.8).

“Service-learning is a structured learning experience that combines community service with preparation and reflection. Service-learning provides college and university students with a ‘community context’ to their education, allowing them to connect their academic coursework to their roles as citizens” (Seifer and Connors, 2007, p.5).
“Service-learning is an educational method that combines service objectives with learning objectives with the intent that the activity changes both the recipient and the provider of the service. This is accomplished by combining service tasks with structured opportunities that link the task to self-reflection, self-discovery, and the acquisition and comprehension of values, skills, and knowledge content” (National Service-Learning Clearinghouse, n.d.).

“Service learning is a teaching method that combines community service with academic instruction as it focuses on critical, reflective thinking and civic responsibility. Service-learning programs involve students in organized community work that addresses local needs, while developing their academic skills, sense of civic responsibility, and commitment to the community” (Campus Compact, n.d.).

“Service learning is the intersection between classroom work and community work. The work you do in the community [helps] inform your learning in the classroom, and you should take skills and ideas that you learn in the classroom with you as you work in the community. The learning is [made] meaningful and deliberate through reflective thinking” (Hawai‘i Pacific University, n.d.).

“Service learning combines the best of active learning and citizenship by connecting course content with service projects that help the community. It is a powerful way of understanding course material by learning from experience…. Service learning is all about connecting what you’re learning in class to the real world. It helps you find relevance in the material you’re learning and exposes you to real-life situations to enhance your understanding” (University of Hawai‘i at Manoa Service Learning Program, n.d.).

Service learning has further been characterized as a high-impact teaching practice that engenders engaged scholarship and serves as a channel for transformative learning (Souza, 2008). As indicated in the preceding definitions, it is distinguishable from other forms of volunteer service because, rather than simply being a community work experience, it involves a structured educational process that is embedded in school curricula, with the service assignments having strong links to course content. These and other core components of service learning will be described briefly below.

2. Core Components

a. Community involvement

One of the key elements of service learning is community service work. Students are asked to spend a specified number of hours (normally 20) during a semester
working with a community partner. The work students do should be both relevant to their coursework and meaningful to the community, and the community service agencies should be considered as equal partners with the university in the development and formulation of service assignments (Howard, 2001). By collaborating with community partners to design worthwhile service activities, universities build reciprocal helping relationships that benefit all parties: the students, the university, the community agency and, by extension, the community itself (Butin, 2010).

b. Coursework

In most cases, service activities are a required and graded component of a standard academic course. The specifics of the service requirement are typically outlined in the course description and detailed in the course syllabus so that students understand in advance what will be expected of them. Instructors will usually work with student services staff at their institution to coordinate community service placements for their students, though they may also take the initiative to contact and make arrangements with community agencies on their own. Importantly, efforts are made to insure that the types of community service work that students become involved with are directly related to course content. Students’ work experiences are discussed periodically during class time, and assignments are given throughout the course that encourage students to reflect on their service experiences and relate what they have learned in the community to course themes. The instructor determines how to evaluate those assignments, as well as how to assess the students’ overall performance on the service component of the course.

c. Reflection

A crucial and distinguishing feature of service learning is reflection. Students are asked to reflect on their community service experiences, both while their work is on-going and after their service has been completed, and make note of any insights or personal discoveries they may have had. This process creates an opportunity for students to think critically about what they have observed in the community, analyze their own reactions, and find what was most meaningful for them in the service encounter. It also leads students to consider the relevance of what they have studied in class to the real-world issues that they have been dealing with during their community involvement. Reflection exercises often include classroom discussions and sharing of students’ service experiences, group work, presentations, reaction papers and other types of personal essays, and the keeping of a journal to record impressions and insights gained throughout the semester. By participating in these types of reflection activities, students deepen their understanding of themselves and their relationship to
others in the community. Because of the insights it provides, reflection is one of the most valuable aspects of the service learning experience.

3. Benefits of service learning

The benefits of service learning are many, varied, and well-documented. Service learning programs have been shown to be beneficial to all parties involved: students, teachers, schools, partner agencies, and the communities being served. To begin with, service learning has the potential to have a profound effect on an array of student goals, including academic, civic, social, and career development goals (McLaughlin, 2004). Research indicates that exposure to well-designed service learning pedagogies enriches students’ academic learning and performance, critical thinking skills, and moral development (Astin and Sax, 1998; Eyler and Giles, 1999; Prentice and Robinson, 2010; Rhodes and Howard 1998). As a result of participation in service learning courses, students have been shown to make significant gains in writing skills (Wurr, 2002) and have improved performance on examinations (Mpofu, 2007). In addition, students become better able to both understand and analyze complex problems (Batchelder and Root, 1994; Eyler and Giles, 1999), and through reflection activities they often gain mastery of content that they otherwise might not achieve (Eyler and Giles, 1999; Pasek et al., 2006). Service learning pedagogies also serve to increase students’ intrinsic motivation for learning course-based materials (Covitt, 2002; Furco, 2003).

Furthermore, service learning may act as a vehicle for career exploration. Through their experiences with service agencies, students make contacts in the community and gain exposure to real-world working situations. While providing an opportunity to develop skills for future employment, such experiences may also spawn insights that help students to clarify their professional goals and more realistically assess their intended career paths (Lascell, 2014).

Importantly, research has shown that one of the primary benefits of service learning is instilling in students a heightened sense of civic and social responsibility (Kendrick 1996). Service work fosters in students a strong sense of connection to their community as they become active participants in civic affairs. Moreover, working with community leaders provides students with role models who may inspire them to become more involved in community issues while also helping them discover their own leadership qualities (McLaughlin, 2004).

Lastly, and perhaps most crucially, service learning has been shown to be a catalyst for the development of empathy (Astin et al., 2000; Eyler, Giles, and Braxton, 1997; Lundy, 2007; Simons and Cleary, 2006; Wilson, 2011). As a result of participation in service learning courses and activities, students often become
more empathetic and more accepting of diversity in all forms—generational, cultural, racial, etc.—transforming previous stereotypical thinking into respect for others (Langstraat and Bowdon, 2011; Rosenberg, 2000; Torsney, 2012). An enhanced and expanded worldview allows students to feel more comfortable working with and helping others who are different from themselves. This in turn often leads to increased trust in peers and adults, as well as an increased sense of self-esteem (Weiler et al., 2013).

As previously mentioned, the benefits of employing service learning curricula extend beyond those pertaining to students. Faculty members may also find incorporating service learning into their courses to be an advantage in that it provides a platform for creating a more hands-on, experiential approach to teaching and learning (McLaughlin, 2004). Utilizing the service learning approach takes the educational experience beyond the classroom and establishes a more realistic learning environment; in other words, it increases the relevancy of education for students. Teachers frequently find that students are able to apply concepts from the classroom to their service and, conversely, are eager to take what they learn and experience in the field and use it to make contributions that enrich classroom interactions. In these ways, service learning adds a unique and stimulating dimension to the teaching design (Guam Community College, n.d.).

For their part, schools find that offering service learning programs gives them the opportunity to be active, engaged partners in the community. Along with developing community partnerships, schools are better able to invite students to become active community members, thereby promoting civic and social responsibility as well as academic development. Overall, by implementing service learning programs as an educational strategy, schools may cultivate a more cooperative and inclusive school climate and culture (Edina Public Schools, n.d.).

Finally, community groups and agencies may benefit from participation in service learning programs in numerous ways, including: establishing mutually beneficial school-community partnerships; increasing human resources for services and problem-solving; profile-raising through increased public awareness of the issues the agencies deal with and the services they provide; and mentoring and nourishing young people who may in turn show their appreciation by devoting considerable energy to their causes over time (Roehlkepartain, 2007). Needless to say, these positive outcomes reverberate among the community members who are recipients of the services provided by the participating community organizations.
III. Service Learning in Pacific Island Contexts

A. Hawai‘i Pacific Islands Campus Compact

For the purposes of this paper, I will focus attention on educational institutions that are members of the Hawai‘i Pacific Islands Campus Compact (HIPICC). HIPICC is a part of the National Campus Compact, a coalition of over 1,100 colleges and universities across the United States committed to linking schools to their respective local communities through the growth and development of campus-based civic engagement. The National Campus Compact “promotes public and community service that develops students’ citizenship skills, helps campuses forge effective community partnerships, and provides resources and training for faculty seeking to integrate civic and community-based learning into the curriculum,” and its affiliated HIPICC member schools are “dedicated to enhancing students’ sense of personal and social responsibility, citizenship, and awareness of the unique communities and peoples of Hawaii, American Samoa, and the Pacific basin, while reinvigorating higher education’s concern for improving the quality of life in society” (University of Hawai‘i at Manoa Service Learning Program, n.d.).

HIPICC consists of 17 member institutions (see Appendix 1 for a complete listing). 14 institutions are located in Hawai‘i and three elsewhere in the Pacific region, these being American Samoa Community College, Guam Community College, and Northern Marianas College; 14 are public institutions and three are private, namely Brigham Young University Hawai‘i, Chaminade University, and Hawai‘i Pacific University; eight are colleges or universities, eight are community colleges, and one—the East-West Center—is a research institute. HIPICC operations are coordinated by the Office of Undergraduate Education Service Learning Program at the University of Hawai‘i at Manoa. In this paper, I will report on the service learning programs at four HIPICC member institutions: American Samoa Community College, Guam Community College, Northern Marianas College, and the University of Hawai‘i at Manoa, with particular emphasis on the programs organized by the University of Hawai‘i at Manoa.

1. American Samoa Community College

Upon joining HIPICC, American Samoa Community College (ASCC) established a Service Learning Office on its campus and set several goals. The first goal was to introduce administrators and faculty members to the new Service Learning Program and demonstrate the ways in which service learning would enhance ASCC’s academic programs. To this end, 15 faculty members from various departments were provided with support to attend conferences in several states in the U.S. at which they could interact with their counterparts from similar
academic disciplines. In one case, teachers of Samoan language studied about oral history with Hawaiian language teachers. These two Polynesian languages and cultures have many similarities, with oral rather than written communication as their base. The Samoan language teachers found that service learning could be utilized as a pathway for their students to interview the elders in their communities, transcribe their stories, and compile them in a booklet that could be preserved and enjoyed by their respective families.

The second goal set by ASCC was to integrate service learning in college courses, not only as student-centered pedagogy but as a way to authentically serve the community. To meet this goal, departments were empowered to take ownership of the Service Learning Program in their own disciplines and decide for themselves how to best meet community needs. Because the very concept of service is a vital part of Samoan culture, participating departments found that both students and community partners were very receptive to the idea of developing service-based relationships. Taking one example, psychology and sociology students were asked to participate in outreach activities at a Catholic home for the elderly. The students primarily spent time conversing, singing, and playing games with the elderly residents. Most of these students were quite used to taking care of their own grandparents at home, so they felt comfortable in this setting and thoroughly enjoyed their fellowship with the residents. In fact, some students continued to visit the home even after their required hours of service were completed. The residents, for their part, were also greatly appreciative of the students’ visits.

ASCC’s third goal was to build service-based relationships with both the public and private sectors of the community. The Department of Business Management, for example, is now working closely with the tax office in American Samoa to assist low-income families in filing their taxes. As a result of this partnership, students on service learning assignments have been able to gain important professional skills while providing services to a segment of the community greatly in need of their assistance. Moreover, some ASCC students have been hired directly into full-time positions at the tax office after completing their degrees.

Considering another example, as part of its commitment to building community relationships, the English Language Institute at ASCC now offers summer reading programs at public and private elementary schools, libraries, churches, village centers, and private homes. Students enrolled in reading classes in the Institute’s developmental program teach these courses, thereby sharpening their own reading skills and gaining practice in teaching while fulfilling their own service learning requirement.
Overall, ASCC currently has eleven academic departments managing their own service learning programs. In addition to the community partners already mentioned, department initiatives have extended service to hospitals (Health Science department), a prison (Social Science department), and the ASCC campus community (Mathematics department). Furthermore, the Business Management department has arranged service activities in the neighboring island nation of Western Samoa and a global outreach program in New Zealand. Some of the instructors involved in the initial establishment of service learning programs at ASCC now hold administrative posts and serve as deans, directors, and vice-presidents, thus ensuring continued administrative support of service learning endeavors at the school (E. Faalafi, personal communication, October 28, 2016).

2. Guam Community College

Service learning programs at Guam Community College (GCC) are coordinated by the Center for Student Involvement (CSI). CSI helps individual teachers make connections with a wide array of community-based organizations that are willing to participate as host institutions for service learning placements. CSI has links to over 80 such organizations in Guam. Teachers choose organizations that match up best with their course content and design service learning components that are directly linked to curriculum. Teachers are then responsible for monitoring students’ service learning experiences. CSI assists this effort by supplying teachers with a packet of materials that includes a Student Agreement Form, Community Based Organization Letter, Student Time Log Sheet, Student Reflection Paper Outline, and Student Evaluation Survey. As for students, in addition to the work that they do off campus, they are normally asked to share their experiences with others in class via presentations and group discussions. They also write reflection journals and papers and receive feedback on these from their teachers.

Examples of departments and courses at GCC linking curriculum with community-based work include: Accounting, which places students with the Guam Girls Scouts to assist with accounting and inventory of supplies and equipment; American Sign Language, which connects students with the Guam Special Olympics and which also sponsors an annual Deaf Expo on campus; Early Childhood Development, which connects students with Island Girl Power to tutor elementary and middle school girls; Math, which sponsors an on-campus Math Carnival consisting of math-oriented games and activities; and Science and Botany, which place students in agencies where they have the opportunity to do environmentally-oriented fieldwork.
While many courses at GCC feature service learning, there is no general requirement at the school for service learning participation. That is, students have the option of choosing courses in which service learning is a requirement, but they may also choose to forgo such courses. According to CSI, those who choose courses that require service learning do so for a variety of reasons, including a desire to begin networking for job opportunities after graduation, as well as simply having a desire to take part in volunteer work to help others.

CSI reports that, in addition to its prevalence in tertiary-level education, service learning is now a staple feature of public high school education in Guam, with 75 hours of work being required of each student before graduation. Civic engagement and service learning activities have also become popular at many junior high schools, though much of the work takes place within the schools rather than outside. Thus, it may be the case that some students at GCC choose courses that involve service learning because of their previous positive service learning experiences in junior and senior high school (B.L. Guerrero, personal communication, July 17, 2015).

3. Northern Marianas College

Northern Marianas College (NMC), located on the island of Saipan, the largest island in the Commonwealth of the Mariana Islands, has operated service learning programs for the past several years with the goals of promoting the value of service and developing servant leadership among its students. To accomplish these goals, NMC has established close working relationships with a variety of community partners. Focus areas have included marine and coastal resources, environmental awareness and stewardship, and community health services. NMC’s programs initially involved partnerships between four community agencies and three academic departments offering nine college courses. A total of ten faculty and staff members helped provide support to over 100 student participants.

More recently, NMC has utilized an outcome-based approach to its service learning projects. According to materials provided by NMC staff (Northern Marianas College 2015), three specific outcomes have been targeted, as follows:

Outcome #1: Implementing a student-driven project to engage students in promoting awareness of the benefits of alternative energy resources and the investments needed to implement their use in the Commonwealth of Northern Mariana Islands.

Outcome #2: Introducing strategies to reduce energy consumption at three community partner sites.
Outcome #3: Partnering with three to four instructional faculty to design and integrate service learning projects into courses in order to support student interest in environmental, energy, and health issues in the Commonwealth.

To achieve these outcomes, new community partners were developed through initiatives and project plans presented by students enrolled in courses whose faculty were identified as being affiliated with the NMC service learning program. New course/faculty partnerships were developed based on faculty commitment to integrating service projects into the curriculum that addressed either environmental, energy, or health-related issues in the community. Faculty who expressed commitment to integrating service learning projects into courses were invited to participate in a service learning information and orientation session.

Additionally, a week-long event was held on the NMC campus to promote service projects in the college community, and presentations were made by students participating in service learning projects. These students also engaged in round-table discussions to identify strategies for effective community outreach as well as for increasing public awareness of alternative energy resources and methods for reducing energy consumption. As part of their program training, service learning students were divided into base groups and participated in various team-building exercises. By means of discussion and debate, academic and social competition, and other group projects, members of these base groups learned to support one another while acquiring skills useful for their college lives. Lastly, to enhance and bolster their self-understanding, students were required to keep reflection logs in which they reported their observations of and reactions to their service learning experiences.

As can be seen in the above descriptions, students at NMC not only participated in service projects, they were actively involved in each stage of the development of the service learning program itself. In this sense, they were utilized as responsible partners for the advancement of service learning at NMC (L. Pangelinan, personal communication, August 28, 2016).

4. University of Hawai‘i at Manoa

The University of Hawai‘i at Manoa (UHM), the flagship campus in the University of Hawai‘i system with an enrollment of over 20,000, extensively promotes service learning for its undergraduate students. Service learning programs are coordinated by two separate offices: the previously mentioned Office of Undergraduate Education Service Learning Program and the College of Social Sciences Program for Civic Engagement and Service Learning.
a. Office of Undergraduate Education Service Learning Program

The Service Learning Program (SLP) at UHM’s Office of Undergraduate Education began its operations in 1994. It supports professors who wish to include a service learning component in their courses by helping to arrange fieldwork opportunities for their students in relevant community organizations (that is, with those organizations whose missions are aligned with the professor’s course content). SLP currently has links with over 175 community organizations and agencies in Honolulu. Additionally, it provides service learning orientations for classes, and it encourages and helps UHM faculty members involved in service learning to network and share ideas and experiences with one another. In these ways, SLP functions as both a guide for and an active link between professors, students, and community partners.

In addition to the activities described above, SLP also administers the Manoa Service Award, a scholarship program in which selected students receive assistance with tuition plus $1000 per term in exchange for completing 100 hours of service-related work on campus and in the community. This is a rare example of student service work being supplemented by financial incentives (University of Hawai‘i at Manoa Service Learning Program, n.d.).

b. College of Social Sciences Program for Civic Engagement and Service Learning

The Program for Civic Engagement and Service Learning at UHM’s College of Social Sciences (CSS) is modeled on the idea that “giving something back to the community is an important college outcome, and...working with community partners is good preparation for citizenship, work, and life” (Prentice and Robinson, 2010). Civic engagement, a broad term that encompasses service learning and other community-related activities, has been defined as “working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values, and motivation to make that difference. It means promoting the quality of life in a community through both political and non-political processes” (Ehrlich, 2000). According to CSS materials, civic engagement involves “actions wherein individuals participate in activities of personal and public concern that are both individually life enriching and socially beneficial to the community” (University of Hawai‘i at Manoa College of Social Sciences, n.d.). For students, civic engagement may include community-based research, participation in service-learning classes and projects, or other types of community service activities.

To achieve its aims of promoting civic engagement and addressing vital community issues, the CSS program coordinates a variety of interdisciplinary
service learning programs and projects for CSS students and faculty. Many of these projects are also open to students and faculty from other tertiary institutions on O’ahu. The program allies itself with numerous community groups, organizations, and agencies, working closely with them towards the shared goal of improving living conditions for Native Hawaiians as well as other Pacific Islanders and immigrant groups in Hawai’i. More specific objectives include combatting racism and discrimination while improving health, education, housing, and employment opportunities for the previously mentioned groups.

CSS students who participate in service learning or other community-engaged projects as part of their course requirements receive credit for the hours that they devote to community work. In this way, students’ community service activities, coupled with related class discussions and reflection assignments, constitute a significant and meaningful portion of their coursework.

Faculty development is also a goal of the CSS program. Program-related materials state that CSS “offers professional development through mentoring, workshops, institutes, and conferences, and help with curriculum and community-relations development, student-learning outcomes and assessment, research, and publication” (University of Hawai’i at Manoa College of Social Sciences, n.d.).

It is worth noting that the CSS Program in Civic Engagement and Service Learning is centered in its Ethnic Studies department. The Department of Ethnic Studies at UHM places emphasis on Pacific and Asian peoples and is a leader in the emerging sub-field of Oceanic ethnic studies. It focuses on an array of issues associated with “key words in the field: indigeneity, race, culture, ethnicity, class, labor, migration, property, land, aloha ʻaina (love and reverence for the land), sustainability, community, gender, sexuality, and pedagogy” (University of Hawai’i at Manoa Department of Ethnic Studies, 2015). The department embraces a research and teaching philosophy emphasizing direct civic involvement and the application of academic theories to complex community concerns. In keeping with this approach, the department maintains “a commitment to ongoing interactions with local communities on the basis of mutual respect and a two-way exchange of knowledge” (University of Hawai’i at Manoa Department of Ethnic Studies, n.d.). This attitude of respect for collaborating community partners and their bases of knowledge is reflected in the many service learning projects that the Ethnic Studies department has initiated and oversees. The most prominent of these projects will be described below.
Programs addressing Hawaiian and Pacific Island history, culture, and environmental issues

(a) Malama I Na Ahupua’a

Malama I Na Ahupua’a is an environmental and cultural program focusing on environmental protection and traditional Hawaiian practices of land stewardship. It is open to UHM students and students from all member institutions of the Hawai‘i Pacific Islands Campus Compact. Participants are allowed to bring friends and family members, particularly children, with them to the activities. This is encouraged, in fact, in recognition of the importance of both families and hands-on learning in Pacific Island contexts.

Concerning the name, malama in Hawaiian means to take care of, tend, preserve, or protect. An ahupua’a is a traditional division of land, usually running from the mountains to the sea and extending out to the reef. In ancient Hawai‘i, those residing within an ahupua’a had access to diverse ecological zones (i.e., uplands, plains, and coastal areas). By utilizing the resources of these zones in a sustainable manner, they were able to function as self-sufficient communities. Following in this tradition, Malama I Na Ahupua’a emphasizes environmental preservation and stewardship of particular land and sea areas through sustainable use of resources and practices promoting food sovereignty. The program aims to give students a sense of place and an appreciation of native Hawaiian practices of sustainable living by creating a pool of shared knowledge and a wealth of hands-on experience. Activities include outdoor experiences in the uplands, midlands, and lowlands, and range from difficult manual labor to the collection of oral histories. All are designed to shed light on the relationship of people and the environment in Hawai‘i, and to illustrate the traditional Hawaiian approach to self-sufficient and sustainable living.

(b) Ka Holo Wa’a

Ka Holo Wa’a, meaning ‘the voyaging canoe’, is a canoe-building and intercultural sharing project designed to give college, high school, and middle school students a chance to help construct a three to four-meter canoe in traditional Micronesian style using natural canoe-building materials. In the initial project, students worked under the tutelage of the master carver Plasito Eseluquipi from the Micronesian island of Satawal. Plasito is the son of the master navigator Mau Piailug, also from Satawal, who in the mid-1970s helped Native Hawaiians reestablish their knowledge of traditional open ocean navigation and wayfinding methods by guiding the newly-built Hawaiian voyaging canoe Hokule’a from O’ahu to Tahiti. He was quoted as saying at the time, “I have placed the stick [bridge] between Micronesia and Polynesia. I like
we make one family” (University of Hawai‘i at Manoa College of Social Sciences, n.d.). The Ka Holo Wa‘a project, which is subtitled ‘Creating Oceanic Pathways—Walking the Stick of Our Ancestors,’ is meant to follow in this spirit by continuing to rebuild and strengthen the reciprocal relationship among the peoples of Oceania. By creating a canoe together, young people from Hawai‘i and recent immigrants from Micronesia, who often have a tense and antagonistic relationship in the schools and on the streets of present-day Honolulu, are able to ‘walk the stick’, or cross the bridge, of their ancestors and find a shared, essential point of their traditional backgrounds. The canoe, then, represents both the physical and symbolic or spiritual connection between Native Hawaiian and Micronesian history and culture.

Carving of the canoe takes place at Ho‘olu Aina, a community partner dedicated to cultural education, environmental sustainability, and community transformation, which manages 100 acres of forest land at the back of Kalihi Valley on O‘ahu. At this site, additional field activities are offered to facilitate cultural and environmental learning. These include gathering the natural materials needed to build various parts of the canoe, such as the ‘iako (crossbeams), ama (outrigger), kia (mast), pe‘a (sail), hoe uli (steering blade), and kaholo, kumuhele, lanalana, kumupou, and pau-o-lu‘ukia (various types of cordage for lashing). By gathering these materials students become intimately familiar with the landscape and its foliage and more knowledgeable of the steps in the canoe-building process and the vital role that the natural elements played in Hawaiian and Pacific Island cultural practices.

Some participants in this project are also provided experience in sailing a previously constructed canoe, the Kanehunamoku, which is a replica of an eight-meter double-hulled traditional coastal sailing vessel. These students spend 25 hours during the semester learning about the parts and functions of the canoe, along with traditional sailing and navigational skills. They later take part in a canoe festival that is held annually on Oahu’s east shore, sharing what they’ve learned with local community members.

(c) Kaho‘olawe

Kaho‘olawe, the smallest of the eight major Hawaiian islands, was used during World War II and for decades afterwards as a training ground and bombing range by the United States military. After many years of protest by Native Hawaiians, jurisdiction over the island was returned to the State of Hawai‘i in 1994. The island is now protected by the State and designated, along with its surrounding waters, as the Kaho‘olawe Island Reserve. Access is controlled and is limited to selected individuals and groups involved in conservation and restoration efforts and to those whose visits are related to Native Hawaiian
cultural and spiritual practices. Students participating in this project have the unique opportunity to visit the island for several days and assist the Protect Kaho'olawe 'Ohana and the Kaho'olawe Preservation Commission in their efforts to document Hawaiian archeological sites. Students also assist in cleaning up designated areas, replanting native grasses, shrubs, and trees, and developing plans for the revitalization of the island.

(d) Native Hawaiian Initiative

The Native Hawaiian Initiative seeks to “expand the network of faculty cooperating across disciplines to inspire and support research and teaching strategies grounded in Hawaiian values and knowledge systems...[in order to] strengthen learning, social sciences literacy, critical thinking, and student leadership while building strong programs for community engagement and supporting a meaningful and productive home base for indigenous students at the College of Social Sciences” (University of Hawai’i at Manoa College of Social Sciences, 2015). CSS currently has eight Native Hawaiian faculty members and offers more than 40 courses with a Hawai’i or Pacific focus, many of which include a service learning component. In addition to their regular duties on campus, CSS faculty also participate in special programs focused on Native Hawaiian issues such as the following:

--Kupopolo Heiau Field School: A three-year archaeological field school and oral history project on Oahu’s North Shore that trains undergraduates, graduates, and community members in archaeological and ethnographic methods as well as cultural and social protocols. The school responds directly to the needs of the Hawaiian community in the areas of cultural resources management, historic preservation, and burial sites protection.

--University of Victoria Indigenous Governance Graduate Exchange: A University of Hawai’i-University of Victoria graduate exchange program in which students study local, indigenous ways of theorizing and practicing land use, both in the past and at present, and explore how these concepts might be applied in different contexts. Two key concepts that are investigated are kuleana (rights, responsibilities, obligations, and authority) and sustainable self-determination.

(2) Programs addressing other community issues and concerns

(a) Pacific Connections

This project involves a network of community groups, organizations, and agencies that are working to improve the living conditions of Native Hawaiians
and Pacific Island immigrant groups residing in Hawai‘i, particularly immigrants from the Micronesian islands. Students provide community service work that targets the improvement of health conditions, education, housing, and employment opportunities for these groups.

(b) Palolo Pipeline

The Palolo Pipeline is an umbrella program consisting of numerous community partners in and around Honolulu’s Palolo Valley. The program’s goal is to improve education and the overall quality of life for residents of the housing projects located in the valley. While emphasizing early childhood education, it aims to “create and sustain a pipeline of educational support that will provide lifelong learning...and help students move through the educational system from pre-school to higher education” (University of Hawai‘i at Manoa College of Social Sciences, n.d.).

Three neighboring institutions of higher education—Chaminade University, Kapi‘olani Community College, and the University of Hawai‘i at Manoa—work together with community partners to support valley residents and their children. Key resource groups for the program are service learning students and faculty members from these three schools. Service learning students may find themselves working at the Palolo Ohana Learning Center, a community center with extensive after-school support programs, or at one of Palolo’s public elementary or secondary schools, with their activities centered around tutoring and mentoring the students of these schools. The Palolo Pipeline has proven to be so successful that it now serves as a model for work in similar low-income areas nationwide.

(c) Project SHINE

SHINE is an acronym meaning ‘Students Helping in the Naturalization of Elders.’ Project SHINE is a national service learning initiative that entails students tutoring elderly immigrants in civics education and English in preparation for the United States Citizenship and Immigration Services Naturalization Test. Funding for the program has been provided over the years by the Corporation for National Service, the U.S. Department of Education, and Learn and Serve America.

In Hawai‘i, Project SHINE functions as a partnership between Chaminade University, Kapi‘olani Community College, and the University of Hawai‘i at Manoa (the same three schools coordinating the Palolo Pipeline) and, aside from the coordinator’s position, is almost entirely student-run. Students participating in Project SHINE normally engage in weekly tutoring sessions of two hours per
week for a total of ten weeks and may receive credit for their work through classes offering SHINE as a service-learning option. Through this experience, students gain exposure to immigration and immigration law, legal and ethical issues related to culture and ethnicity in Hawai‘i and the U.S., and various aspects of poverty in local communities. While developing their teaching skills, students are also able to facilitate and promote the empowerment of an often marginalized set of immigrants in Hawai‘i.

(d) No Mo’ Haus

No Mo’ Haus’ is a project dedicated to helping the homeless in Hawai‘i, with a special focus on children. Student participants often serve as mentors and tutors for children from homeless families at the Next Step Homeless Shelter in the Kaka’ako area of Honolulu. This shelter houses up to 200 people, about one-third of whom are children. A large portion of the people using the shelter are recent immigrants, mostly from Micronesian countries.

Students are asked to put in 25 hours of work during a semester, usually in weekly two-hour sessions. Activities normally include helping children with their homework assignments as well as simply spending time playing with them. Students may also be asked to help with serving food or assisting in other useful ways at the shelter. After they have become familiar with the shelter and comfortable with their work there, students with time and enthusiasm are given the chance to create a special program for the residents. These programs might be educational in nature or set up just for fun. Examples of previous programs include a Valentine’s Day breakfast event; Surf to Serve, a weekend surfing activity; and an English as a second language class offered for older shelter residents. In some cases, students may be granted permission to conduct research at the shelter, though this requires first showing commitment to, and building trust with, shelter residents and staff.

(e) Local 5

Local 5 is part of an ongoing collaboration between the Department of Ethnic Studies at UHM and Local 5, a labor union representing over 11,000 hotel, health care, and other service industry workers throughout Hawai‘i. The purpose of the program is to “expose students to the issues affecting working families and to…raise awareness and encourage students to become agents of social justice and social change beyond the university” (University of Hawai‘i at Manoa College of Social Sciences, n.d.). The program provides opportunities for students to learn about grassroots and union organizing by working with Local 5’s community and political organizers and participating in Local 5’s Hotel
Workers Rising Campaign. Students may also conduct community-based research as part of their participation in this program.

(f) Other programs

Other programs coordinated by the Department of Ethnic Studies at UHM as part of the College of Social Sciences Program for Civic Engagement and Service Learning include:

--Hawai‘i Plantation Village: Students work at the Hawai‘i Plantation Village, an outdoor museum of Hawaii’s multicultural plantation history, assisting in docent training, website development, systematization of historic photos, oral histories, and other documents, and organization of special events.

--Bridging the Digital Divide at Kuhio Park Terrace: Students assist children and adults at the Kuhio Park Terrace housing project in acquiring and/or improving computer literacy skills.

--BIN-I Program: Students assist the Office of Multicultural Student Services at UHM with its tutorial program for immigrant students enrolled in public schools in Honolulu.

As the many examples given above illustrate, member schools of the Hawai‘i Pacific Islands Campus Compact have a clear dedication to civic engagement and the service learning process. Each institution has worked to develop an extensive set of community partnerships and to establish a broad assortment of service learning programs that deepen and enhance the educational experience of their students while addressing local community concerns and historical, cultural, and environmental issues pertinent to the indigenous populations of Native Hawaiians and Pacific Islanders.

Turning now to the appropriateness of service learning for Japanese students, the following section will utilize a series of case studies to consider the impact of participation in service learning programs at UHM on study-abroad students from Japan.

IV. Service Learning and Study-Abroad Students from Japan

A. Case Studies
In order to obtain first-hand accounts of the effect of participation in service learning programs on Japanese students studying abroad, interviews were conducted with three such students enrolled at the University of Hawai‘i at Manoa. Although their backgrounds and circumstances varied, all three took courses in the Department of Ethnic Studies that contained service learning components, and as a result they participated in programs run through the College of Social Sciences Program for Civic Engagement and Service Learning, such as the previously described Malama I Na Ahupua‘a, Ka Holo Wa‘a, and SHINE. The interviews with these three students are summarized below.

1. Momoko

Momoko, age 20, is from Okayama Prefecture in southwestern Japan. During her high school days, she saw a Japanese movie (‘Paradise’) that depicted the experience of Japanese Americans in Hawai‘i during World War II. The movie also provided Momoko with her first views of Hawaiian hula. This inspired her to want to live and study in Hawai‘i someday, as well as to begin taking hula lessons in Okayama. When the time came for her to enter college, she deliberately chose a school, Ryukoku University in Kyoto, that had an exchange agreement with the University of Hawai‘i. Momoko majored in Intercultural Communication and continued her hula lessons in Kyoto. As she approached her junior year of studies, she applied for a one-year study abroad program at the University of Hawai‘i at Manoa and was accepted.

Because of her interest in issues pertaining to minority groups, Momoko chose to study in the Ethnic Studies department at UHM. As part of her studies, Momoko took courses on Hawaiian and other Pacific Island cultures. She was not aware, however, that service learning would be an essential component of many of her classes and, in fact, before beginning her studies at UHM she had no idea what service learning was. She eventually participated in several service learning projects, including Malama I Na Ahupua‘a and Ka Holo Wa‘a. Excerpts from her service learning journal, in which she comments on her experiences, are shown in Appendix 2.

Before coming to Hawai‘i, Momoko saw it as a place with nice beaches and good shopping. Her first impression after arriving was of an “urbanized and Westernized” place. Through service learning, however, she says she was able to discover and explore Hawaiian culture in a unique way, and this changed her view of and relationship with Hawai‘i entirely. Momoko describes her participation in service learning activities as a “very special opportunity” that she is thankful for having had. She says that through these activities she developed an interest in self-sufficiency, sustainability, and the preservation of traditional culture. Concerning this last point, she says she was especially
impressed to see Hawaiian *kupuna* (elders) passing down their cultural knowledge to future generations. Finally, experiencing Hawaiian culture in a deep and personal way made her want to learn more about her own Japanese culture, something she hopes to do after returning to Japan.

After graduating from her university back in Japan, Momoko now plans to become involved in international development work. She also hopes to find a way to help promote traditional Japanese culture. She plans to return to Hawai‘i often to continue the relationships she developed through her studies at UHM and, particularly, through her participation in service learning projects.

2. Saki

Saki, age 24, is from Fukuoka Prefecture in southwestern Japan. She began her university studies by attending Seinan University in Fukuoka. While there she studied about Asian Americans in her American history seminar class, and she developed an interest in Japanese Americans in Hawai‘i through independent reading. Saki was generally uninspired by her university courses and longed to do something different. She accompanied her family on a trip to Hawai‘i, and something resonated with her there. She decided to move to Hawai‘i and begin a new phase of her life there.

Saki left her university, came to Hawai‘i, and initially joined a language school to improve her English. Though she had no previous volunteer experience in Japan, she began volunteering at the Japanese Cultural Center in Honolulu. Later she enrolled at Kapi‘olani Community College and became involved with a program for foreign students called the International Café. She worked closely with one of her teachers who introduced her to various service learning activities available through the school.

After completing her studies at the community college, Saki transferred to the University of Hawai‘i at Manoa, majoring at first in Asia-Pacific history and then transferring to Ethnic Studies. Through her involvement in Ethnic Studies courses, she participated in several service learning programs. She was less than satisfied with her experience in SHINE due to what she perceived as a lack of structure in the program and a lack of guidance by the program supervisors. She was especially disappointed by the lack of interaction with other SHINE student participants. Her comments here serve to underscore the importance of proper supervision and guidance in a service learning program, and the necessity of creating ample opportunities for interaction among student participants.

In contrast to her experience with SHINE, Saki was very impressed by the Malama I Na Ahupua‘a program, which she described as being “very fulfilling.”
She noted that the program was “full of surprises” and opened her mind to a different side of Hawai‘i that she didn’t know existed. She was able to discover different places and people that she felt she previously did not have access to as a foreign student.

Saki was greatly impressed at the talks given by the leaders at some of the program sites. She particularly recalled a talk at Ulupo Heiau in which a *kupuna* explained the Hawaiian cosmology, including the story of how humans came to be in the islands. These ideas were different from other belief systems she was familiar with because Hawaiians gave great value to plants as part of the evolutionary process and in fact believed that humans evolved from the taro plant, not from another animal, and not as the creation of a god or gods. This spurred her interest in the Hawaiian understanding of and relationship with nature. It also caused her to reflect on the traditional Japanese understanding of nature, which she felt had many similarities with Hawaiian views. For Saki, the concepts of *aloha aina* (love for the land) and *malama aina* (protecting and caring for the land) encapsulated the Hawaiian viewpoint.

Saki made multiple visits to some program sites, deepening her relationship with the people and places on each visit. With her broadened perspective on Hawaiian people, culture, and traditions, she said she began to feel sorry for the Japanese tourists who had “no clue” about the side of Hawai‘i she was experiencing. Later her feeling changed to one of gratitude for having had the chance to encounter Hawaii’s natural environment and its culture and traditions in a unique way through service learning activities and work on the land. Simultaneously, she furthered her understanding of Hawaiian perspectives through her study of the Hawaiian language, which she said helped her to more readily comprehend the concepts discussed at each of her service learning sites.

After graduating from the University of Hawai‘i, Saki plans to return to Japan to attend graduate school, where she intends to focus on minority issues. She hopes to eventually become a teacher, or perhaps work at a university. When she begins her own teaching career, her hope is to organize service learning and other experiential learning activities for her students. She believes that Japanese students would benefit immeasurably from out-of-classroom, “real life” learning experiences, such as the ones she gained so much from in Hawai‘i.

3. Makiko

Makiko, age 55, is from Kanagawa Prefecture in the Kanto region of Japan. She holds a BA degree in English literature from Tamagawa University in Tokyo. She began studying hula in Japan at age 47. Her Japanese instructor had studied under a well-known *kumu hula* (master hula teacher) from the island of Maui.
named Ku‘ualohanui Kaulia. She gradually became interested in Hawaiian culture, and especially the language, because of the many Hawaiian language oli (chants) and terms used in hula.

With her husband’s encouragement, Makiko came to Hawai‘i to learn more about the culture and language. She enrolled at Kapi‘olani Community College for two years and then transferred to UHM to become a Hawaiian language major. She will earn her BA in Hawaiian language in the near future.

Makiko’s initial exposure to service learning took place at the community college. As a requirement for her botany class, students had the choice of doing research and making a presentation at the end of the term or participating in service learning projects. She chose service learning and, she said, was eventually quite glad that she did. Makiko found the Malama I Na Ahupua’a program to be particularly rewarding. Though she was only required to do 25 hours of work during the term, she ended up putting in well over 30 because she simply enjoyed the experience. One activity in the program that she found stimulating was working at He‘eia Fish Pond. On her first visit she went on a one-hour walking tour of the pond during which she heard about the traditional Hawaiian approach to aquaculture, which she understood to be exceptionally clever. Afterwards, she worked alongside 40 students from various colleges and universities around O‘ahu, clearing brush and helping to maintain and rebuild parts of the pond. When the work was finished, she enjoyed sharing lunch and talking with her fellow students. She said that this was an excellent way to begin new relationships and expand her social network in Hawai‘i.

Makiko believes that though she learned much about Hawai‘i through the study of Hawaiian language and hula, participation in service learning activities significantly strengthened and deepened her knowledge of Hawaiian culture. She said she learned through direct experience how Hawaiians valued and took care of the land and sea, the kalo (taro) and the fish. In other words, service learning provided her with an immersion experience in Hawaiian culture which served to expand and fortify her understanding of not only the language, but of the people and their culture. Furthermore, since most of the communication that took place during her service learning activities was in English, she was also able to hone her English language skills in the process.

Makiko explained that she discovered there is an enormous difference between learning about a language, culture, and place through classroom lectures and the understanding gained by experiencing these things directly as she did through service learning. She believes that in order to fully comprehend a language, one must be very familiar with the culture and customs of the people, the natural environment in which they live, and most importantly the people themselves.
She felt fortunate to have been able to learn about all of this through her involvement in service learning projects.

Makiko believes that there are many similarities between Hawaiian and Japanese culture, including the ancient relationship between the people and their many gods, the naming of different types of winds and rains (as she found in hula chants and songs), and the many ways that nature and peoples' relationship with it is interwoven in the traditional way of life. At the same time she realizes that, though she is Japanese, she really does not know her own culture deeply. As such, her service learning experiences have motivated her to make an effort to learn more about Japanese culture, history, and environment upon her return to her country.

V. Discussion

The preceding sections of this paper have illustrated the pervasiveness of the service learning approach in the educational systems of schools in the Pacific region, as well as the diversity and richness of the programs offered at specific tertiary institutions. The examples given show that successful programs create a strong collaborative bond between faculty, students, and community partners in which all parties become fully engaged in a reciprocally beneficial relationship.

All of the programs described above seek to address the needs of their local communities, while some also promote awareness of indigenous issues, traditions, and values. Of the four schools included in this study, the University of Hawai‘i at Manoa placed the most emphasis on raising awareness of indigenous culture and issues of importance to native people in the community. Programs such as Malama I Na Ahupua‘a, Kaho‘olawe, and the Native Hawaiian Initiative expressly aim to shine a light on traditional Hawaiian culture and values as well as on the pressing contemporary social concerns of the Hawaiian people. Ka Holo Wa’a brings together traditional Native Hawaiian and Micronesian cultural practices in one project, and by doing so builds and enhances the respect that the two communities have for one another.

American Samoa Community College, at least in one of its past programs, also focused on indigenous culture with its oral history project involving elders in the Samoan community. On the other hand, Guam Community College and Northern Marianas College, both in Micronesia, have not designed programs with Native Chamorro culture at their core. This may reflect the differing statuses of the native peoples and cultures in different parts of the Pacific. The Hawaiian people are now a minority in their own homeland, and their language and culture were repressed for decades after the overthrow of their kingdom.
until a ‘cultural renaissance’ began in the 1970s. The Micronesian peoples have had a different history, and perhaps feel less need to reclaim cultural identity. This question lies beyond the scope of this study, but it presents fertile ground for future research.

Regarding the effect of service learning on Japanese students, the interviews with the three study abroad students at the University of Hawai‘i at Manoa indicated that numerous benefits resulted from their participation in service learning programs. First, their fieldwork activities provided an opportunity for an immersion experience in another culture, in this case Hawaiian culture. Students were able to obtain direct experience of traditional customs and practices and greater awareness of cultural concepts and spiritual symbolism. As a result, they were able to understand Hawaiian culture in a deeply personal way and access a side of Hawai‘i that those visiting as tourists rarely encounter.

These students also began to see similarities between Hawaiian and Japanese culture. This seems to have created in them a desire to learn much more about their own culture and spurred an interest in protecting and preserving their Japanese cultural traditions. One commonality they perceived between Hawaiian and Japanese thought was an appreciation of nature, and they observed the ways in which a close relationship with nature was interwoven in the traditions of both cultures. This, along with their participation in certain land-based service learning activities, increased their environmental awareness and interest in issues such as food self-sufficiency, organic agriculture, use of non-GMO crops, and environmental sustainability.

Service learning seems to have both reinforced and promoted an interest in minority group issues for the three students, especially with regard to Japanese Americans. While two of the students came to Hawai‘i with prior exposure to basic facts concerning Japanese Americans, all became more knowledgeable of and empathetic towards Japanese Americans and other minority groups in Hawai‘i after working with them in the context of service learning activities. These experiences have motivated at least one of the students to learn more about minority groups in her own country. Thus service learning seems to have the potential for helping ethnic Japanese become more cognizant of the non-mainstream groups in Japanese society and the range of issues that these groups face.

Lastly, the students remarked that service learning helped them to see the merits of building strong personal relationships with people of other cultures. Given the normally monocultural nature of interactions in Japanese society, the intercultural experiences provided by service learning were truly a unique opportunity for them and left a lasting impression. These students not only
served but worked side by side with people from disparate cultures and walks of life, sometimes developing close relationships with them. This helped them to bolster their English (and, in one case, Hawaiian) language skills, but just as importantly they came to personally recognize the worth of person-to-person intercultural cooperation and understanding. By extension, they also realized the value of community service, as well as international development work. They became proponents of volunteerism as a way of not only helping others but also removing barriers and building bridges between peoples of diverse origins and backgrounds. It seems very likely that they will seek out further volunteer experiences and continue to cultivate positive intercultural relationships, after their return to Japan.

VI. Recommendations

Based on the findings of this study and the discussion presented above, some recommendations can be made for constructing service learning programs appropriate to the Japanese context. Beginning with domestic programs, as shown previously a key point is to identify the needs of the community being served and to work closely with community partners in establishing truly useful programs that will thrive by harnessing student support. The needs of specific local communities no doubt differ, but in Japan’s aging society programs centered around services for the elderly might prove particularly welcome. Like their Samoan counterparts, many Japanese students have experienced living with a grandparent and would likely feel comfortable working with, and learning from, this population. Programs geared towards work with children would also fall within students’ ‘comfort zone’ and address prevalent community needs.

By contrast, many college-age students have had little chance to interact with members of Japan’s diverse minority groups. Service learning programs focused on ethnic Koreans, Chinese, Brazilians, or Filipinos would introduce students to groups within their country with backgrounds and worldviews strikingly different from their own, thus heightening the learning experience involved while increasing the prospect of the formation of new intercultural friendships. Similarly, programs centered on Japan’s own indigenous peoples, the Ainu and the Okinawans, would expose students to traditional cultures which, much like that of the Hawaiians, share some traits and values with Japanese culture but are remarkably different, deep, and vibrant in their own ways. In all of these cases, students would learn not only about the cultures of the people they would work with, but also about the issues that these groups face as non-mainstream members of Japanese society.
Colleges and universities in Japan may also wish to design international service learning programs. Such programs often involve environmentally-based work in rural settings in developing countries, giving students experience in a world quite removed from their normally urban, modernized lifestyles. However, some international programs, particularly those run in conjunction with partner universities overseas, involve the types of community-based projects that students might participate in domestically, albeit in significantly different surroundings. In either case, the impact of participating in service projects in a foreign setting often produces a kind of learning experience that is profound and lasting, and that is impossible to replicate in any classroom. The value of such programs for Japanese students cannot be overstated.

VII. Conclusion

The present study has shown service learning to be a compelling experience for college-level students, including those from Japan. It has the capacity to transform mundane coursework into a captivating educational experience, bringing a sense of authenticity to academic lessons. Through service learning, students have a chance to apply what they have learned in the classroom to real-world settings. By participating in community service projects, they are able to bolster their understanding of local and global issues while contributing to the well-being of community members. In the process, they become more informed, engaged, and socially responsible individuals.

Ty Kawika Tengan, a Native Hawaiian, in writing about the political, cultural, and ecological issues now facing Hawai‘i and the Pacific, states “With ancestral knowledge as our guide, we will navigate anew the large and small currents of Oceania” (University of Hawai‘i at Manoa Department of Ethnic Studies, 2015). In the same vein, the practice of service learning may reconnect Japanese students with their cultural traditions and, by also shedding light on contemporary issues and concerns, help prepare them to navigate the currents of the Asia-Pacific region in which they reside.

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Appendix 1: Hawai‘i Pacific Islands Campus Compact (HIPICC) Member Institutions and Their Locations

American Samoa Community College--Pago Pago, Tutuila, American Samoa
Brigham Young University-Hawai‘i--Laie, O‘ahu, Hawai‘i
Chaminade University--Honolulu, O‘ahu, Hawai‘i
East West Center--Honolulu, O‘ahu, Hawai‘i
Guam Community College--Barrigada, Guam
Hawaii Community College--Hilo, Hawai‘i Island, Hawai‘i
Hawaii Pacific University--Honolulu, O‘ahu, Hawai‘i
Honolulu Community College--Honolulu, O‘ahu, Hawai‘i
Kapi‘olani Community College--Honolulu, O‘ahu, Hawai‘i
Kaua‘i Community College--Lihue, Kaua‘i, Hawai‘i
Appendix 2: Momoko’s Service Learning Reflection Journal

Mālama I Nā Ahupua ‘a

I joined the Mālama I Nā Ahupua ‘a (MINA) project, I visited Ho’oulu ‘Alīhāpndi ‘aina. At Ho’oulu ‘Alīhāpndi ‘aina, I learned about organic agriculture and helped promote it through participation in community work. Before we started our work, we made a big ‘aloha circle’ with all the participants, introduced ourselves, and prayed to the land. We worked in a vegetable garden and harvested crops that would be sold at the market. Through working at the organic farm, I met the people who contribute to promoting organic food products and increasing the food self-sufficiency rate in Hawaii.

I learned that one of the big issues in Hawaii is the extremely low food self-sufficiency rate. If more people were to work in the fields growing local products
on small farms it would increase the food self-sufficiency rate. Another serious issue I learned about is the large-scale experiment with GMO (genetically modified organism) products that is currently taking place. It is important to have an interest in what we eat in our daily lives in order to promote healthy agricultural practices in Hawaii. We have a responsibility to choose safe products for our bodies and need to be more concerned about food safety as we try to develop local agriculture.

In addition to working at Ho’oulu Aina, I joined the service learning project at Ulupō Heiau. Before we began work at the heiau (Hawaiian shrine), we made a kukui (candlenut) lei with the other participants and dedicate it to the heiau. We used only fallen yellow leaves which we found on the ground, but it was still a very beautiful lei. Using only fallen leaves means that we do not kill any living creatures. After that, we worked on the heiau and cleared away the weeds. The Hawaiian woman who instructed us told us that the heiau is a very sacred place, so we need to leave all of our negative thoughts behind before we enter there, and we should not think about something bad once we enter, but only positive things such as thankfulness to the land.

The most interesting thing that I learned on that day is the meaning of the name Ulupō. Ulu means “inspire” or “grow,” and pō means “beginning” or “darkness”. Therefore, Ulupō means “beginning in darkness,” and implies that a human baby grows inside the darkness of the mother’s womb, just like a seed grows up in the dark ground and sprouts on the earth. It is really interesting for me because it means that both humans and plants come to the earth in a similar way. In my opinion, it also shows us a strong relationship between nature and people. The reason I think that way is that we are what we have from nature. After people die, they are going to return to the soil, and people have food and water from the land on which their ancestors also existed. Therefore, people and nature have a strong relationship, and it teaches us the importance of keeping a good balance with the earth.

Ka Holo Wa ‘a

I also worked on the Ka Holo Wa ‘a service learning project. Through this project, I learned much about the culture and knowledge related to the Hawaiian voyaging wa’a (canoe). One of the most impressive experiences I had was when I participated in ‘Imi Na’auao, the ‘ohana wa’a (canoe family) crew training on Kauai.

In this program, we worked on building a canoe named Nāmāhoe, which is going to be launched in June, 2015. I learned to tie some sailor’s knots and built one part of the wa’a. Even though it was heavy work, we cooperated and helped
each other to build it. It was such a joy to see the part we finished building by ourselves. One of the leaders told us that Nāmāhoe means “twin,” and this wa’a is made up of two parts: the left side is wāhine (female), and the right is kāne (male). This shows the importance of the balance between kāne and wahine, and that we need to support and respect each other when we voyage. It was a really meaningful experience for me to learn the traditional skills related to the wa’a and to take part in building the Nāmāhoe. I also felt the significance of learning these techniques from people who have had experience in building traditional canoes and sailing them on the open ocean.

On the third day of the program, we went to a place called Hule’ia to help the local NPO organization that is working on removing mangroves there. In this location there used to be a large Hawaiian-style fishpond for aquaculture and a big lo’i (taro patch); however, these traditional features have not been maintained because invasive mangroves have overgrown the area.

In order to do our work there and clean up the area, we cut back the mangroves and formed a long human line to pass and remove the wood. As a result of others before us taking care of this land, there are some native plants now growing tall. I was so impressed by that because I could see the result of people’s effort of mālama ʻāina (protecting and caring for the land). It may be little by little, but the land is surely getting back to the way it used to be. It was a hot day and hard work, but I personally experienced and felt for the first time what mālama ʻāina means.

We worked on building Namahoe again on the last day, and I varnished the underside of the wa’a. Before we left, I humbly gave her leis made of ti leaves, which I made with other members. We all gave offerings in front of her to show our thanks and pray for her. It was a sacred moment, and many of us were even crying. At that moment, I really felt as if she is living and I recognized that she is really one of the ʻohana (family members) who will voyage with the crew members.

On the morning of the day we left, we made our last offerings outside. Before leaving, we made a circle with all the participants and sang a song. While we were singing, tears ran down from my eyes naturally. I was so thankful to everyone who had shared such a special time with me; therefore, I was really sad to say goodbye to them. It was only four days, but people were very welcoming, and I could make a very strong relationship with them within such a short time. I think that is a real canoe family, and I learned how great the spirit of welcoming and accepting other people is, which is necessary as a crew member. I appreciated that people shared so much of the Hawaiian culture with me. It was
really a meaningful and significant experience to learn Pacific culture and skills related to the voyaging and wa’a from many great persons.

Through my service learning projects, I met many people who are protecting their own culture, and there are many things to learn from them. These experiences made me want to know more about not only Hawaiian culture, but also my own culture back in Japan, and to begin learning these things from our own kūpuna (elders). I believe that engaging in community service to meet our needs will create a stronger connection among all the people in the community and will help us to more deeply appreciate and understand our own culture and our relationship with nature.
SCHOOL SAFETY : SELF HARM AND THE DUTY OF CARE.
Working together to make a difference

**Topic Area:** Counsellor Education/ Teacher Education/ Health Education

**Presentation format:** Paper Session

**Description:** One of the greatest challenges in contemporary education is how to manage young people with serious mental health issues in mainstream schools. In 2009 legislation was introduced in NSW, Australia, which increased a school's legal obligation to actively manage student violent behaviour, which includes self-harm. This paper introduces a practical guide for school leaders on how to support students who self-harm and minimise the risk posed to themselves and others, within the context of a school setting.

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Jennifer is an Accredited Mental Health Social Worker with a Master of Education. She has 25 years of experience working in the areas of child and adolescent mental health, trauma and education. Formerly a Counsellor with the NSW State Coroner's Office, Jennifer now works as a Senior Counsellor/Consultant with Sydney Catholic Schools. Jennifer is the author of “School Safety - & the Duty of Care - Self Harm.” (2016 May publication)
ABSTRACT

In Australia, in 2009, the New South Wales Government introduced legislation that increased the obligation for schools to “**assess, manage and eliminate**” any risks posed by a student’s violent behaviour, to the health and safety of all members of the school community. Most school staff thought this meant dealing with acts of physical violence however it has become increasingly clear that the duty of care extends beyond this, to include psychological injury.

With 1 in 10 young Australians, between the ages of 4 -17 years, engaging in deliberate self harming behaviour, (1) there has been a need for schools to develop better practices to support and manage these students in mainstream educational facilities.

The purpose of this presentation is to help educators gain an understanding of why some students self harm and to introduce guidelines for school staff on how to intervene and support these students, while at the same time, execute their duty of care to provide a safe & supportive environment to all members of the school community.

Participants will be presented with the guidelines recently developed and introduced into Sydney Catholic Schools. The guidelines are informed by best practice standards in mental health care.

The importance of collaboration between school staff, parents and mental health professionals is emphasised.

Reference:

*The Mental Health of Children & Adolescents*

*2nd Aust Survey of Mental Health & Wellbeing. 2015: iii*
1. Title: Educating Globally: The Value of Engaging in Cyber-Classes for Adults with Learning Differences
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6. Abstract: This paper explores how distance learning can be a tool for more inclusive education for students with learning disabilities, specifically by providing increased opportunities for cross-cultural educational experiences for such students. The case study presented in this paper is a cross-cultural class (for which the author is one of the instructors) that uses Skype to connect post-secondary American students in the ICCS program at Maplebrook School and Korean students in the K-PACE program at Daegu University, both of which are programs for young adults who learn differently.
Submission ID #: 551

1. Linking it All Together: What Concept Maps Show about Students' Implicit Beliefs about Exceptionalities after Instruction
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Linking it All Together: What Concept Maps Show about Students' Implicit Beliefs about Exceptionalities after Instruction

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Background

According to the World Health Organization and World Bank (2011), about 15% live with a disability in the world today. The 2010 Census (Newsroom Archive United States Census Bureau, 2012), indicated that about 19% or one in five individuals in the United States has a disability. While many countries, including the United States, have enacted laws to ensure that individuals with disabilities can obtain an education, proper medical care, and a job, there is the ongoing issue of negative attitudes towards these people (Wilson & Scior, 2014), which can limit their potential and opportunities. These attitudes can be implicit, or unconsciously triggered, often without awareness or intent (Prestwich, Kenworthy, Wilson, & Kwan-tat, 2008) and as a result, can be difficult to alter. As noted in a study by Wilson and Scior (2015), “…negative attitudes, in the form of implicit attitudes, appear to prevail” (p. 14/19).

Previous research (e.g., Wilson & Scior, 2015) has studied implicit attitudes towards individuals with disabilities, comparing them with their explicit views. The researchers found that participants had slightly negative implicit attitudes towards people with disabilities in contrast to positive explicit views towards the same group of individuals. Wilson and Scior (2015) noted, “…explicit evaluations may be subject to consciously accessible knowledge being appraised and thus influencing reactions…” (p. 14/19). Therefore, if tenacious implicit beliefs and stereotypes are to be revealed and subsequently addressed, novel assessment approaches are needed.

One non-traditional assessment is a concept map, or the hierarchical arrangement of concepts connected by lines and words to show the relationships among them (Novak & Cañas, 2008; Stuart, 1985). Upon visual inspection, they resemble a flow chart lacking arrows (Wandersee, 1990). Concept maps are basically qualitative assessment tools that are not, in principle, designed to lead to a score however, as graphical representations of knowledge (Novak & Cañas, 2008), they have been used to successfully illustrate conceptual understanding. As noted by Edmondson (2000), “Concept maps may also prove to be useful for portraying learning that traditional methods of assessment have not captured effectively, such as experiential settings…” (p. 25).

Higher education is one place where implicit attitudes could be altered, especially in introductory courses such as Educational Psychology where a chapter on exceptionalities is routinely part of the content. While the traditional structure of introductory courses may preclude in-depth exploration about people with disabilities, these courses have the potential to alter students’ implicit attitudes if they can be identified. Unfortunately, students concerned about behaving in ‘socially acceptable ways’ may mask their opinions in class discussions. Test-
savvy students may conceal their real feelings when taking a multiple-choice exam. It is only with more novel, less content explicit assessments that these attitudes may be revealed.

Concept maps could provide a unique perspective on students’ knowledge of various topics where social desirability might cloud their perceptions. They could also be a useful means of assessing learning relative to concepts that may be more difficult to internalize for a variety of personal, social and developmental reasons. By contextualizing students’ understanding about exceptionalities, implicit views may better be revealed. Once they are discovered, these courses can conceivably alter those views when more innovative pedagogies are utilized (Grauerholz, 2001).

Purpose of the Study

Research is sparse on individuals’ attitudes towards persons with disabilities in a variety of settings (Bruder & Mogro-Wilson, 2016). Therefore, the purpose of this exploratory study was to use concept maps to reveal undergraduates’ conceptual understanding of exceptionalities after instruction in an introductory educational psychology course. While content of the entire course was incorporated into students’ concept maps, this study explored only students’ perceptions of individuals with disabilities. As a control, the less socially contentious topics of Behavioral Learning Theory and classroom management were used for comparison of content complexity, accuracy, and importance on the resulting concept maps.

Methodology

Participants and Materials

Students who were enrolled in an introductory level Educational Psychology course at one liberal arts institution in the northeastern United States participated in the study. An entry-level educational psychology text (Slavin, 2009) guided instruction in the course. A total of twelve chapters’ were covered each semester, roughly a chapter per week of instruction. In this text, the twelfth chapter involved exceptionalities intertwined with the broader topic of diversity. This was the final chapter covered in the course.

The concept maps were a final course project. Prior to making the concept maps, students read about the theory and practice of using them. During class, students completed a series of exercises that introduced the procedures for constructing concept maps. Both the readings and activities were adapted from instructional materials found on the website, (http://istudy.psu.edu/tutorials/conceptmaps/), (accessed on April 2, 2016). Once these introductory activities were completed, instruction was provided to the students on open-source software (Novak & Cañas, 2008). It was this software, found at (http://www.ihmce.us/cmaptools.php), that was used to construct and present students’ maps. Participants were then divided into teams of three to four for their construction of a concept map illustrating major course concepts.
Three groups’ maps were selected to illustrate the diversity of presentation in this study. These maps were selected because they demonstrated different areas (and degrees) of strength, confusion, and avoidance of the content, and each had different implications for assessing (and addressing) students’ implicit attitudes.

Analysis of Concept Maps

Previous researchers (e.g., Kinchin, Hay, & Adams, 2000) have used a qualitative approach to analyze concept maps. Kinchin et al. (2000) argued that solely using a quantitative analysis examining “valid links,” “…seems to contradict the constructivist philosophy underlying the use of concept maps by failing to recognize the significance of students’ perspectives” (p. 46). In the current study, seven main guidelines, a synthesis of ideas presented in Jonassen (2000) and a proposed set of criteria for evaluation on the website, (http://istudy.psu.edu/tutorials/conceptmaps/), accessed on April 2, 2016, that provided a framework for classification. The first four of these guidelines relate to the portrayal of the concepts themselves: accuracy, breadth, depth and importance. In the current study, accuracy was defined as the correct identification of the main or central idea(s). Breadth involved identifying causal relationships between concepts. As the number of concepts increases, breadth increases. Depth was demonstrated by including details and examples. As the amount of levels of concepts increase, depth increases. Importance was defined as the correct prioritization of a set of concepts, according to their relevance. This meant that concepts needed to be represented accurately in terms of their varying weight by the amount of space they encompassed on the map. Color could also be used to effectively differentiate superordinate from subordinate concepts.

The final three guidelines relate to the relationships, or links, between and among concepts: validity, precision, and specificity. Validity was defined as the accurate portrayal of directionality; students must show order in sequentially organized information. For example, if there is a cyclical relationship between concepts, it would need to be visually portrayed as such. Precision related to the ability to identify assumptions that underlie positions on the map, demonstrated by whether labels are accurate or not. Specificity correlated to the degree to which students were able to classify based upon common attributes, and therefore whether the linking words give enough information or not. This qualitative approach allowed for an examination of “invalid links” (Kinchin et al., 2000, p. 46), which could potentially reveal implicit beliefs about individuals with disabilities.

Results

Initial analysis of the concept maps showed either avoidance of the topic of exceptionalities or its connection to race/culture and socioeconomic status. The latter can be seen in the following concept map:
The developers of this map noted that Socioeconomic Status (SES) has a part in Culture and Identity. It was then indicated that Culture and Identity “affects” Students with Exceptionalities.” Interestingly, the developers noted that Socioeconomic Status “can lead to” Interventions. These interventions involved both Classroom Management and Early Childhood Programs, to which Early Intervention was connected. Early Intervention, in turn, was connected to Students with Exceptionalities.

Discussion and Implications

The conflation of exceptionalities with the broader topics of diversity and socioeconomic status (SES) was in sharp contrast to instruction, in which exceptionalities, race, and socioeconomic status (SES) were discussed repeatedly as separate concepts. Their collective association could be seen as part of an implicit theory (Bruning, Schraw, and Norby, 2011), about the relationship of intelligence, race, and wealth. This conflation of exceptionalities with race and culture, as well as socioeconomic status is disconcerting, especially given that previous research has found that implicit attitudes could predict individuals’ behaviors (Greenwald, Poehlman, Uhlmann, & Banaji (2009).

Future research should examine implicit beliefs further using concept maps and other novel assessments. A pre-post model may reveal whether attitudes are altered after instruction.
References


1. Title: Using Academic Notebooks in Doctoral Writing: An Investigation of Doctoral Students’ and Instructors’ Perceptions and Beliefs

2-5: Paper Authors, Affiliation, Address, and email are listed below:

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6. Abstract listed below:

**Abstract**

The purpose of this study was to examine the attitudes and perceptions of nine doctoral students’ and two instructors’ beliefs about their use of academic notebooks as a tool for improving academic writing. Academic notebooks may be a beneficial instructional tool if graduate students are gathering text models, are cognizant of instructors’ feedback, and are systematically applying the gathered information in his or her own writing. Typically, higher education students struggle with academic writing. By understanding doctoral students’ and professor’s attitudes and perceptions about the use of the academic notebook, educators may be able to better support graduate students with learning the nuances of academic language.

Six overarching themes emerged among both teachers and students, and the first letter of each theme formed the acronym ASPIRE: (a) academic club; (b) synthesis; (c) purpose; (d) intentionality; (e) reflection; and (f) efficacy/capacity. The researchers involved in this collective case study suggest that the use of academic notebooks may facilitate growth in academic writing and research skills by providing a tool for metacognitive reflection, scaffolded learning, and instructor and peer feedback.
After School Just Got Healthier

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BACKGROUND

The dramatic increase in the prevalence of childhood obesity has become a major national health priority. There is now a mounting body of evidence that multiple factors contribute in the development of childhood obesity. However, four primary behaviors seem to play a leading role: (1) lack of physical activity, (2) lack of fruit and vegetable consumption, (3) high sugar intake (primarily through sugar-sweetened beverages), and (4) television and video game usage. It is estimated that in the United States, more than 60 % of elementary aged children do not participate in after-school organized physical activity, and 47% do not frequently engage in free-time physical activity. The data for healthful eating is equally discouraging, with only 20% of children eating the daily recommended five servings of fruit and vegetables. Even more alarming are the statics for children in underserved communities. Many children, especially minority and economically disadvantaged children, lack environments that promote fitness and healthy eating, making it difficult for them to learn how to select healthy food choices and be physically active.
Students’ attitudes and beliefs about health issues are greatly influenced by the school setting. For this reason, it is imperative that childhood obesity prevention programs target the myriad of needs for students in underserved communities. Few studies to date have looked at efforts to promote positive attitudes, beliefs and behaviors about fitness and good nutrition in an after-school academic tutoring program.

The purpose of this research project was to investigate the effects of a coordinated effort to improve the attitudes, beliefs, and behaviors related to fruit and vegetable consumption and physical fitness on children in an already successful after-school literacy tutoring program. This project engaged elementary age students in a skills-based literacy intervention program, using children’s literature focused on the benefits of healthy eating and physical fitness. Hands-on learning activities and healthy snacks were provided during each literacy tutoring session. Additionally, these children—who report not owning books of their own—kept the book they read that day, thereby creating a home library of books to read over and over again, reinforcing the fitness and good nutrition content with family members.

Three conceptual and research-related principles guided the development of our project design. The first was related to the type of program offered to these children. Many of these children lack environments that promote fitness and healthy eating. As a result, a high percentage of them suffer from childhood obesity and other chronic diseases related to poor nutrition and lack of physical activity. The second perspective involved the children themselves. Because of their nomadic lifestyle and language barriers, they may not have had ample opportunity to become skillful readers, and therefore would benefit from a skills-based literacy tutoring program. The final area of
consideration was related to evidence that suggests that many children from low-income families have limited access to books, which results in lower reading achievement.

With this in mind, we purchased children’s literature recommended in the Healthy Reading for Kids: Food & Fitness Program. The books integrated well with our already successful afterschool literacy tutoring program. After each story, children had the opportunity to display and expand their understanding of the wellness learning through age appropriate activities in a small group setting.

METHODS:

Sixty-eight students in grades K-5, participating in an after-school literacy tutoring program that served a predominantly low SES minority student population, participated in the data collection. The students were surveyed at two points. A pre-survey was administered early each semester to measure student their attitudes, beliefs, and behaviors related to fruit and vegetable consumption and physical fitness, and the post-survey was administered late each semester to the same students. The pre-survey and post-survey scores for each student were analyzed. A paired two-sample t-test was conducted to determine if there was a significant increase in scores from the pre-survey to the post-survey for the fall 2015 and spring 2016 semesters.

RESULTS:

Our research documented a significant increase in: (1) positive attitudes and beliefs toward fruit consumption and vegetable consumption, and (2) positive attitudes and beliefs toward physical fitness. Although we did not find an increase in reported consumption of healthy foods or in the amount of time engaged in physical fitness
activities, we are optimistic that changes in attitudes will result in changes in behavior by the end of this project.
Bullies and Books: 
Read4Respect Bullying Prevention Project

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FOCUS OF THE PROJECT

The Read4Respect Bullying Prevention Project was an after-school service-learning project in a low SES elementary school. Fifty-seven students who were identified as struggling readers participated in a skills-based literacy tutoring program over the course of a school year. A paired two-sample t-test was used to determine if there was a significant increase in reading attitude scores from the pre-survey to the post-survey. Attitude scores increased for 13 of the 20 survey questions with increases found to be significant for three of the questions.

CONTEXT OF THE WORK

Given that sufficient print resources are available, the frequency in which a child reads is explained by two factors: success in acquiring reading skills and motivation to read. A child who enjoys reading will read more often and improve at it. Sight word
recognition, ability to decode unfamiliar words, reading fluency, vocabulary development, comprehension, and general knowledge improve with frequent reading. Unfortunately, poor readers often lack motivation to read. Furthermore, motivation is a significant predictor for the amount of reading practice which is the “preeminent predictor” of reading achievement.

Studies show that children from low-income families have restricted access to books at home and in their communities, and therefore, they do not read as often as children from families with access to books. Providing books for children from low-income families may produce reading gains comparable to those by children from middle-income families.

**PRACTICAL APPLICATION OF THE WORK/FINDINGS**

The design of the study was guided by three conceptual and research-related principles. The first was related to the nomadic lifestyle and language barriers of the children that may have limited their opportunities to become skillful readers. The second principle involved the dynamics of the school situation. Common threads throughout literature concerning children in similar situations include poverty, social isolation, rejection, school indifference, and peer victimization. The third principle was related to evidence that suggests that the limited access to books by children from low-income families may significantly contribute to low achievement in reading.

With these principles in mind, we implemented the Read4Respect Program developed by the Anti-Defamation League (ADL). This program engages students in lessons that promote empathy, respect, and appreciation of differences.
IMPLICATIONS FOR PRACTITIONERS, RESEARCHERS, AND COMMUNITY MEMBERS

An increase between pre-survey and post-survey scores was found for 13 of 20 questions related to reading attitude with a significant increase found for three of the questions. Students responded positively toward receiving a book as a present, starting a new book, and learning from a book.

The Read4Respect Bullying Prevention Project is the foundation for a continued collaboration between Fort Hays State University and the Hays Public School District in the development of a student culture of positive and peaceful conflict resolution.
Title: The Practical Physical Education Environment: Shifts in Knowledge Perspectives for Teacher Candidates through Innovative Learning Practices.

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Abstract

As a professor in teacher education, I wondered how teacher candidates (TCs) connected personal learning experiences and knowledge acquisition when involved in a practical learning environment. These environments produce little note taking and a great deal of practical experience. TCs are immersed in the “doing” and consider it “fun” within these practical environments. These classes are different because the theory/course content is embedded in the practical. At the end of the class the TCs would say the class was ‘great’ and I wondered what that really meant. (The TCs vary in knowledge with some students having a major or minor in PE; to those who have no experience teaching PE).

Sound pedagogy and instructional strategies have been researched within the field of physical education. There are many resources that outline these important pieces of practice that are paramount within any methods course in PE for TCs (Graham (2007); NASPE (2007); Seidentop (1991); Pangrazi & Gibbons (2009). For this innovation, important thematic criteria were selected from these resources to create a rubric that represented researched pedagogies that would align with our course work and these pedagogies became the framework for assessment.

The values that TCs place on their learning experiences at the university are clear from my discussions with them. They value practical experiences; however, often share that they experience little of the practical while learning to teach through their methods courses. Except for the realities of their internship, they struggle with professors expecting them to ‘imagine’ what reality looks and feels like. Hopper and Bell (2016) agree that teaching strategies are learned best through field experiences or in other practical environments related to PE pedagogy. Providing practical, learner-centered opportunities assists TCs in understanding practice more authentically and that was the focus of this course.

This innovation in teaching sheds light on their practical learning perspectives and furthers understanding of TC’s experiences relating to physical education specifically. The goal of this research was to gain an understanding of how TCs connect theoretical course content through the practical and build knowledge towards sound pedagogy.

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January 7, 2017
WHO IS MORE FREE?

Abstract

**Purpose:** While an abundance of school choice literature focuses on student achievement outcomes, little has been done to determine the mechanisms involved in producing such outcomes. We present a comparative analysis of private and public school principals using data from the School and Staffing Survey (SASS) 2011-2012. We add to the literature by examining the differences in private and public school principals’ abilities to influence important decisions at their schools.

**Research Design:** We use ordinal logistic regressions to study differences in self-reported decision-making ability of public and private school principals. We report marginal effects for two models: one that controls for principal background characteristics and one that does not.

**Findings:** We find that in comparison to principals in public schools, principals in private schools are more likely to report to have a major influence on six out of seven school-level activities. We conclude that private schooling may have a systematic advantage over public schooling since private school leadership exhibits more autonomy in influencing relevant decisions.

*Keywords:* school choice; school leadership; school management; School and Staffing Survey
WHO IS MORE FREE?

Introduction

“While the public school principal is bound most by red tape, the private school principal is bound most by his or her conscience.”

—John E. Chubb and Terry M. Moe, 1988, p. 1076

School choice has emerged as a key intervention in school reform globally. In fact, the United States President-Elect, Donald Trump, promised massive expansion of private school choice through a reallocation of $20 billion in federal funding in 2017. Evidence suggests that private schools slightly outperform public schools on improving student achievement within the US as well as internationally (Betts & Tang, 2011; Forster, 2016; Greene, 2005; Shakeel, Anderson, & Wolf, 2016; Tooley, 2005; Tooley, Bao, Dixon, & Merrifield, 2011). Most of the school choice studies focus on student achievement (West & Woessmann, 2010; Witte, 2001; Witte et al., 2014; Wolf et al., 2013). Out of the nineteen experimental studies of private school choice in the United States, the only negative findings for test scores were from the two studies of the Louisiana Scholarship Program (Abdulkadiroglu, Pathak, & Walters, 2015; Mills & Wolf, 2016).

Other studies have examined impacts on the long-term outcomes of students such as attainment (Booker et al., 2008; Zimmer, 2009; Cowen et al., 2013; Wolf et al., 2013) and criminal activity (Deming, 2011; Dobbie & Fryer, 2015; DeAngelis & Wolf, 2016). While this evidence is limited, the existing studies have found that access to school choice reduces criminal activity and teen pregnancy while increasing the likelihood of graduating from high school. Additionally, access to private school choice may increase performance in public schools through competitive effects (Egalite, 2013; Egalite, 2016; Figlio & Hart, 2014; Greene & Winters, 2003; Sandström & Bergström, 2005) and increase civic skills such as voter activity,
volunteering, charitable activity, and tolerance of others (Campbell, 2002; Bettinger & Slonim, 2006; Fleming, 2014; Fleming, Mitchell, & McNally, 2014).

Though many studies have examined whether private schools outperform public schools, few have looked at why there are differences in short and long-term student outcomes. Wolf and Hoople (2006) attempted to peer into the black box of the school choice reform through examination of the DC Opportunity Scholarship Program and found that the successful private schools allocated fewer resources to facilities and programs. Our study fits into the literature by examining a potential explanation for why school choice could have an advantage in producing slightly positive outcomes for students.

We examine the differences in the autonomy of school leaders, which may increase the likelihood that leaders can adapt to the changing needs of students and staff within their schools. Effective leadership, and an environment to support the ability to make effective decisions within a school, may be important for creating a high-quality educational experience for children (Rousmaniere, 2013). For example, Grissom, Loeb and Master (2013) find that principals that can spend time on things such as the school’s education curriculum can positively influence student achievement. Conversely, they find that principals that spend more time on activities such as simple classroom walkthroughs may have a negative impact on student growth. Additionally, Ouchi (2009) and Hess (2013) point out that student learning cannot be improved unless school leaders have control over important school-level activities such as curriculum and the budget.

In schooling, leaders that are free to influence important decisions may be better able to change their approach to curriculum, instruction, or professional development practices if their leaders notice inefficiencies (Tekleselassie & Villarreal III, 2011). However, schools with
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constrained leadership will be less likely to capitalize on the benefits associated with needed reform strategies. Branch, Hanushek and Rivkin (2013) point out that highly effective principals increase student learning by two to seven months within a single school year. Chubb and Moe (1988, p. 1065) found that the public and private schools were “distinctively different in environment and organization” and that private school principals had more teaching experience than public school principals. They also theorized that greater autonomy would exist in private schools with respect to their structure, goals and school operations. However, Chubb and Moe did not empirically test this specific theory.

We provide the first study to empirically test the hypothesis that the private schooling sector allows for more leadership autonomy by using nationally representative survey data of principals in the United States for the 2011-12 school year from the School and Staffing Survey. We compare the reported differences between public and private school principals’ influence on decision-making activities within their schools. Since we simply want to make overall comparisons between the two types of institutions, we do not examine subcategories of private schools and public schools.

Theory

In private schools, families have lower transaction costs associated with opting to leave the school, making the school operators more prone to the threat of a shutdown condition (Friedman, 1955; West, 1981). However, loss for a private school is not only monetary in the short-run; it can also cause several chain reactions such as damaged brand name, threat to teachers’ jobs, and threat of change in the perception of future clients. Since families are more able to leave the private school if they are dissatisfied, it is more necessary for the school leader to be able to make changes to influence customer satisfaction levels (Smith, 1776; West, 1997).
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If a private school principal is able to make the decisions necessary to adapt to the signals transmitted by his or her clients, the quality of their schooling should increase. Since the public school often has a monopoly on public funding, and their customers are assigned residentially, their leaders do not need to adapt to dissatisfaction as quickly (Hoxby, 2007; Peterson, 1998; Peterson & Hassel, 1998). In other words, the transaction costs for a customer leaving a public school are much higher, especially since it would require Tiebout choice (Tiebout, 1956) or paying for a private school out of pocket (Friedman & Friedman, 1990; Merrifield, 2008).

In fact, since the transaction costs are typically much higher in order to exit a public school, large amounts of principal autonomy may not be desirable in that sector (Neal, 2002). If a malicious, or simply ineffective, principal becomes the leader of the school, we may not want them making school-level decisions that could negatively affect students (Hayek, 2011). If the ineffective principal is free to make bad decisions, many students may be harmed without much of an exit option, especially if they come from a disadvantaged family (Gaventa, 1982; Lerner, 1995). Since this scenario is potentially more likely and costly in public institutions, the public sector may be more likely to be set up in a way to limit the possibility of this negative event occurring. As a result, an official from the central office may be more likely to control the important school-level decisions.

The private school principal is likely to have more influence in decision-making since the private schools have fewer political constraints and enjoy more autonomy in selection of students and daily administration than public schools (Firestone & Shipps, 2005; Shipps & White, 2009; White, 2006). Since private school principal are at least less likely to feel the pressures of political constraints, they may feel more confident and able to influence school-level activities. Private school leaders may be more likely to establish an environment of similar students
working towards a uniform mission through selective-admissions and an improved match between school goals and student interests.

Additionally, private school principals may face a stronger dismissal threat than their public school counterparts. If school leaders have fewer costs associated with dismissing their principals, they will be more likely to be able to hold them accountable for their actions. If a private school principal can be dismissed easily, they will have a stronger incentive to make effective decisions. On the other hand, if a school principal is protected through unionization or otherwise, they will be more likely to make ineffective decisions without the same level of accountability (Chubb & Moe, 1986; Painter, 2000; Tucker, 1997; Weisburg et al., 2009). Since it is more difficult to fire a principal in the public sector, we expect that a centralized official will reduce their autonomy in order to limit negative outcomes for students. Furthermore, since school principals in the public sector are more likely to have an incentive to maximize budgets, we expect that central offices will not grant them much autonomy over finance decisions (Niskanen, 1971).

Data

The data for the public and private school principals comes from the School and Staffing Survey (SASS) 2011-2012 questionnaire. SASS was developed by the National Center for Education Statistics (NCES) and it has been administered seven times since 1987-88 to 2011-2012. Table 1 lists the question categories and what they measure\(^1\). The public school principal data file contained 7,510 records while the private school principal data file contained 1,720 records. There were some additional questions for public school principals, but in this paper, we compare only the common questions related to decision making.

\(^1\) For more information, see http://nces.ed.gov/surveys/sass/pdf/1112/SASS2A.pdf (for public school principals) and http://nces.ed.gov/surveys/sass/pdf/1112/SASS2B.pdf (for private school principals).
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Our dependent variables come from questions 16-A through 16-G on decision-making in SASS 2011-2012. This section asks the principals to rate their ability to influence seven school related activities on a four-item Likert scale (no influence, minor influence, moderate influence and major influence) and it includes a *not applicable* option for each activity (Table 1).

[Table 1 about here]

We utilize questions from the survey that relate to principal’s demographics, academic and professional background for summary statistics. Tables 2A and 2B show the population weighted summary statistics expressed as percentages for the principals in public and private schools. Overall, private school principals report more years of principal experience but lower education levels in comparison to the public school principals. This is consistent with the findings of Hill et al. (2016). The proportion of private school principals reporting greater than 10 years of experience as a principal or school head is almost double that of public school principals. The proportion of private school principals involved in teaching in addition to their task as a principal or school head is also about twice that for public school principals.

A higher proportion of public school principals report having previous experience as a department head, assistant principal or program director and participation in a school training or development program in comparison to their private counterparts. The proportion of public school principals holding a school administration license is about twice as large as private school principals. Almost all public school principals earned a MA or higher degree while only 76% of the private school principals report so. The racial composition of principals is largely white in both the sectors (86% in public schools and 90% in private schools; this excludes mixed race, so it is a lower bound). Lastly, private schools have a larger share of females in their leadership in comparison to the public schools.
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[Table 2A about here]

[Table 2B about here]

Methods

Since the survey responses related to decision-making are ordinal and have four categories (from “No Influence” to “Major Influence”), the analytic technique we employ is an ordered logistic regression (Borooah, 2002; Cohen, Cohen, West, & Aiken, 2003) of the form:

\[ DM_i = \alpha_0 + \alpha_1 Private_i + \mu_i \]

The dependent variable of interest, \( DM \), is the reported decision-making ability of a given principal \( i \), for the following school-level activities: setting student performance standards, establishing curriculum, determining teacher professional development content, evaluating teachers, hiring new full-time teachers, setting discipline policy and deciding how the budget will be spent. This variable takes the value 1 for the least influence and value 4 for the highest influence\(^2\). \textit{Private} is a dummy variable of value 1 if the principal is in a private school, and 0 if the principal is in a public school. The coefficient of interest, \( \alpha_1 \), measures the mean difference of the decision-making influence reported by private school principals relative to public school principals. The constant, \( \alpha_0 \), measures the average principal decision-making influence reported by public school principals.

Since we want to examine the differences between principals based solely on the type of institution they are in, this initial model does not control for any principal-level differences. Controlling for the differences in types of principals hired by the different institutions would control away the institution itself and therefore bias our effect estimates downward. In order to construct a conservative estimate of the association between institution-type and decision-

\(^2\) Since the dependent variable is ordinal, we report average marginal effects from the ordered logistic regression. We do not report the result for the fifth category of the dependent variable, not applicable, since it is not systematically related to the decision-making ability of the principal.
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making freedom, we construct the following model that also includes principal characteristics as controls:

\[ DM_i = \alpha_0 + \alpha_1 Private_i + \alpha_2 PC_i + \mu_i \]

The variable \( PC \) is a vector of controls for the following principal characteristics: race, gender, education level, years of experience as a principal or school head, years of experience as a teacher in elementary or secondary school, any experience as a department head, any experience as an assistant principal, participation in professional development or training programs, management experience outside of education, and whether the principle holds a license in school administration. This second model includes principal-level controls in order to examine if the effects are significant after accounting for differences in the types of principals hired across the two institutions. We choose not to include school-level controls since they are an essential result of our independent variable of interest. The school-level characteristics are inherent sectoral differences. For example, private schools are typically smaller for market niches while public schools are typically larger in order to take advantage of alleged economies of scale.

The restricted use data provided by the NCES are imputed and adjusted for non-response. Based on the stratified probability proportionate to size (PPS) sampling strategy used by NCES in the SASS, we use the balance repeated replication (BRR) bootstrap methodology\(^3\) so that the results reflect the true population values and not just the sampled units. This methodology does not change our final estimates, but rather corrects the formula for the calculation of the standard errors.

Results

\(^3\) Details can be found in the User’s Manual for the 2011–12 Schools and Staffing Survey.
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We now present the results for our models with and without controls below. The dependent variables (Tables 3 A-G) refer to the variables on decision-making (A-G) as in Table 1. The change of sign in the coefficient from column 1 through 4 and column 5 through 8 is indicative of the ordered logistic regression model working in the expected way. Columns 1 through 4 report the results for the model without controls and columns 5 through 8 do so for the model with controls. We focus on columns 4 and 8 where the principal chose the option of ‘Major Influence’ on that activity. Results from column 4 shows that private school principals have a higher likelihood of reporting to have a major influence in setting student performance standards, establishing curriculum at the school and determining teacher professional development program content.

These results indicate that private school principals perceive to have more autonomy in the decision-making activities at their schools. However, private school principals have a 6.4 percentage point lower likelihood of reporting to have a major influence on the evaluation of the teachers in their school. It could be that private school principals are less likely to have mandatory evaluations of their teachers. The results are not statistically significant for the last three outcome measures, though they are all positive. This model simply examines overall differences of leadership autonomy across the two types of institutions. Though data indicate that private school principals have more leadership autonomy, it could be that private institutions choose to hire principals that are more experienced and therefore more in control. It could be that the institutions foster the same environment for their leaders, but that the leaders are just different. To minimize selection bias, we examine results with many principal-level controls as well.
When controlling for principal differences across sectors, we find robust evidence that private school principals exercise significantly more influence over decision-making activities. In addition to the previous model, results in column 8 show that the private school principals also have a higher likelihood of reporting to have a major influence on hiring teachers and setting discipline policies. The coefficients in this model all increase in magnitude except for the evaluation of teachers. This coefficient drops to about half the size, indicating that private schools principals have a 3.4 percentage point lower likelihood of having a major influence on the evaluation of teachers. Since private school principals have a 5-percentage point higher likelihood of having a major influence over the hiring of teachers, they may not need to provide as much direct feedback. In addition, since private school principals have a 14-percentage point higher likelihood of having a major influence on the content of their teacher professional development programs, they may provide feedback through that channel instead. Notably, private school principals have a 26-percentage point higher likelihood of reporting that they have a major influence on establishing their school’s curriculum and a 15-percentage point higher likelihood of reporting that they have a major influence on their students’ performance standards. This is especially important for the ability of the principal to positively impact student achievement.

[Tables 3 A-G about here]

Our results imply that either principals with better decision-making characteristics self-select into private schools or that private-school leadership does a better job in identifying and hiring principals with better leadership characteristics. It could also be that the smaller regulatory burden found in private schools grants the principals the ability to exercise more influence related to school activities in comparison to the public school principals. To explore this further,
we examine the coefficients on the control variables for the case of reporting major influence as a principal or school head on decisions concerning school activities in Table 4.

[Table 4 about here]

The coefficient on the principal’s previous experience as a department head is significant and positive in all cases except for the case of teacher evaluation, where it is not statistically different from zero. Hence, previous leadership experience has a systematic positive relationship with the principal’s ability to have actual influence on school related activities. However, the presence of negative coefficients for previous principal experience, relative to no previous experience, is surprising. Since the negative estimates are smaller in magnitude as experience level increases, it may be that the principals that stay in the field for longer periods of time are the ones that have not become discouraged enough to leave the field. This appears to be an area for future research.

Having a master’s or higher degree seems to be a positive principal characteristic. It could be that education itself improves decision-making ability or that people that choose to pursue more education are also more motivated and confident. The coefficient on gender (being male) is negative throughout and statistically significant for four of the seven activities. Females seem to have systematic advantages over males in their influence over school-related activities. Since about three-fourths of all elementary and secondary-level teachers are female, female principals may be more able to have a strong connection with their employees (Goldring et al., 2013). Minority principals have a lower likelihood of reporting that they have an influence over hiring teachers and setting discipline policy, but a higher likelihood of reporting that they have an influence over student performance standards and curriculum.

Conclusion and Policy Implications
The principals in both sectors seem to significantly differ in decision-making abilities when it comes to their influence on school-level activities. The private school principals may have an advantage over their public school counterparts by having significantly more influence on almost all the school related activities. Principal characteristics, like previous experience as a department head and having a MA or higher degree, play a positive role in their ability to exercise higher influence on school activities. Nevertheless, the private school sector may be able to learn from the public school sector in evaluating teachers. Female principals seem to have a systematic advantage over their male counterparts in reporting more decision-making influence related to school activities and the relation is statistically significant for most of the categories.

Our findings mainly accord with Chubb and Moe (1988). They reasoned that control variables are endogenous in the institutional perspective on the organization of schools. However, we differentiate between controls related to principal characteristics and controls related to the school-level. We add controls for principal characteristics to our model that show that previous academic leadership experience as a department head and educational attainment contribute positively to the principal’s ability to have a major influence related to school activities.

In terms of policy implications, it seems that private school principals seem to outperform the public school principals on every aspect of decision-making ability except the evaluation of teachers. These findings may point towards the need of training in evaluation activities for the private sector. However, it could mean that the private school sector has a lower need for direct teacher feedback since they have more autonomy in hiring decisions and more involvement in the schools, as Chubb and Moe (1988) find. This may also reflect the emphasis that recent Race to the Top related policy changes have imposed on traditional public schools (Maranto et al.,
2016). Ouchi (2009) has emphasized the importance of principal autonomy and argued that principals know what happens at the school-level while central office employees do not. Perhaps, the relatively short tenure but greater credentialing of public school principals, as well as larger school size may suggest that they are climbers; that is, they see the principal position as a stepping-stone to the superintendence and focus on pleasing superiors rather than serving kids (Downs, 1967; Maranto et al., 2016). Cheng (2015) finds that schools where principals have more autonomy over personnel have greater mission coherence, though his sample only includes public schools.

Since we have relied on self-reported measures in school surveys, the results are prone to social desirability bias as well as reference group bias (Dobbie & Fryer, 2015; West et al., 2015). Although SASS is a nationally representative sample and stable results over time can have good external validity, future studies should utilize other measures like value-added measures related to school’s graduation rates and teacher turnover to study principal’s leadership qualities.

References
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Mills, J. N., & Wolf, P. J. (2016). The Effects of the Louisiana Scholarship Program on Student Achievement after Two Years. Available at SSRN 2738805.


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Table 1: School related activities over which the principal has actual influence

<table>
<thead>
<tr>
<th>Category</th>
<th>School related activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Setting performance standards for students of this school</td>
</tr>
<tr>
<td>B</td>
<td>Establishing curriculum at this school</td>
</tr>
<tr>
<td>C</td>
<td>Determining the content of in-service professional development programs for teachers of this school</td>
</tr>
<tr>
<td>D</td>
<td>Evaluating teachers of this school</td>
</tr>
<tr>
<td>E</td>
<td>Hiring new full-time teachers of this school</td>
</tr>
<tr>
<td>F</td>
<td>Setting discipline policy at this school</td>
</tr>
<tr>
<td>G</td>
<td>Deciding how your school budget will be spent</td>
</tr>
</tbody>
</table>
### Table 2. A. Summary statistics for principal characteristics

<table>
<thead>
<tr>
<th>Measure</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years principal or school head at this or any school prior to this year</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>no experience</td>
<td>8.32</td>
<td>8.78</td>
</tr>
<tr>
<td>low experience 1-3</td>
<td>24.55</td>
<td>18.82</td>
</tr>
<tr>
<td>medium experience 4-10</td>
<td>43.79</td>
<td>30.97</td>
</tr>
<tr>
<td>high experience 10+</td>
<td>23.34</td>
<td>41.43</td>
</tr>
<tr>
<td><strong>Years principal or school head at this school prior to this year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>no experience</td>
<td>16.46</td>
<td>14.52</td>
</tr>
<tr>
<td>low experience 1-3</td>
<td>38.83</td>
<td>27.62</td>
</tr>
<tr>
<td>medium experience 4-10</td>
<td>36.07</td>
<td>32.92</td>
</tr>
<tr>
<td>high experience 10+</td>
<td>8.64</td>
<td>24.94</td>
</tr>
<tr>
<td><strong>Years of elementary or secondary teaching before becoming principal or school head</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>no experience</td>
<td>1.70</td>
<td>18.51</td>
</tr>
<tr>
<td>low experience 1-3</td>
<td>2.79</td>
<td>7.99</td>
</tr>
<tr>
<td>medium experience 4-10</td>
<td>47.34</td>
<td>32.79</td>
</tr>
<tr>
<td>high experience 10+</td>
<td>48.16</td>
<td>40.71</td>
</tr>
<tr>
<td><strong>Years of elementary or secondary teaching since becoming principal or school head</strong></td>
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<td></td>
</tr>
<tr>
<td>no experience</td>
<td>90.41</td>
<td>49.69</td>
</tr>
<tr>
<td>low experience 1-3</td>
<td>5.42</td>
<td>21.87</td>
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<tr>
<td>medium experience 4-10</td>
<td>3.30</td>
<td>15.87</td>
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<tr>
<td>high experience 10+</td>
<td>0.87</td>
<td>12.56</td>
</tr>
<tr>
<td><strong>Currently teaching at school</strong></td>
<td>37.37</td>
<td>71.89</td>
</tr>
</tbody>
</table>

*Note: Summary statistics presented using population weighted percentages for each italicized category. Number of public schools principal surveys = 7,510 and number of private school principal surveys = 1,720. Italicized measures with * are used as controls in regressions.*
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Table 2. B. Summary statistics for principal characteristics

<table>
<thead>
<tr>
<th>Measure</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to becoming a principal of school head</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked as department head*</td>
<td>40.36</td>
<td>35.33</td>
</tr>
<tr>
<td>Worked as an assistant principal or program director*</td>
<td>73.85</td>
<td>43.82</td>
</tr>
<tr>
<td>Participated in school training or development program*</td>
<td>55.34</td>
<td>31.41</td>
</tr>
<tr>
<td>Previous management experience outside education*</td>
<td>40.28</td>
<td>46.43</td>
</tr>
<tr>
<td>Currently holding license in school administration*</td>
<td>95.99</td>
<td>43.36</td>
</tr>
<tr>
<td>Having a bachelor’s degree</td>
<td>99.94</td>
<td>88.47</td>
</tr>
<tr>
<td>Bachelor degree awarded by a university’s department or college of education</td>
<td>81.93</td>
<td>67.78</td>
</tr>
<tr>
<td>Having a master’s degree</td>
<td>97.61</td>
<td>76.34</td>
</tr>
<tr>
<td>Master’s degree awarded by a university’s department or college of education</td>
<td>97.36</td>
<td>85.38</td>
</tr>
<tr>
<td>Earned a MA and higher degree*</td>
<td>97.82</td>
<td>68.96</td>
</tr>
<tr>
<td>Participated in any professional development activity related to principal or school head in last 12 months*</td>
<td>99.32</td>
<td>89.56</td>
</tr>
<tr>
<td>Race (white)*</td>
<td>86.36</td>
<td>90.19</td>
</tr>
<tr>
<td>Gender (male)*</td>
<td>48.38</td>
<td>44.64</td>
</tr>
</tbody>
</table>

Note: Summary statistics presented using population weighted percentages for each category. Number of public schools principal surveys = 7,510 and number of private school principal surveys = 1,720. Measures with * are used as controls in regressions. Race summarized above does not include mixed race.
Table 3. A. Setting performance standards for students of this school

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Private school principal</td>
<td>-0.008***</td>
<td>-0.015***</td>
<td>-0.050***</td>
<td>0.072***</td>
<td>-0.016***</td>
<td>-0.031***</td>
<td>-0.102***</td>
<td>0.146***</td>
</tr>
<tr>
<td>Controls included</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
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<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
</tr>
</tbody>
</table>

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. B. Establishing curriculum at this school

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Private school principal</td>
<td>-0.039***</td>
<td>-0.112***</td>
<td>-0.110***</td>
<td>0.247***</td>
<td>-0.042***</td>
<td>-0.118***</td>
<td>-0.114***</td>
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<td>Controls included</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tr>
<tr>
<td>Observations</td>
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<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
</tr>
</tbody>
</table>

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. C. Determining the content of in-service professional development programs for teachers of this school

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private school principal</td>
<td>-0.008***</td>
<td>-0.029***</td>
<td>-0.100***</td>
<td>0.126***</td>
<td>-0.008***</td>
<td>-0.032***</td>
<td>-0.112***</td>
<td>0.141***</td>
</tr>
<tr>
<td>Controls included</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
</tr>
</tbody>
</table>

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.
**WHO IS MORE FREE? A COMPARISON OF THE DECISION-MAKING**

**Table 3. D. Evaluating teachers of this school**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private school principal</td>
<td>0.008***</td>
<td>0.009***</td>
<td>0.062***</td>
<td><strong>-0.064</strong>*</td>
<td>0.005***</td>
<td>0.005***</td>
<td>0.033***</td>
</tr>
<tr>
<td>Controls included</td>
<td>(0.003)</td>
<td>(0.002)</td>
<td>(0.008)</td>
<td>(0.009)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.009)</td>
</tr>
<tr>
<td>Observations</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
</tr>
</tbody>
</table>

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**Table 3. E. Hiring new full-time teachers of this school**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private school principal</td>
<td>-0.002</td>
<td>-0.005</td>
<td>-0.014</td>
<td><strong>0.019</strong></td>
<td>-0.006***</td>
<td>-0.014***</td>
<td>-0.036***</td>
</tr>
<tr>
<td>Controls included</td>
<td>(0.002)</td>
<td>(0.004)</td>
<td>(0.010)</td>
<td>(0.014)</td>
<td>(0.002)</td>
<td>(0.004)</td>
<td>(0.009)</td>
</tr>
<tr>
<td>Observations</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
</tr>
</tbody>
</table>

*Note:* Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

**Table 3. F. Setting discipline policy at this school**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private school principal</td>
<td>-0.001</td>
<td>-0.002</td>
<td>-0.016</td>
<td><strong>0.018</strong></td>
<td>-0.002***</td>
<td>-0.008***</td>
<td>-0.052***</td>
</tr>
<tr>
<td>Controls included</td>
<td>(0.000)</td>
<td>(0.002)</td>
<td>(0.012)</td>
<td>(0.014)</td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Observations</td>
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<td>9,230</td>
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</tbody>
</table>

*Note:* Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.
Table 3. G. Deciding how your school budget will be spent

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private school principal</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.001</td>
<td><strong>0.001</strong></td>
<td>-0.003**</td>
<td>-0.016**</td>
<td>-0.031**</td>
<td><strong>0.049</strong></td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.006)</td>
<td>(0.011)</td>
<td>(0.017)</td>
<td>(0.002)</td>
<td>(0.007)</td>
<td>(0.013)</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Controls included</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
</tr>
</tbody>
</table>

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.
Table 4. Major influence as a principal or school head on decisions concerning school activities as reported in tables 3A-3G.

<table>
<thead>
<tr>
<th></th>
<th>Performance Standards</th>
<th>Establishing Curriculum</th>
<th>Professional Development</th>
<th>Teacher Evaluation</th>
<th>Hiring Teachers</th>
<th>Discipline Policy</th>
<th>Budget Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private school principal</strong></td>
<td><strong>0.146</strong>*</td>
<td><strong>0.259</strong>*</td>
<td><strong>0.141</strong>*</td>
<td><strong>-0.034</strong>*</td>
<td><strong>0.050</strong>*</td>
<td><strong>0.060</strong>*</td>
<td><strong>0.049</strong>*</td>
</tr>
<tr>
<td></td>
<td>(0.017)</td>
<td>(0.018)</td>
<td>(0.017)</td>
<td>(0.009)</td>
<td>(0.014)</td>
<td>(0.017)</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Low principal experience</td>
<td>-0.063**</td>
<td>-0.051**</td>
<td>0.036</td>
<td>-0.000</td>
<td>0.014</td>
<td>-0.086***</td>
<td>-0.097***</td>
</tr>
<tr>
<td></td>
<td>(0.025)</td>
<td>(0.023)</td>
<td>(0.029)</td>
<td>(0.016)</td>
<td>(0.022)</td>
<td>(0.026)</td>
<td>(0.023)</td>
</tr>
<tr>
<td>Medium principal experience</td>
<td>-0.057***</td>
<td>-0.026</td>
<td>0.013</td>
<td>-0.012</td>
<td>-0.045***</td>
<td>-0.044***</td>
<td>-0.066***</td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
<td>(0.019)</td>
<td>(0.017)</td>
<td>(0.008)</td>
<td>(0.014)</td>
<td>(0.019)</td>
<td>(0.019)</td>
</tr>
<tr>
<td>High principal experience</td>
<td>-0.037**</td>
<td>-0.006</td>
<td>0.031*</td>
<td>-0.000</td>
<td>-0.020</td>
<td>-0.022</td>
<td>-0.034**</td>
</tr>
<tr>
<td></td>
<td>(0.017)</td>
<td>(0.016)</td>
<td>(0.016)</td>
<td>(0.006)</td>
<td>(0.012)</td>
<td>(0.015)</td>
<td>(0.016)</td>
</tr>
<tr>
<td>Low teaching experience</td>
<td>-0.045</td>
<td>-0.058</td>
<td>0.069</td>
<td>-0.032**</td>
<td>-0.054*</td>
<td>-0.050*</td>
<td>0.031</td>
</tr>
<tr>
<td></td>
<td>(0.037)</td>
<td>(0.043)</td>
<td>(0.076)</td>
<td>(0.015)</td>
<td>(0.029)</td>
<td>(0.028)</td>
<td>(0.043)</td>
</tr>
<tr>
<td>Medium teaching experience</td>
<td>0.041</td>
<td>-0.028</td>
<td>-0.027</td>
<td>-0.017</td>
<td>-0.016</td>
<td>0.019</td>
<td>-0.017</td>
</tr>
<tr>
<td></td>
<td>(0.035)</td>
<td>(0.045)</td>
<td>(0.040)</td>
<td>(0.014)</td>
<td>(0.022)</td>
<td>(0.033)</td>
<td>(0.036)</td>
</tr>
<tr>
<td>High teaching experience</td>
<td>0.023*</td>
<td>-0.006</td>
<td>0.025**</td>
<td>0.010*</td>
<td>0.002</td>
<td>0.005</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.012)</td>
<td>(0.011)</td>
<td>(0.006)</td>
<td>(0.010)</td>
<td>(0.012)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>Department head</td>
<td>0.039***</td>
<td>0.061***</td>
<td>0.042***</td>
<td>0.002</td>
<td>0.030***</td>
<td>0.023*</td>
<td>0.038**</td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.013)</td>
<td>(0.012)</td>
<td>(0.005)</td>
<td>(0.011)</td>
<td>(0.013)</td>
<td>(0.015)</td>
</tr>
<tr>
<td>Assistant principal/ program director</td>
<td>-0.022</td>
<td>-0.060***</td>
<td>0.005</td>
<td>-0.007</td>
<td>0.006</td>
<td>-0.030**</td>
<td>0.044***</td>
</tr>
<tr>
<td></td>
<td>(0.014)</td>
<td>(0.013)</td>
<td>(0.013)</td>
<td>(0.006)</td>
<td>(0.012)</td>
<td>(0.014)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>School training/ development</td>
<td>0.046***</td>
<td>0.006</td>
<td>0.019*</td>
<td>0.006</td>
<td>-0.007</td>
<td>0.016</td>
<td>0.020*</td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.014)</td>
<td>(0.011)</td>
<td>(0.005)</td>
<td>(0.010)</td>
<td>(0.010)</td>
<td>(0.012)</td>
</tr>
<tr>
<td>License in school administration</td>
<td>0.038*</td>
<td>0.010</td>
<td>0.024</td>
<td>0.031***</td>
<td>0.010</td>
<td>0.039**</td>
<td>0.022</td>
</tr>
<tr>
<td></td>
<td>(0.022)</td>
<td>(0.023)</td>
<td>(0.022)</td>
<td>(0.009)</td>
<td>(0.014)</td>
<td>(0.019)</td>
<td>(0.031)</td>
</tr>
<tr>
<td>Management experience</td>
<td>0.006</td>
<td>0.018</td>
<td>-0.023*</td>
<td>0.002</td>
<td>0.001</td>
<td>0.017</td>
<td>-0.009</td>
</tr>
<tr>
<td></td>
<td>(0.014)</td>
<td>(0.014)</td>
<td>(0.014)</td>
<td>(0.007)</td>
<td>(0.011)</td>
<td>(0.012)</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Master’s degree or higher</td>
<td>0.068**</td>
<td>-0.011</td>
<td>-0.021</td>
<td>0.004</td>
<td>0.042**</td>
<td>0.052*</td>
<td>0.075**</td>
</tr>
<tr>
<td></td>
<td>(0.030)</td>
<td>(0.028)</td>
<td>(0.048)</td>
<td>(0.011)</td>
<td>(0.020)</td>
<td>(0.027)</td>
<td>(0.033)</td>
</tr>
<tr>
<td>Participation in professional development</td>
<td>0.155***</td>
<td>0.146**</td>
<td>0.037</td>
<td>0.017</td>
<td>0.062</td>
<td>0.055</td>
<td>0.073</td>
</tr>
<tr>
<td></td>
<td>(0.046)</td>
<td>(0.060)</td>
<td>(0.126)</td>
<td>(0.019)</td>
<td>(0.055)</td>
<td>(0.035)</td>
<td>(0.062)</td>
</tr>
<tr>
<td>White</td>
<td>-0.045**</td>
<td>-0.060***</td>
<td>0.013</td>
<td>0.005</td>
<td>0.059***</td>
<td>0.064***</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>(0.019)</td>
<td>(0.021)</td>
<td>(0.017)</td>
<td>(0.008)</td>
<td>(0.012)</td>
<td>(0.015)</td>
<td>(0.019)</td>
</tr>
<tr>
<td>Male</td>
<td>-0.023</td>
<td>-0.005</td>
<td>-0.047***</td>
<td>-0.022***</td>
<td>-0.009</td>
<td>-0.022**</td>
<td>-0.047***</td>
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</tbody>
</table>

29
WHO IS MORE FREE? A COMPARISON OF THE DECISION-MAKING

<table>
<thead>
<tr>
<th>Observations</th>
<th>(0.015)</th>
<th>(0.014)</th>
<th>(0.014)</th>
<th>(0.006)</th>
<th>(0.011)</th>
<th>(0.011)</th>
<th>(0.013)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
<td>9,230</td>
</tr>
</tbody>
</table>

*Note:* Table reports average marginal effects estimated after running ordered logit models. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1. Table 2 A. and 2 B. provide details on the control variables marked with *
A Case Study of Effects of a Short-term Study Abroad Program on Japanese University Students

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A Case Study of Effects of a Short-term Study Abroad Program on Japanese University Students

OMOTEDANI, Junko (Kobe Gakuin University)
NISHINA, Yasunori (Kobe Gakuin University)
MORISHITA, Miwa (Kobe Gakuin University)

Abstract
This paper attempts to identify factors in student cultural and learning experiences through questionnaire analysis conducted on 16 university students who participated in a month-long Study Abroad (hereafter, SA) program in New Zealand after completing their first year of study. As participants in such programs are usually exposed to all-English environments both in and out of the classroom, they are expected to have opportunities for cross-cultural experiences and to improve their English communication skills as well as to enhance their English proficiency. However, such an ideal environment alone does not automatically ensure positive effects. The results of the questionnaire analysis indicate the effectiveness of this SA program on the enhancement of cultural awareness and the improvement in their English communication skills. Nevertheless, regarding the English proficiency such as reading academic papers and authentic materials, the results show the statistically significant differences between two groups. The group which expressed more positive effects on the improvement in the above mentioned English proficiency has a higher pre-SA TOEFL ITP© score compared to the other group. Especially, the listening score is significantly different between the groups. These suggest that the factors for a successful SA program lie not only in a program itself but also in a preparation stage before the SA program. Therefore, this paper scrutinizes the factors leading to success in a SA program and reports on both positive and negative aspects as basic data for constructing effective SA programs in the future.

Keywords: study abroad program, questionnaire survey, non-parametric test
Introduction

In recent years, and in the present, Japan has been facing urgent need to develop global human resources. As an attempt to meet the challenge, many universities in Japan have modified their curriculums and/or established new departments/faculties which have required SA programs. Although such SA programs; all the students in the faculty are required to study abroad, are claimed as advantages of the newly established curriculums or departments, it is hard to deny that those required SA programs are still in their pilot stages.

In this paper, we provide our findings based on a questionnaire survey on participants of a month-long elective SA program, which was conducted prior to the required SA program. The survey sheds light on what participants actually learned, experienced, and felt specifically. This attempt is to offer basic data for effective and successful SA programs in the future.

Literature review

Trends in Japanese citizens studying abroad and international students in Japan

The Ministry of Education, Culture, Sports, Science and Technology in Japan released the 2012 statistics on Japanese citizens studying abroad. The countries with the largest number of citizens studying abroad were the People’s Republic of China (21,126; up by 3,165 on the previous year), the United States of America (19,568; down 398 from the previous year), and the United Kingdom (3,633; down 72 from the previous year). This indicates the trends in declining popularity of English speaking countries as study abroad destinations. However, with regard to Japanese university and college students studying abroad, the results are different.

As Table 1 shows, according to the Japan Student Services Organization (JASSO), the top four countries with the largest number of Japanese university and college students studying abroad were the United States of America (16,794; up 1,372 from the previous year), Canada (6,614; up 281 from the previous year), the United Kingdom (6,516; up 878 from the previous year), and Australia (5,641; up 624 from the previous year). The number of students studying abroad in the Republic of Korea, the People’s Republic of China, and Germany (shaded in Table
1) has decreased compared to the results of the previous year. Therefore, among university and college students, English speaking countries are still popular SA destination and its popularity is rather increasing.

Table 1

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>FY2012</th>
<th>FY2013</th>
<th>+ / -</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 United States of America</td>
<td>15,422</td>
<td>16,794</td>
<td>+1,372</td>
</tr>
<tr>
<td>2 Canada</td>
<td>6,333</td>
<td>6,614</td>
<td>+281</td>
</tr>
<tr>
<td>3 UK</td>
<td>5,641</td>
<td>6,519</td>
<td>+878</td>
</tr>
<tr>
<td>4 Australia</td>
<td>5,768</td>
<td>6,392</td>
<td>+624</td>
</tr>
<tr>
<td>5 South Korea</td>
<td>5,542</td>
<td>5,211</td>
<td>-331</td>
</tr>
<tr>
<td>6 China</td>
<td>5,796</td>
<td>4,022</td>
<td>-1,774</td>
</tr>
<tr>
<td>7 Germany</td>
<td>2,495</td>
<td>2,408</td>
<td>-87</td>
</tr>
<tr>
<td>8 France</td>
<td>2,290</td>
<td>2,309</td>
<td>+19</td>
</tr>
<tr>
<td>9 Thailand</td>
<td>1,909</td>
<td>2,249</td>
<td>+340</td>
</tr>
<tr>
<td>10 Taiwan</td>
<td>1,680</td>
<td>2,080</td>
<td>+400</td>
</tr>
<tr>
<td>11 Other</td>
<td>12,497</td>
<td>15,271</td>
<td>+2,774</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>65,373</strong></td>
<td><strong>69,869</strong></td>
<td><strong>+4,496</strong></td>
</tr>
</tbody>
</table>

*Increase or decrease of number was calculated by the authors

In addition, an annual survey conducted by JASSO reports that the number of international students in Japan is showing an increasing trend as of May 1, 2014. In total, there were 184,155 international students in Japan, and the countries/regions accounting for the largest number of international students were the People's Republic of China (94,399), Vietnam (26,439), the Republic of Korea (15,777), Nepal (10,448), and Taiwan (6,231). Considering the goal of the action plan, “Aim to accept 100,000 international students” (Kadokura, 1994, p. 7), advocated by the former Prime Minister Nakasone in 1983, the number of international students acceptance in
2014 (184,155) surpassed the goal in 1983. This indicates that Japan’s internal globalization has indeed made great progress.

The increasing trends mentioned above have accelerated the demands for globalization of Japanese citizens, and for cross-cultural understanding. As one of the roles of tertiary education, universities are expected to provide students with real inter-cultural experiences through SA programs. As a result, more universities are incorporating SA programs into some departments/faculties as a core curriculum.

**Examples of required SA programs at university**

Table 2 shows the summary of required SA programs held at four of the universities in the Kansai region. All of the students belong to certain departments or courses at those universities are required to study abroad. The summary is based on the information posted on the Web-pages of each university, and states major destinations of their required SA programs and the average number of students studying abroad at each destination.

The universities mentioned in Table 2 are only examples and there are many other universities that incorporate required SA programs into their curriculums. For instance, Osaka International University established the faculty of International Liberal Arts in April, 2015 and offers curriculums which require all the students to study abroad for more than four months in the third year of their study. Hitotsubashi University proposed a policy, which requires all the new students go on short term SA programs, by academic year 2018. Rikkyo University and Waseda University also set forth a plan to require their students to study abroad. The period and the timing of the introduction of SA programs vary depending on universities. Some universities have arranged SA programs with schools in Chinese and Korean speaking countries in order to meet current social demands. As shown in these examples, SA programs are increasing in importance because these programs can provide university students with opportunities to learn foreign languages and improve intercultural understanding while they are in university and as a final preparation phase before they leave school and go out into the world.
Table 2

* Summary of Required Study Abroad programs at four universities in Kansai region *

<table>
<thead>
<tr>
<th>University</th>
<th>Period</th>
<th>Major destinations (N of school)</th>
<th>School year</th>
<th>N of students / school (English speaking)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kobe Gakuin</td>
<td>6 months</td>
<td>English speaking countries (7 schools)</td>
<td>First semester of the third year</td>
<td>About 12 students per school</td>
</tr>
<tr>
<td>University</td>
<td></td>
<td>Chinese speaking countries (2 schools)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GC*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindai University</td>
<td>1 year</td>
<td>English speaking countries (12 schools)</td>
<td>Second semester of the first year+</td>
<td>Annual student admissions of Faculty of IS are 500, and Kindai University affiliates with Berlitz and has more than 500 SA destinations.</td>
</tr>
<tr>
<td>Faculty of</td>
<td></td>
<td>Chinese/Korean speaking countries (4 schools)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doshisha University</td>
<td>1 year</td>
<td>English speaking countries (15 schools)</td>
<td>Second year</td>
<td>About 5-6 students</td>
</tr>
<tr>
<td>Faculty of</td>
<td></td>
<td>Chinese speaking countries (3 schools)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GC*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kansai University</td>
<td>1 year</td>
<td>English speaking countries (11 schools)</td>
<td>Second year</td>
<td>About 15 students</td>
</tr>
<tr>
<td>Faculty of</td>
<td></td>
<td>Chinese/Korean speaking countries (2 schools)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLS*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* GC: Global Communication, IS: International Studies, FLS: Foreign Language Studies

Difficulties of L2 acquisition and intercultural understanding while studying abroad

Despite the increasing costs for studying abroad and the financial situation, many families
in Japan manage to have their sons and daughters study abroad. However, there are many
Japanese university students whose SA experience, L2 acquisition, and intercultural interaction
end in failure, due to the introversive way of thinking peculiar to the Japanese as well as the
hesitation to integrate into the foreign society because they are so accustomed to the
circumstances in Japan (cf. Kobayashi, 1999). Although once they study abroad, they gain some
kinds of learning (Bateson, 1994), it does not mean that they can achieve their original goals such
as improvement of L2 proficiency and intercultural interaction (cf. Kinginger, 2009).
Summarizing difficulties of L2 acquisition and intercultural understanding, there are three factors
that students have to face (Ayano, 2006; Jackson, 2006; Pearson-Evans, 2006; Ming-Hung Lam,
2006; Gao, 2010)

Table 3

*Three factors and the variations of barriers while studying abroad*

<table>
<thead>
<tr>
<th>Factors</th>
<th>Variations of factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living in a foreign country</td>
<td>Stress from the language barriers</td>
</tr>
<tr>
<td></td>
<td>Feeling alienated as a foreigner</td>
</tr>
<tr>
<td></td>
<td>Socializing with other Japanese people</td>
</tr>
<tr>
<td>The way of communication</td>
<td>Differences in communication styles</td>
</tr>
<tr>
<td></td>
<td>Preference of conversation topics</td>
</tr>
<tr>
<td></td>
<td>Differences in sense of humor</td>
</tr>
<tr>
<td>Social and ethnic differences</td>
<td>Differences in the values, view of the world, and of the life</td>
</tr>
<tr>
<td></td>
<td>Differences in social and economic levels</td>
</tr>
<tr>
<td></td>
<td>Differences in academic levels</td>
</tr>
</tbody>
</table>

We assume that each of the factors mentioned in Table 1 is entangled complicatedly and
hinders learners’ L2 acquisition and intercultural socialization. Among those factors, “socializing
with other Japanese people” would be what schools that dispatch or accept students studying
abroad can deal with. Dispatching schools can investigate the circumstances and the situations of
accepting schools and choose the schools with less Japanese studying there. Schools accepting international students can consider the balance and ratio of the same nationality in a class, and make their students use English all the time even outside the class.

Regarding the other factors mentioned in Table 2, it is highly difficult to eliminate them. Nevertheless, from the different point of view, these factors can be the best part of intercultural understanding. Therefore, this questionnaire survey investigates if the factors mentioned above can really be the learning obstacles while studying abroad.

**Research Design**

**Research questions**

A summary of the literature review indicates that many factors make it quite difficult to effectively acquire L2 proficiency and experience intercultural socialization through SA programs. Therefore, this paper researches into positive and negative experiences students have actually gone through while studying abroad based on the following six research questions: “1. What kind of intercultural experience did you have?”, “2. What kind of English skills did you feel you gained?”, “3. What kind of communication skills did you feel you gained?”, “4. What are your general impressions of living and studying abroad?”, “5. What did you gain through living with your host family?”, and “6. Now that you have completed SA programs, what English skills would you like to improve?”

**Participants of the survey**

The participants of this survey are 16 first-year students (18 to 19 years old) who belong to a private university located in the Kansai region in Japan. They joined the short term SA program held at the University of Waikato in Hamilton, New Zealand, from February 20, 2016 to March 14, 2016. The average score of their TOEFL ITP® is 418 (the highest: 490, the lowest: 360). There were 23 applicants for this SA program and the 16 participants were selected based on their GPA, the number of credits they earned, and the results of the interview in English. This questionnaire survey was conducted after they completed their SA programs.
Questionnaire survey

The participants who joined the SA program mentioned above responded to the survey on the research questions. Following Dörnyei (2003), four point Likert scale (strongly agree, agree, disagree, strongly disagree) was employed in order to avoid the answer “neither agree nor disagree”. The survey was conducted from March 15, 2016 to March 31, 2016. There were sixteen valid responses (male: four, female: twelve) and ratio of valid responses was 100%.

Data analysis

Analysis of questionnaire: $\chi^2$ test

We converted the survey results on the four point Likert scale (strongly agree, agree, disagree, strongly disagree) into a two point Likert scale (agree, disagree) in order to clarify the participants’ view, and then conducted a chi-square test. The following describes the results shown in Table 4 to Table 10. Q# in each table is the item number of the questionnaire, and the shaded results indicate negative significant differences.

Table 4

<table>
<thead>
<tr>
<th>Q#</th>
<th>Results of converted 2 point Likert scale</th>
<th>$\chi^2$test results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

*p < .05. **p<.01

All the items on intercultural experience indicate positive results. It is interesting that the participants realized the advantages of their own culture through the experience of living outside
Japan for a certain period of time (Q2) as well as coming to like foreign culture through studying abroad. The participants felt culture differences during their stay, which is vividly reflected in their positive comments regarding intercultural experience. The following are examples of such comments; (student 3) “The way people always express their thanks when getting off the bus and shop clerks greeted saying ‘have a nice day’ and so on left a big impression on me”, (student 6) “I was impressed that the manner of ladies-first was thoroughly penetrated and everyone greets and shows gratitude to others in a polite way”, (student 8) “Even an elementary school boy was doing ladies-first!”, (student 9) “When we get on a bus in Japan, we go into the bus in order of arrival. However, in New Zealand, I saw high school boys, even though they came to the bus stop earlier; let girls go into the bus before them. I was quite impressed with the culture that is different from Japan, and thought New Zealand is such a wonderful country!”, and (student 15) “I needed to be careful not to take a long shower. Every day, I had cereal for breakfast, and sandwiches, an apple, and crisps for lunch, which was a simple meal compared to the meals I had in Japan. Dinner was a one-plate dish, which had a lot of vegetables, so it was very healthy”.

<table>
<thead>
<tr>
<th>Q#</th>
<th>Results of converted 2 point Likert scale</th>
<th>$\chi^2$ test results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

*p < .05. **p<.01
Table 6

$\chi^2$ test results of each item on applied English skills (N=16)

<table>
<thead>
<tr>
<th>Q#</th>
<th>Results of converted 2 point Likert scale</th>
<th>$\chi^2$ test results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>12</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>13</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>14</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>17</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>18</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>19</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>20</td>
<td>13</td>
<td>3</td>
</tr>
</tbody>
</table>

*p < .05. **p<.01

The items on basic English skills indicate both positive and negative results. Most participants felt that their communication skills in English had improved. As we can see from the comment quoted from student 2, “Unlike the classes I had in Japan, the classes abroad were very active, so it was great. I studied through exchanging ideas, talking, and playing games. I think I can improve my English in these classes as far as I have the attitude of learning English”, the classes of the SA program offered the students opportunities to communicate elaborately. On the other hand, $\chi^2$ test results suggest that the participants felt less improvement on skills typically taught in a lecture style such as English writing skills (Q8), English reading skills (Q9), and English grammar skills (Q10). As these skills can be difficult to improve through SA programs and can also be taught in Japan before SA programs, it is essential to include the improvement of
the above mentioned skills into the curriculums of university courses in Japan and support students to enhance the skills while they are at university in Japan.

In addition, the results on applied English skills (see table 6) were divided into the items on which the participants felt the positive effects and did not realize the positive effects through the SA program. The former includes the items such as expressing their own ideas (Q11), being more aware of their pronunciation (Q13), getting used to translating English into Japanese (Q17), and being more aware of grammar (Q18). It may be a necessary consequence because the participants have overwhelmingly more opportunities to communicate and express their ideas and opinions in English while studying abroad. On the other hand, regarding the latter items: vocabulary skills (Q12), practical and advanced input skills (Q14; Q15; Q19; Q20), and practical writing skills (Q16), the participants did not realize the actual improvement through the SA program.

Table 7

<table>
<thead>
<tr>
<th>Q#</th>
<th>Results of converted 2 point Likert scale</th>
<th>χ² test results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>22</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>24</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>25</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>26</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>27</td>
<td>1</td>
<td>15</td>
</tr>
</tbody>
</table>

*p < .05. **p<.01

The results of Table 7 as well as the ones shown in Table 4, 5, and 6, indicate that the participants of the SA program generally perceive the improvement on their English
communication skills. They acquire skills to communicate in English without having any hindrance in daily life (Q22), and their personality traits are changing from introverted ones typically found in Japanese culture to westernized extroverted ones (Q23). However, negative results are also indicated as following; the opportunities to interact with local people were differentiated depending on the participants (Q24), there were many opportunities to speak with Asians (especially with Japanese) (Q25; Q26). One of the participants mentioned in a personal communication with us that it was difficult to interact with local people unless the participants themselves tried to communicate with them proactively, and the quantity of communication at home was different depending on the host family they stayed with. These negative results correspond to three factors of barriers while studying abroad which are shown in Table 3.

Table 8

<table>
<thead>
<tr>
<th>Q#</th>
<th>Results of converted 2 point Likert scale</th>
<th>$\chi^2$ test results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>28</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>29</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>30</td>
<td>0</td>
<td>16</td>
</tr>
</tbody>
</table>

*p < .05. **p<.01

In regards to the SA program in general (see Table 8), most of the participants gave a favorable review on the English only circumstances (Q28). In addition, all the participants strongly desire to study abroad again, despite each student having found somewhat negative aspects regarding the SA program (Q29). Table 8 also shows that they have changed their characters and personalities through the SA program in a positive way (Q30).

Regarding the host family system, most of the participants perceived its effectiveness on intercultural experiences (Q31) and acquisition of English proficiency (Q32). Here are some of
the comments from the participants; (student 10) “The intercultural experience that left the biggest impression on me is to spend time with a host family member and family’s friend who are in the same generation as me. I was very happy to hang out with them and experience the local youth culture”, (student 16) “The most memorable experience was my host father’s birthday party. I was told that it wasn’t a typical birthday party in New Zealand, but it was a birthday party I have never experienced in Japan. Commonly, we invite friends to our home to celebrate birthdays in Japan, but for my host father’s birthday, all the host family’s relatives got together and celebrated with him. It was a feast with a whole roasted pig as a main dish.” These comments indicate that living with their host family provided a golden opportunity to have intercultural experience and use English. The participants of this SA program are generally satisfied with the host family system. However, they have never lived in a dormitory abroad; therefore they cannot compare which accommodation style, dormitory or homestay, is more effective in terms of intercultural experience and learning English.

Table 9

<table>
<thead>
<tr>
<th>Q#</th>
<th>Results of converted 2 point Likert scale</th>
<th>χ² test results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
</tr>
<tr>
<td>31</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>32</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>

*p < .05. **p<.01

Analysis of questionnaire: cluster analysis

We grouped the participants using 32 variables obtained from the questionnaire (excluding the final question: what subject would they like to register?) in order to see the similarity and difference of the participants on the short term SA program. We conducted the cluster analysis using Ward’s method by Squared Euclidean distance. As a result of automatic discrimination on
Entropy, the participants were classified into four cluster groups (see Figure 1). However, the result of student 14 (‘S’ indicates ‘student” in Figure 1) is far apart from the results of the others; therefore, it was judged as an outlier and the second cluster analysis was conducted excluding the data of student 14. The results indicate two cluster groups: group 1 with four students (S4, S6, S1, and S8) and group 2 with eleven students (S2, S5, S15, S10, S12, S3, S11, S9, S7, S13, and S16).

Next, we conducted a Mann-Whitney U test following the procedure of Carreira (2015) in order to examine the characteristic of each cluster. We employed Mann-Whitney U test using nonparametric method because most items of the questionnaire did not show the normal distribution according to the results of the Shapiro-Wilk normality test. Table 10 is the list of variables which have significant differences between the groups with the results of Mann-Whitney U test (significance level of 5%). Please refer to the results of all the items to Appendix 2.

The items that indicate significant differences between the clusters are the followings: (Q9) “I realize the improvement on reading skills”, (Q14) “I became able to understand movies, TV and radio programs, and songs in English”, (Q15) “I became able to read books, newspapers, and magazines in English”, and (Q20) “I became able to read technical books and research papers in

![Dendrogram](image_url)
English faster and more effectively”. According to the results of this Mann-Whitney U test, the participants in the first cluster earned higher and more practical English skills than the ones in the second cluster. Hence, the first cluster is categorized as the higher English proficiency group and the second cluster as the intermediate English proficiency group.

Table 10

Four variables which indicate significant differences between the clusters

<table>
<thead>
<tr>
<th></th>
<th>First cluster (N=4)</th>
<th>Second cluster (N=11)</th>
<th>Mann-Whitney U test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>9</td>
<td>3.50</td>
<td>0.50</td>
<td>2.55</td>
</tr>
<tr>
<td>14</td>
<td>3.25</td>
<td>0.43</td>
<td>2.18</td>
</tr>
<tr>
<td>15</td>
<td>3.25</td>
<td>0.43</td>
<td>2.09</td>
</tr>
<tr>
<td>20</td>
<td>3.00</td>
<td>1.00</td>
<td>1.64</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01

Why, then, did the participants in the first cluster realize that they had acquired higher English proficiency? Table 11 is the result of TOEFL ITP© between the clusters. Their scores show the normal distribution according to the results of the Shapiro-Wilk normality test; therefore, the results of t-test are also presented in Table 11.

All the sections including the total score indicate that the mean score of the first cluster is higher than that of the second cluster. In addition, we conducted two-tailed t-test (significance level of 5%), and the results are as follows: the listening score: \( t(12)=2.62, p=.02 \), the grammar score: \( t(12)=0.60, p=.56 \), the reading score: \( t(12)=2.62, p=.02 \), and the total score: \( t(12)=1.37, p=.20 \). Only the listening score indicates significant differences between the clusters. In short, the above suggests that the differences of the participants’ English proficiency level before the SA program are closely linked to the questionnaire items that the participants felt their improvement through the SA program. Items Q9, Q14, Q15, and Q20, which show significant differences between the clusters, all require higher proficiency level of English to achieve; therefore, the
participants in the first cluster felt they had acquired more advanced English skills thanks to the solid foundation skills in English they originally had. During the SA program, all the instructions are conducted in English, which suggests that the group with higher significant differences on the listening score had a greater advantage in their study, including the other skills such as reading skills, through the SA program.

Table 11

Comparison of TOEFL ITP® between the clusters

<table>
<thead>
<tr>
<th></th>
<th>First cluster (N=4)</th>
<th>Second cluster (N=11)</th>
<th>t (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>47.75</td>
<td>43.1</td>
<td>2.62*</td>
</tr>
<tr>
<td>SD</td>
<td>2.62</td>
<td>3.11</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>47.75</td>
<td>43.1</td>
<td>2.62*</td>
</tr>
<tr>
<td>G</td>
<td>41.75</td>
<td>39.9</td>
<td>0.60</td>
</tr>
<tr>
<td>R</td>
<td>42.50</td>
<td>41.4</td>
<td>0.42</td>
</tr>
<tr>
<td>Total</td>
<td>439.75</td>
<td>414.60</td>
<td>1.37</td>
</tr>
</tbody>
</table>

*p < .05  **p<.01

The results above also indicate the importance of giving sufficient language learning training to the participants before they go on a SA program. One of the participants (student 6) classified in the first cluster commented as “I was able to train my communication skills because the course offered a lot of opportunities to think about and express my own ideas and opinions. Even in an academic English class, discussion was a part of it. I sometimes got frustrated since I couldn’t express what I wanted to say in English. Still, I think I got the skills to somehow communicate with others and make myself understood.” This comment tells us that the academic English classes required the participants to have communication skills including listening skills.

Discussion

Answer to the research questions

The following are the answers for the research questions. First, regarding RQ1: “what kind
of intercultural experience did you have?”, the participants experienced cultural differences from Japan based on a wide-range of life related matters such as greetings, gender (for example, ladies-first), dietary life, history of the race, life style, and pleasure. Although the literature review indicates the difficulty for international students to interact with local people using the target language, this survey reveals that the participants were able to have social interaction opportunities with the local people using English through the life and communication with their host family. Next, regarding RQ2: “What kind of English skills did you feel you gained?” the participants felt the improvement on speaking and listening skills that are necessary skills for communication. In terms of reading comprehension skills and practical English skills, the participants felt their improvement on those skills differently depending on their level of English proficiency. Those who had a higher English proficiency level, especially in English listening skills, before joining the SA program felt the improvement on a higher level of English skills including academic English. (See Table 10 for the results of the cluster analysis and Mann-Whitney U test.)

With regard to RQ3: “What kind of communication skills did you feel you gained?”, the participants became able to speak positively to people they first met, and express their thoughts and opinions with less hesitation. Therefore, we can conclude that the participants’ personality traits have transformed from introverted ones typically found in Japanese culture to more extroverted ones. As for RQ4: “What are your general impressions of living and studying abroad?”, the participants realized the virtue of Japanese culture once again as well as the one of foreign culture through the intercultural interaction and communication. Regarding RQ5: “What did you gain through living with your host family?”, many participants had intercultural experience through living with their host family, and as a result, we obtained the answers for RQ1 and RQ4.

**Upon completion of the SA program**

Lastly, regarding RQ6: “Now that you have completed SA programs, what English skills would you like to improve?” we would like to refer to the following tabulation results of the final
questionnaire item “what kinds of classes and/or programs would you like to enroll after completion of the SA program? (Multiple answers allowed)”. The results of their answers are; study abroad (16), test taken courses such as TOEFL® and TOEIC® (14), speaking class (14), class with international students (13), English conversation lounge with foreigners (Extracurricular Lessons) (13), listening class (7), class using movies, TV programs, and songs (7), grammar class (6), reading comprehension class (3), self-study programs using computers (2), others (0). Hence, the results above suggest that the participants of this short term SA program generally desire classes to improve communication skills. They realized the improvement of their communication skills through the SA program, and all of them wish to study abroad again. In addition, the results indicate the high demand for test taken classes such as TOEFL®. However, regarding skills on grammar, reading comprehension, practical English using movies, TV programs, and songs, less participants show their interests in improving these skills after the SA program. In theory, acquiring them would coincide with improvement of comprehensive English proficiency, but many of the participants did not realize it through the SA program. This indicates the importance to train these skills intensively in the university programs before sending students to study abroad, and the survey results revealed the the improvement of these skills was the secret of success in studying abroad.

**Conclusion**

**Concluding remarks**

This paper visualized the experience the participants of a short term SA program in an English speaking country in detail, based on the questionnaire survey of participants. The results indicate the positive effects on many criteria such as their communication skills, their next goal to improve English, intercultural experience, love for their country, and so on. Furthermore, regarding three barriers while studying abroad, we, as the conductors of this program, think that the factor of “living in a foreign country (stress from the language barriers, feeling alienated as a foreigner, socializing with other Japanese people” influenced the participants’ intercultural socialization and L2 language learning. It is assumed primarily because the SA program this time
is a short term program. Therefore, as they experience longer term SA programs and interact with many local people and non-Japanese international students, it is highly possible that the other two factors, “the way of communication (differences in communication styles, preference of conversation topics, differences in sense of humor)” and “social and ethnic differences (differences in the values, view of the world, and of the life, differences in social and economic levels, differences in academic levels), become their barriers while studying abroad. We conclude that it is imperative to offer classes to prevent these forecasted barriers and to prepare for the intercultural life before students go on a study abroad program. We will continue to conduct the similar research overtime and study for the changes in experiences and awareness of studying broad depending on the age and the time.

**Limitations**

The following limitations of this study should be considered for future research. This study is based on the data obtained from 16 first year students belonging to a middle-level private university in the Kansai region in Japan. Thus, it is difficult to generalize the results of this study. According to Long (2006), needs analysis have to be conducted from the multiple angles, and sampling of survey participants need to be considered. Without doubt, it is essential to obtain and analyze data from students belonging to different universities in a variety of regions. Moreover, we need to conduct similar studies on different school grades (e.g. first year students, second year students, third year students, forth year students), different generations (e.g. in their teens’, in their twenties’, in their thirties), different occupations (e.g. university students vs. business people), different universities (e.g. national university vs. private university), different regions (e.g. urban area vs. rural area), different accommodations (e.g. dormitory vs. homestay) and so on. Analyzing the data from multiple elements and aggregating the results obtained from the surveys above will make it possible to specify the effects of SA programs on Japanese English learners in detail, and to aim for a more refined generalization.
Notes


3 Hatsuse (1988) rephrases internal phases of globalization as (1) situation of “globalization in a daily life””, (2) “globalization of their mind” regarding how to deal with the situation, (3) action of “globalization of citizens” to shape their future. Kadokura (1994, p. 3) rephrases as “domestic”, “internal”, and “intrinsic” globalization. Internal globalization is mentioned as “under the development of borderless economy, in order to live with the world, we need to globalize our mentality and moral such as culture and customs in addition to the globalization of materials and finances. Internal globalization means opening the minds and practices of Japanese citizens to the world by mutual understanding of culture and customs through interaction of people. One of the effective measures is to accept foreign workers and international students.” (http://www.city.shunan.lg.jp/ho/gappei/sg0708.htm)

4 Osaka International University Faculty of International Liberal Arts Web-page (http://www.oiu.ac.jp/kk/)

5 Nippon Keizai Shinbun Online edition. July 3, 2014 “Hitotsubashi University, introducing required study abroad course for upcoming students. So as Rikkyo University and Waseda University” (http://www.nikkei.com/article/DGXNASDZ03001_T00C14A7MM0000/)

6 The total number of students in the University of Waikato is 13,000. Among those, 2,800 students are international students from 70 countries.
Appendix 1

The items of the questionnaire are as follows;

(1. strongly disagree, 2. disagree, 3. agree, 4. strongly agree)

1. I had intercultural experience. 2. I become to like foreign culture. 3. I became to like Japanese culture more than before. 4. Please describe the impressive intercultural experience abroad. (Free descriptive answer) 5. (I think) my English has somewhat improved. 6. (I think) my speaking skills have improved. 7. (I think) my listening skills have improved. 8. (I think) my writing skills have improved. 9. (I think) my reading skills have improved. 10. (I think) my grammatical skills have improved. 11. I became able to express my thoughts, feelings, and what I want to say. 12. I was able to learn many English vocabulary, idioms and expressions. 13. I was able to acquire correct English pronunciation. 14. I became able to understand movies, TV and radio programs, and songs in English. 15. I became able to read books, newspapers, and magazines in English. 16. I became able to read and write emails and/or letters in English. 17. I became able to translate English into Japanese smoothly. 18. I became more aware of English grammar. 19. I became able to understand academic and technical lectures in English. 20. I became able to read technical books and research papers in English faster and more effectively. 21. (I think) my communication skills have somewhat improved. 22. I became able to deal with varieties of daily situations. 23. I became able to speak to people I first met without hesitation. 24. There were many opportunities to speak with local people. 25. There were many opportunities to speak with non-Asian people. 26. There were many opportunities to speak with Asian people. 27. There were many opportunities to speak with Japanese people. 28. The English only circumstances were good. 29. I would like to study abroad again. (Both selection description and free description) 30. I think I have changed my characters through the SA program in a positive way. (Both selection description and free description) 31. I was able to learn cultural differences through living with host family. 32. I was able to study English through living with host family. 33. Please describe the impressive experience living with host family. (Free descriptive answer)

[What kinds of classes and/or programs would you like to enroll after completion of the SA]
program?](Multiple answers allowed)

1. Test taken courses such as TOEFL<sup>®</sup> and TOEIC<sup>®</sup>
2. Exclusive grammar class
3. Exclusive reading class
4. Exclusive listening class
5. Exclusive speaking class
6. Class with a native English teacher
7. Class with international students
8. Class using movies, TV program, and songs
9. Self-study programs using computers
10. English conversation lounge with foreigners (Extracurricular Lessons)
11. Short/long term study abroad program at university
12. Others

**Appendix 2**

The results of mean scores, standard deviation, and Mann-Whitney U test on each item of questionnaire are as follows.

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*p < .05. **p < .01

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THE PRIVATE SCHOOL LANDSCAPE

The Effects of School Choice on Student Capacity and Composition

Dick M. Carpenter, Ph.D.
Rebecca S. Keith
Andrew D. Catt

ed CHOICE
ABOUT EDCHOICE

EdChoice is a nonprofit, nonpartisan organization dedicated to advancing full and unencumbered educational choice as the best pathway to successful lives and a stronger society. EdChoice believes that families, not bureaucrats, are best equipped to make K–12 schooling decisions for their children. The organization works at the state level to educate diverse audiences, train advocates and engage policymakers on the benefits of high-quality school choice programs. EdChoice is the intellectual legacy of Milton and Rose D. Friedman, who founded the organization in 1996 as the Friedman Foundation for Educational Choice.

We are grateful for the generous financial support of the Walton Family Foundation, which made this project possible.
THE PRIVATE SCHOOL LANDSCAPE

The Effects of School Choice on Student Capacity and Composition

Dick M. Carpenter, Ph.D.
Rebecca S. Keith
Andrew D. Catt
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EXECUTIVE SUMMARY

In this research, we examined longitudinal trends in private school enrollment, grade offerings, and student demographics over a 22-year period to determine the nature of the relationship between school choice program adoption and private school student populations.

We drew our data from the U.S. Department of Education’s Private School Universe Survey (PSS), which has been gathering data biennially on private schools in the United States since the 1989–90 school year. The PSS database collects information from private schools spanning prekindergarten through 12th grade, including ungraded and some post-secondary, but our focus was on the schools serving only K–12 students.

- **Is there a significant difference in private school enrollment after the introduction of private school choice programs?**

Across all analyses, the enrollment trends of private schools in states with private school choice programs either did not differ significantly or differed only trivially from schools operating without the presence of choice. This was the case whether choice was measured broadly or for each different type of school choice program—vouchers, individual tax credits, individual tax deductions, or tax-credit scholarships.

- **Is there a significant difference in the percentage of racial/ethnic minority students in private schools after the introduction of private school choice programs?**

Private schools in choice states did not grow “whiter,” contrary to charges by critics that private schools would grow less diverse as a result of choice. Results show the average percentage of non-white students in private schools grew over time in choice states similar to schools in non-choice states. Moreover, the percentage of minority students enrolled in private schools as compared to the surrounding school-aged populations did not appear to change as a function of choice programs. As with the other analyses, this suggests private schools under circumstances of choice did not grow whiter, and the student body composition appeared consistent with the populations surrounding their schools.

- **Is there a significant difference in the number of grades offered (i.e., capacity) in private schools after the introduction of private school choice programs?**

Results indicate the number of grade levels offered by private schools in choice and non-choice states changed very little over time. And the trends showed little or no divergence based on the introduction of choice. Thus, school capacity trends in private schools under conditions of choice look substantively the same as conditions without choice, both broadly measured and disaggregated by different types of school choice programs.

Although the impulse among some may be to ascribe such results to a failure of school choice to increase enrollment in or the capacity of private schools, other reasons—working in concert—are more likely.

First, private school leaders appear cautious to respond to changes in their environments. New private school choice programs have often been limited in their scope, meaning the number of new students any given private school may see after policy adoption may be small, so small, in fact, as to limit the ability of schools to significantly increase their capacity. Adding a grade, for example, requires hiring at least a new teacher plus

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1 Note that this differs from the number of classrooms in a given school. Instead, it measures whether a school adds new grade levels to those already existing, such as when a K–5 school adds middle school grades.
curricular material and other related resources, all of which demand enough student growth to cover the increased costs. The prudent school leader would naturally be reluctant to take on the additional costs absent clear and present demand. Such reluctance would be even more pronounced among private school entrepreneurs, who would need to see sufficient demand before committing to opening and operating a new school.

From a broad perspective, the competition driven by school choice, particularly at scale, depends on a critical mass of families exiting their neighborhood schools, but without viable alternatives—i.e., private school capacity—the critical mass is unlikely. Of course, private schools or private school entrepreneurs are unlikely to blindly subscribe to a “build it and they will come” fantasy. Like anyone else, private school leaders see the regulatory limitations imposed on choice programs, such as participation caps, tuition caps, or student eligibility restrictions, and recognize the resulting demand likely will not justify significant expansion. Moreover, for leaders of religious schools, the very real possibility of regulations forcing them to significantly alter the content of their teaching and even their facilities (i.e., removing religious iconography) provides a serious disincentive to participate in choice programs. Indeed, making such changes undermines the very missions that motivate such schools.

Caution to participate may also stem from a fear that even constitutionally “safe” private school choice programs can disappear if funding is eliminated in the state budget. Some programs often depend on annual appropriations in state budgets, and a change in the legislature’s makeup could result in insufficient funding. Anticipating this possibility, private school leaders might hesitate to expand the number of seats made available to school choice program students out of fear their schools would be vulnerable in the event that program funding were taken away.

Second, limitations in choice programs themselves may depress demand and growth in enrollment and capacity. Historically, most choice programs have been targeted in nature, designed to serve only low-income students or those with special needs. Until recently, many programs operated on a small scale, some as trial programs with firm caps on participation, limits on a private school’s choice-using student population, income limitations on the parents to qualify for the program, geographic limitations, grade limitations, and limitations based on where the student last attended school.

If legislators are sincere in their intent to see school choice work at scale to improve K–12 education, the issue of capacity can no longer be ignored. More than 25 years ago, John Chubb and Terry Moe predicted the capacity problem when they warned against policies that focused exclusively on creating demand and ignored mechanisms to encourage and promote the emergence of new and different types of schools. Their warning was prescient. As Foundation for Excellence in Education’s Matthew Ladner observed of current programs,

> “Existing school voucher and tax-credit programs have been designed, in essence, to allow students to transfer from public schools into a preexisting stock of nonprofit private schools...Few state lawmakers have created choice programs robust enough to spur the creation of new private schools.”

Consequently, others have recently begun referring to capacity as one of the most significant limitations on the choice movement. Results from this report confirm such observations.

Increasing private school supply will likely mean:

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• adopting programs with more universal student eligibility to produce enough demand for private school leaders to expand and/or replicate their schools;

• finding a balance between light regulatory restrictions/burdens and accountability to avoid disincentivizing high-quality providers who value autonomy;

• establishing reliable program funding streams to assure private school leaders choice programs are more than a flash in the pan; and

• securing strong per-pupil funding for school choice programs, whether in the form of vouchers, tax-credit scholarships or education savings accounts, to incentivize greater private school involvement and put a greater number of schools within reach of more children.

We recognize such recommendations are rather general, but because this issue has seen surprisingly little attention, we position these results and recommendations as an initial catalyst to begin creative and productive discussion and undoubtedly debate about the role of capacity in school choice and recommendations for its expansion.
INTRODUCTION

Since the advent of large-scale private school choice programs in recent decades, policymakers, researchers, school choice opponents and proponents, and media members have paid great attention to, among others, the outcomes of these programs,\(^1\) the effects of private choice on public school performance,\(^2\) and issues of equity in program participation.\(^3\) By private school choice, we mean programs that enable students to leave their neighborhood public schools and attend, instead, private schools. Such programmatic mechanisms include vouchers, tax-credit scholarships, and education savings accounts.\(^4\)

Policymakers, researchers, and others have paid comparably less attention, however, to potentially important and revealing trends within the private school population since the adoption of private school choice programs. This report tackles those trends: private school enrollment, the infrastructure growth of the private school sector, and changes in the demographics of private school populations over time—all of which we measure with a nationally representative sample.

An examination of such trends is particularly revealing because it provides insight into the mechanics of choice. As school choice researcher Huriya Jabbar noted, “Although existing research has considered whether competition improves student achievement, it is also important to study how that might occur and what the consequences of such policies are.”\(^5\) More specifically, examination of such trends sheds light on one of the most important issues in the efficacy of choice that has only recently begun to receive the attention it deserves: the capacity or supply of private schools.\(^6\) As described later in this report, for choice to be an efficacious reform policy, certain changes must occur at scale. Without an increase in the capacity or supply of private schools, the reform potential for school choice, in particular, will largely remain unrealized.\(^7\) Indeed, as Gregory Elacqua, Matias Martinez, and Humberto Santos wrote, “This issue is critical to understanding if and how educational markets work. How private schools actually respond to the competitive marketplace created by school choice will greatly affect the future success of [choice] reforms.”\(^8\)

The first of the trends studied herein is private school enrollments, which signals the degree of competition actually experienced by a given public school. One of the central tenets of school choice is that competition can lead to educational reform by spurring public schools to become more effective.\(^9\) The mechanics of such competition are manifest in families that use a voucher, for example, to “exit”\(^10\) their catchment schools in favor of private schools, thereby applying pressure on public schools to improve their offerings in order to keep and/or regain constituents.\(^11\) Setting aside mixed findings about competitive effects from the threats of vouchers,\(^12\) it stands to reason that for competition through exit to work, there has to be a credible threat of exit or actual exit, or at least enough exit to compel change.\(^13\)

To date, these mechanics have gone unexamined.\(^14\) Many of the studies on the competitive effects driven by school choice programs largely assume or acknowledge only descriptively that as a result of the introduction of a school choice program,\(^15\) significant numbers of students are exiting public schools in favor of private institutions.\(^16\) When predicting estimates of the effects of school choice programs, others explicitly assume growth in the private school sector is a result of choice programs.\(^17\)

Given the centrality of the assumed progression from choice to competition to systemic impact, empirically evaluating the first linkage in that chain is particularly important.\(^18\) Accordingly, this study tests this by asking: Is there a significant difference in private school enrollment following the introduction of school choice programs?

The second trend studied here is infrastructure growth in the private school sector. The exit option is real only to the extent that families have private
schools to enter after exiting their catchment schools. In part, this is an issue of capacity. We ask: Is there increased capacity in the private sector to accommodate the students who wish to avail themselves of school choice programs? Does choice, in fact, create new options for students? 19

The capacity question is the infrastructure companion to the prior question on enrollment. Similar to enrollment, economists Thomas Downes and Shane Greenstein succinctly describe the assumption in their study on the locations of private schools,

“[T]he argument in favor of school choice implicitly assumes that once school choice programs go into effect, private schools will enter and locate near low-quality public schools, resulting in a more competitive environment and widespread improvement in public schools.” 20

Indeed, others posit that if choice programs are to succeed in compelling change in public schools, an expansion of private school capacity is required in order to accommodate the critical mass of students that would need to exit their neighborhood schools. 21

Significant data limitations are likely to blame for the scarce attention researchers, pundits, and others have paid to this important issue thus far. 22 Constructing a longitudinal census of private schools in the United States has proven exceptionally difficult, and as discussed in greater detail later in this report, even the data source used for this study—the Private School Universe Survey (PSS)—does not allow for a reliable analysis of changes in the number of schools over time. However, one alternative measure available in the PSS provides at least some approximation, specifically grade levels private schools offer. The logic applied to grade levels mirrors that of schools. As demand for private schooling increases throughout the K–12 span, the assumption is that private schools—many of which may not serve all grades—will increase the number of grades they offer to meet demand. 23 Thus, to examine this trend we ask: Is there a significant difference in the number of grades offered in private schools before and after the adoption of school choice programs?

The third trend considers a persistent issue that follows the adoption of school choice programs: the racial/ethnic composition of private schools. 24 Critics’ assertion is, by now, well-known. They claim school choice programs will result in greater segregation as white students use vouchers and other choice mechanisms at disproportionate rates to leave public schools in favor of private schools. 25 This is not necessarily an implication of the enrollment practices of private schools but of (a) inequitable access on the part of some parents to resources and information necessary to navigate a complicated landscape created by choice programs 26 and/or (b) the desire of parents to send their children to schools populated with other children “like them.” 27 Significant opportunity and monetary costs must be borne by parents in the process of visiting different schools, learning and completing different application procedures, and monitoring the various options if assigned to a waiting list. Such circumstances typically favor parents with strong social networks and resources to understand and navigate the many different enrollment processes. The fact that some parents lack the resources necessary to undergo this process may lead to inequitable access to schools and enrollment patterns segregated by race/ethnicity, socio-economic status, and other indicators. Similarly, inequitable access to information may be as basic as not understanding a choice even exists, let alone possessing the information necessary to utilize the choice provided.

As for choosing based on school demographics, studies are mixed in their findings. Studies such as those reviewed in EdChoice’s reports A Win-Win Solution and The Integration Anomaly find private schools are more racially/ethnically integrated than public schools. 28 Other research, however, suggests parents seek schools with student
populations that reflect their own racial backgrounds, particularly white parents. Such findings have been generated by surveys, analysis of datasets such as the National Education Longitudinal Study, or through tracking Internet search patterns of parents in their school choice decision-making processes.

Yet, such findings are far from definitive, and few examine longitudinal trends at a particularly robust scale. We do so here by postulating that if, through inequitable access or the choices made by parents, the mechanics of choice produce schools with less diverse populations, we should expect to see the percentage of white students increasing in private schools following the adoption of school choice programs.

WHAT PRIOR RESEARCH SAYS

Enrollment

Two recent reports have examined general trends in private school enrollment over time. Using PSS data, Chief of the U.S. Census Bureau’s Foreign-Born Population Branch Stephanie Ewert tracked private school enrollments from 1990 to 2010 and found that the number of students enrolled in private school grew steadily from 1990 to about 2001. After 2002, the number of students enrolled in private school declined. Ewert’s analysis was confirmed by a National Center for Education Statistics (NCES) report that showed enrollments in the 2011–12 school year represented a low point in private school enrollment during the past few decades. During the high point in 2001–02, 6.3 million students attended private schools in the United States. By 2011–12, the number decreased to 4.5 million students.

Both reports provided important descriptive information about general enrollment trends, but neither examined how enrollment trends may have changed based on the adoption of school choice programs. Three others have, but they focus specifically on tax credit programs.

In the first report, researchers studied enrollment trends before and after tax credit program adoption, then compared those trends to neighboring states that had not adopted such programs. None of the tax credit program states saw enrollment increases after program adoption, and some saw decreases. Comparisons to other states showed no significant differences in trends based on program adoption.

The second report analyzed the relationship between the use of tax credits in Iowa and private school enrollment. Results indicated that as the number and amount of tax credit claims increased over time, private school enrollment declined. In fact, private school enrollment declined in every single year in the study, save for one. During the same years studied, public school enrollment increased for a six-year period, then also declined. The authors opined that the tax credit did not appear to increase private school enrollment and the decreasing trend was likely a consequence of a general decrease in the school-aged population in the state.

The third study reported findings similar to those in Iowa using data from Minnesota. It compared tax adjustment increases allowed as part of the state’s tax credit program during 1976, 1984, and 1997 to enrollment figures in private schools under the logic that greater tax adjustments would allow for more families to opt for private schools. Results indicated between 1975 and 1978, there was a 1 percent decrease in private school enrollment following a $300 increase in the adjustment, and between 1983 and 1987, there was a 2 percent decrease in private school enrollment in Minnesota. Only after the adjustment amount was nearly tripled, did private school enrollment increase, albeit modestly, in 1997.

In contrast, World Bank Economist Maria Marta Ferreyra assessed the relationship between private school enrollment and two different types of school
vouchers—universal vouchers and those that could be used only at nonsectarian schools. Her simulation results suggested that both programs increased private school enrollment, but under nonsectarian vouchers, private school enrollment expanded less than under universal vouchers, and religious school enrollment declined for large nonsectarian vouchers. In general, fewer households benefit from nonsectarian vouchers.

**Capacity**

Infrastructure growth in the private school sector indicates an increase in its capacity to take on more students. Some have studied the location patterns of private schools, but few authors have examined the number of new private schools entering the marketplace over time, let alone in the context of school choice policies.

One study examined school creation in Milwaukee and found that the vast majority of Catholic and Lutheran schools existed prior to the city’s school voucher program, but two thirds of “other religious” schools and all of the non-religious schools formed after the program started. Moreover, 46 percent of the new schools’ principals said the Milwaukee voucher program was a major factor in decisions to open the schools.

Another study focused specifically on Florida and its tax-credit scholarship program. It used an interrupted time series analysis to examine whether the number of private schools increased following program adoption. Results provided little evidence that the policy introduction was causally responsible for an expansion of private school supply in the state. Compared to other states, the formation of private schools in Florida increased at a greater rate after the tax-credit scholarship program’s implementation, but the state’s growth rate appeared to have been part of a trend that preceded the adoption of the tax-credit scholarship program.

**Composition**

Though a series of studies have examined the demographics of private school populations as a function of school choice programs, most use a cross-sectional design. In fact, only a few have used any form of longitudinal design.

The first analyzed racial/ethnic enrollments in Milwaukee’s private schools by comparing enrollment figures from 1994–95 to 1998–99. The authors found a noticeable increase in racial and ethnic balance in private schools—a finding in sharp contrast to school choice critics’ often hyperbolic predictions that more choice would worsen racial and ethnic segregation. The report’s authors concluded that the results were reflective of the fact that most low-income students using school vouchers in Milwaukee’s means-tested voucher program belonged to racial or ethnic minority groups. By using the school choice program, Milwaukee voucher students moved from racially isolated public schools, with low percentages of white students, to private schools with larger enrollments of white students.

Another analysis of two years of data from the Louisiana Scholarship Program found voucher students moved from schools in which their racial group was overrepresented relative to the surrounding communities, thereby improving integration in Louisiana public schools. At the same time, student transfers had, in general, no net negative impact on racial integration in their new private schools. The authors reported,

> “Based on this evidence, we conclude that the LSP is unlikely to have harmed desegregation efforts in Louisiana. To the contrary, the statewide school voucher program appears to have brought greater integration to Louisiana’s public schools.”

A third study used two years of data from the Milwaukee Parental Choice Program (MPCP) to study how voucher student transfers affected the demographics of sending and receiving schools and how the public and private schools compared to the demographic profiles of surrounding
communities. Results indicated students who switched schools in Milwaukee tended to (a) improve racial integration at their originating school and (b) worsen integration at their receiving school, whether that receiving school was within Milwaukee Public Schools (MPS) or part of the voucher program. Furthermore, the differences between MPS-to-MPS and MPS-to-MPCP switches were negligible. They also found that MPCP and MPS schools were about equally representative of the racial composition of the broader community in which they were located; however, both sectors had racial compositions that deviate significantly from the Milwaukee metro area. The authors concluded, “Overall, our results show that the Milwaukee voucher program is currently neutral in its effect on racial integration.”

**METHODS**

In this section, we discuss the methods that are generally applied to all of our research questions. We provide additional details about the analyses of each question in the Results section, and findings for each question are discussed and in even greater detail in the Appendix.

**Research Questions**

One overarching question guides this analysis: Have the following three metrics experienced significant change after the introduction of modern private school choice programs?

1. Private school enrollment
2. The percentage of racial/ethnic minority students in private schools
3. The number of grades private schools offer/serve (i.e., student capacity)

**Data and Sample**

To study the question guiding this research, we examined longitudinal trends in enrollment, grades offered, and student demographics among private schools during a 22-year period. We drew our data from the PSS, which has been gathering data biennially on private schools in the United States since the 1989–90 school year. The PSS database collects information from private schools spanning prekindergarten through 12th grade, including ungraded and some post-secondary, but our focus was on the schools serving only K–12 students. For the purposes of this study, we excluded kindergarten-terminal, post-secondary, and ungraded schools, an approach consistent with other studies, but we retained schools that served only primary grades, since those were the types of schools that might be particularly inclined to expand their grade offerings in response to school choice programs.

**Variables**

The outcome (i.e., dependent) variables include total school enrollment, number of grades private schools offer/serve, and the percentage of the student body that are racial/ethnic minorities. Ideally, we would have used the number of schools in operation each year as a measure of capacity, but insight provided by the NCES prohibited us from doing so. The list of schools in the PSS changes each year, but the PSS does not track—and the NCES does not know—whether the appearance and disappearance of schools from one year to the next is a result of entering and exiting the market or simple non-response to the survey. The number of grades schools offer/serve, however, acts as a viable substitute. Indeed, based on her cross sectional study of private school market entry, Federal Reserve Bank Economist Lisa Barrow recommends the number of grades schools offer/serve as a worthy measure.
“In particular, there are other dimensions of private school supply, namely increasing enrollment and offering more grade levels, which are not captured by measures of entry. These are likely to be dimensions on which schools may respond more easily to changes in private school demand. Thus, future work might be helped by capturing several dimensions of increasing private school supply.”

The primary predictor (i.e., independent) variables of interest are private school choice program variables. These include vouchers, tax-credit scholarships, individual tax deductions, and individual tax credits. Notably, education savings accounts are another form of educational choice, but Arizona adopted the first program of its kind just before the final year of data used in this study, precluding its inclusion.

More detailed information about each of these types of choice programs is available on EdChoice’s website, but we review the essential elements below.

**Individual Tax Deductions**

Through individual tax deductions, parents can receive state income tax relief for approved educational expenses, which can include private school tuition, books, supplies, computers, tutors, and transportation. A tax deduction reduces a person’s total taxable income.

**Individual Tax Credits**

Through individual tax credits, parents can receive state income tax relief for approved educational expenses, which can include private school tuition, books, supplies, computers, tutors, and transportation. Tax credits lower the total taxes a person owes.

Table 1 on the next page lists the programs in effect during the study period. Between 1989–90 and 2011–12, 15 voucher programs operated in 10 states and Washington, D.C.

Figure 1 on page 13 illustrates the number of private school choice programs in effect by year and aggregates the number of programs and states by year. During the early years of the data included in this study, the number of programs and states remained basically static. Beginning in 1999–00, the rate of growth increased, with the sharpest increases evident starting in 2005–06. By 2011–12, 17 states offered a combined 31 programs of various types, the greatest number being school voucher programs.

**RESULTS**

Is there a significant difference in enrollment after the introduction of private school choice programs?
## TABLE 1
Choice Programs in Effect During the Study Period

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Geographic Area</th>
<th>Program Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voucher</td>
<td>OH</td>
<td>Cleveland Scholarship Program</td>
</tr>
<tr>
<td>Voucher</td>
<td>OH</td>
<td>Autism Scholarship Program</td>
</tr>
<tr>
<td>Voucher</td>
<td>OH</td>
<td>Educational Choice Scholarship Program</td>
</tr>
<tr>
<td>Voucher</td>
<td>OK</td>
<td>Lindsey Nicole Henry Scholarships for Students with Disabilities</td>
</tr>
<tr>
<td>Voucher</td>
<td>UT</td>
<td>Carson Smith Special Needs Scholarship Program</td>
</tr>
<tr>
<td>Voucher</td>
<td>VT</td>
<td>Town Tuitioning Program</td>
</tr>
<tr>
<td>Voucher</td>
<td>WI</td>
<td>Milwaukee Parental Choice Program</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>AZ</td>
<td>Original Individual Income Tax Credit Scholarship Program</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>AZ</td>
<td>Low-Income Corporate Income Tax Credit Scholarship Program</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>AZ</td>
<td>Lexie’s Law for Disabled and Displaced Students Tax Credit Scholarship Program</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>FL</td>
<td>Florida Tax Credit Scholarship Program</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>GA</td>
<td>Qualified Education Expense Tax Credit</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>IN</td>
<td>School Scholarship Tax Credit</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>IA</td>
<td>School Tuition Organization Tax Credit</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>PA</td>
<td>Educational Improvement Tax Credit Program</td>
</tr>
<tr>
<td>Tax-Credit Scholarship</td>
<td>RI</td>
<td>Tax Credits for Contributions to Scholarship Organizations</td>
</tr>
<tr>
<td>Individual Tax Credit</td>
<td>IL</td>
<td>Tax Credits for Educational Expenses</td>
</tr>
<tr>
<td>Individual Tax Credit</td>
<td>IA</td>
<td>Tuition and Textbook Tax Credit</td>
</tr>
<tr>
<td>Individual Tax Credit</td>
<td>MN</td>
<td>K–12 Education Credit</td>
</tr>
<tr>
<td>Individual Tax Deduction</td>
<td>IN</td>
<td>Private School/Homeschool Deduction</td>
</tr>
<tr>
<td>Individual Tax Deduction</td>
<td>LA</td>
<td>Elementary and Secondary School Tuition Deduction</td>
</tr>
<tr>
<td>Individual Tax Deduction</td>
<td>MN</td>
<td>Education Deduction</td>
</tr>
</tbody>
</table>


*Maximum amount
<table>
<thead>
<tr>
<th>Year of Origin</th>
<th>Average Amount in Year 1</th>
<th>Average Amount in 2011–12</th>
<th>Average Amount % Change (Year 1 to 2011–12)</th>
<th>Participants Year 1</th>
<th>Participants 2011–12</th>
<th>Participants % Change (Year 1 to 2011–12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>$1,470</td>
<td>$3,284</td>
<td>123%</td>
<td>1,994</td>
<td>5,030</td>
<td>152%</td>
</tr>
<tr>
<td>2004</td>
<td>$9,211</td>
<td>$16,537</td>
<td>80%</td>
<td>300</td>
<td>1,978</td>
<td>559%</td>
</tr>
<tr>
<td>2006</td>
<td>$3,272</td>
<td>$4,106</td>
<td>26%</td>
<td>3,169</td>
<td>16,136</td>
<td>409%</td>
</tr>
<tr>
<td>2010</td>
<td>$6,381</td>
<td>$7,436</td>
<td>17%</td>
<td>6</td>
<td>135</td>
<td>2150%</td>
</tr>
<tr>
<td>2005</td>
<td>$5,648</td>
<td>$5,374</td>
<td>-5%</td>
<td>107</td>
<td>679</td>
<td>535%</td>
</tr>
<tr>
<td>1869</td>
<td>unavailable</td>
<td>$13,958</td>
<td>N/A</td>
<td>unavailable</td>
<td>2,501 (FTE)</td>
<td>N/A</td>
</tr>
<tr>
<td>1990</td>
<td>$2,446</td>
<td>$6,442</td>
<td>163%</td>
<td>341</td>
<td>23,198</td>
<td>6703%</td>
</tr>
<tr>
<td>1997</td>
<td>$811</td>
<td>$1,897</td>
<td>134%</td>
<td>128</td>
<td>23,828</td>
<td>18516%</td>
</tr>
<tr>
<td>2006</td>
<td>$2,374</td>
<td>$1,949</td>
<td>-18%</td>
<td>1,947</td>
<td>5,836</td>
<td>200%</td>
</tr>
<tr>
<td>2009</td>
<td>$5,438</td>
<td>$4,921</td>
<td>-10%</td>
<td>115</td>
<td>119</td>
<td>3%</td>
</tr>
<tr>
<td>2001</td>
<td>$3,208</td>
<td>$3,664</td>
<td>14%</td>
<td>15,585</td>
<td>40,248</td>
<td>158%</td>
</tr>
<tr>
<td>2008</td>
<td>unavailable</td>
<td>$3,388</td>
<td>N/A</td>
<td>unavailable</td>
<td>13,285</td>
<td>N/A</td>
</tr>
<tr>
<td>2010</td>
<td>$1,187</td>
<td>$880</td>
<td>-26%</td>
<td>386</td>
<td>2,890</td>
<td>649%</td>
</tr>
<tr>
<td>2006</td>
<td>$1,119</td>
<td>$1,031</td>
<td>-8%</td>
<td>116</td>
<td>10,600</td>
<td>9038%</td>
</tr>
<tr>
<td>2001</td>
<td>$1,099</td>
<td>$1,013</td>
<td>-8%</td>
<td>17,350</td>
<td>45,100</td>
<td>160%</td>
</tr>
<tr>
<td>2007</td>
<td>$3,757</td>
<td>$2,759</td>
<td>-27%</td>
<td>278</td>
<td>382</td>
<td>37%</td>
</tr>
<tr>
<td>2000</td>
<td>$369</td>
<td>$274</td>
<td>-26%</td>
<td>165,781</td>
<td>293,813</td>
<td>77%</td>
</tr>
<tr>
<td>1987</td>
<td>unavailable</td>
<td>$111</td>
<td>N/A</td>
<td>unavailable</td>
<td>138,198</td>
<td>N/A</td>
</tr>
<tr>
<td>1998</td>
<td>$355</td>
<td>$276</td>
<td>-22%</td>
<td>57,083</td>
<td>53,516</td>
<td>-6%</td>
</tr>
<tr>
<td>2011</td>
<td>$1,735</td>
<td>$1,732</td>
<td>0%</td>
<td>47,193</td>
<td>51,018</td>
<td>8%</td>
</tr>
<tr>
<td>2008</td>
<td>$2,621</td>
<td>$4,060</td>
<td>55%</td>
<td>92,707</td>
<td>106,549</td>
<td>15%</td>
</tr>
<tr>
<td>1955</td>
<td>unavailable</td>
<td>$1,171</td>
<td>N/A</td>
<td>unavailable</td>
<td>222,021</td>
<td>N/A</td>
</tr>
</tbody>
</table>
We begin by examining general trends in enrollment disaggregated by states that offer school choice (choice states) sometime during the 22-year period and those that do not (non-choice states). Figures 2A and 2B illustrate the total number of private school students by year in choice and non-choice states. Figure 2A shows the sums by year. Figure 2B shows the percentage change in total enrollment over time.

During the early years of the data, we should expect to see the trend lines for the two groups of states move in essentially parallel fashion. If choice programs are compelling changes in enrollment, trend lines should diverge in later years when choice programs begin to proliferate. As evident in both figures, whether measured as the overall sums or percentage changes compared to 1990, both trends move in very similar trajectories. Thus, these general trends do not suggest choice states saw differential enrollment patterns compared to non-choice states.

Similar trends are evident when looking at average

**Choice Measured Broadly**

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FIGURE 2A Biannual Enrollment in Choice and Non-Choice States—State Sums

![Graph showing biannual enrollment in choice and non-choice states.](image)

N = 13,809 Non-Choice; 9,009 Choice

FIGURE 2B Biannual Percentage Change in Enrollment Over Year 1 in Choice and Non-Choice States—State Sums

![Graph showing biannual percentage change in enrollment.](image)

N = 13,809 Non-Choice; 9,009 Choice
Biannual Enrollment in Choice and Non-Choice States—School Means

$N = 13,809$ Non-Choice; 9,009 Choice


Biannual Percentage Change in Enrollment Over Year 1 in Choice and Non-Choice States—School Means

$N = 13,809$ Non-Choice; 9,009 Choice

school enrollments over time. Figures 3A and 3B on page 15 show average school size in choice and non-choice states, first with average trends over time and then with the percentage change. In both figures, average school enrollments moved in similar trajectories in choice and non-choice states, although the decrease in choice states appeared to be greater than in non-choice states (Figure 3B).

These are, of course, only descriptive trends. Though they are helpful for understanding general private school enrollment patterns and suggest enrollment trends in choice states differed little from non-choice states, we cannot draw statistical inferences about the relationship between enrollment and the adoption of school choice programs.

To help isolate the relationship between choice and average school enrollment (the outcome variable of interest in this question), we used a time series analysis with linear and curvilinear trends interacted with school choice program indicator variables and school and year fixed effects. The former—where time is measured as years (i.e., linear) and years squared (i.e., curvilinear)—allowed us to detect differences in enrollment trends between schools in choice states and those operating in non-choice states, which we describe in more detail later. The latter—school and year fixed effects—enabled us to control for factors within schools or within years that might confound the relationship between choice and enrollment.

A longitudinal approach to trends in private schools is particularly important because the effects of large-scale interventions often take time to manifest. As one study of vouchers and racial segregation noted,

“[I]t may take several years or possibly decades before a new long-run equilibrium is reached. Evaluations conducted only a few years after implementation may reveal very little about the long-run effects of [choice] because they will not fully account for, along with many other factors, the long-run supply responses of existing private schools, entry by new private schools, competitive responses by public schools, and long-run demand responses.”

The analyses began with choice measured broadly as simply whether a state had any type of choice, as defined above. We also controlled for whether a state had a charter school law. The inclusion of a charter variable controlled for the possible effects of charter schools on the outcome measures. We say “possible” because prior research is mixed on the relationship between charter schools and private school enrollment, but because the greater consensus of prior research findings seems to indicate a negative relationship between charter schools and private school enrollment, we included a measure in our analyses.

Setting aside all of the control variables, the primary variables of interest are average school enrollment—the outcome variable—years, years squared, and the interaction of the choice indicator variable with both time variables—the predictor variables. We included years squared given earlier research findings of a curvilinear trend in private school enrollment and the trend lines displayed previously, which clearly show non-linear trends in enrollment over time in both choice and non-choice states. The interaction of the choice indicator variable with years and years squared captured possible differential trends in enrollment between those operating in choice environments and those that were not. To reiterate, if choice produces growth in average enrollment in private schools that differs from trends in non-choice states, we should expect to see the interaction variable in the tables below as statistically significant and with positive regression coefficients, indicating schools in choice states growing at rates different than schools in non-choice states.

As Table 2 indicates, there appears to be no meaningful difference in enrollment trends between those operating under choice and those that are not, thereby confirming the trends evident
### TABLE 2
Enrollment Trends Between Choice and Non-Choice States (significant variables in bold)

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>se</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter</td>
<td>-0.597</td>
<td>0.909</td>
<td>0.511</td>
</tr>
<tr>
<td>Year</td>
<td>1.471</td>
<td>0.621</td>
<td>0.018</td>
</tr>
<tr>
<td>Year(^2)</td>
<td>-0.086</td>
<td>0.054</td>
<td>0.114</td>
</tr>
<tr>
<td>Choice State x Year</td>
<td>-1.622</td>
<td>0.562</td>
<td>0.004</td>
</tr>
<tr>
<td>Choice State x Year(^2)</td>
<td>0.010</td>
<td>0.044</td>
<td>0.826</td>
</tr>
<tr>
<td>Intercept</td>
<td>205.446</td>
<td>0.830</td>
<td>0.000</td>
</tr>
</tbody>
</table>

\( R^2 \text{adj} = 0.90; \text{N} = 273,746; \text{dependent variable} = \text{average school enrollment} \)


in Figures 3A and 3B. The interaction between choice and year is significant, and indicates a slight decrease in enrollment compared to non-choice states, but the magnitude of the difference is small (i.e., 1.6 fewer students per year). Moreover, the non-significant coefficient for the interaction of choice and year squared indicates the subsequent trend in choice states did not deviate from non-choice states.

Together, these results indicate no meaningful difference in enrollment trends between private schools operating under conditions of school choice and those that do not.

**Choice Measured by Specific Programs**

Of course, the prior analysis measures choice broadly by combining all types of choice programs into a single group. It could be that enrollment is sensitive to specific types of choice. To measure this possibility, we disaggregated choice into the different types of choice programs—voucher, tax-credit scholarship, individual tax credit, and individual tax deduction programs. Figures 4A through 4D illustrate trends over time—specifically the percentage of change—for states based on the different types of programs offered. Similar to Figures 2 and 3, the trends in Figures 4A through 4D show average school enrollment trends move in similar trajectories in states with various types of choice programs as compared to states without such programs. Although the trend lines are not perfectly correlated, they nonetheless fail to show strongly divergent trends that would be consistent with the aforementioned school choice theories.

Subjecting these trends to similar statistical analyses described above confirms the descriptive trends in Figures 4A through 4D. As Table 3 indicates, only two of the interactions involving time and school choice programs were significant. This means the enrollment patterns of choice schools did not consistently diverge from the pattern of non-choice schools. Of the two significant interactions, schools in states with individual tax credits saw a small decrease in enrollment compared to states without such programs, and no change in enrollment in later years. Conversely, schools in individual tax deduction states saw a greater increase in enrollment as compared to non-individual tax deduction states; however, the effect was, again, small with no change in enrollment in later years.
TABLE 3

Enrollment Trends Based on Choice Programs (significant variables in bold)

<table>
<thead>
<tr>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter</td>
<td>-1.043</td>
<td>0.910</td>
</tr>
<tr>
<td>Year</td>
<td>0.754</td>
<td>0.619</td>
</tr>
<tr>
<td>Year²</td>
<td>-0.057</td>
<td>0.054</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year</td>
<td>-2.851</td>
<td>0.992</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year²</td>
<td>-0.017</td>
<td>0.081</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year</td>
<td>2.620</td>
<td>1.169</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year²</td>
<td>-0.087</td>
<td>0.091</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year</td>
<td>0.294</td>
<td>0.752</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year²</td>
<td>-0.051</td>
<td>0.058</td>
</tr>
<tr>
<td>Voucher State x Year</td>
<td>0.848</td>
<td>0.712</td>
</tr>
<tr>
<td>Voucher State x Year²</td>
<td>-0.057</td>
<td>0.057</td>
</tr>
<tr>
<td>Intercept</td>
<td>205.308</td>
<td>0.838</td>
</tr>
</tbody>
</table>

R² adj = 0.90; N = 273,746; dependent variable = average school enrollment


Enrollment Trends Compared to Population Trends

It is important to note that trends in enrollment or demographics may be influenced by changes in the communities in which schools operate. In light of this, we compare private school enrollment trends to those in the larger population. To do so, we used geographic information system (GIS) or geocoding in comparing private schools to their surrounding communities and schools. To date, few school choice studies have used this growing technology, which is an unfortunate omission given the importance of the social, cultural, and economic landscapes that shape school choice. Using contemporary technology, GIS allows researchers to “layer” data with spatial characteristics on computer-generated maps in order to better understand contextual issues and spatial patterns and relationships. It can also be used with traditional statistical analyses to improve estimates such as those derived herein. Of those who have used spatial analysis in school choice research, prior authors have examined how geography affects domains, such as parental choices, differences in achievement, housing markets, school efficiency, and racial segregation. Thus, while our use of GIS is not entirely unique, it is one among a very small collection of studies in the school choice oeuvre.

We compared the enrollment trends of each private school to those of public schools operating within five miles of the respective private school. This approach examines whether the enrollment trends in private schools mirror those of surrounding public schools—a measure of population changes—or whether conditions of choice alter the enrollment trends of private schools in relation to public schools.
**FIGURE 4A**
Biannual Percentage Change in Enrollment Over Year 1 in Voucher and Non-Voucher States—School Means

![Graph showing biannual percentage change in enrollment for voucher and non-voucher states.](image)

N = 17,660 Non-Voucher; 5,152 Voucher

**FIGURE 4B**
Biannual Percentage Change in Enrollment Over Year 1 in Tax-Credit Scholarship and Non-Tax-Credit Scholarship States—School Means

![Graph showing biannual percentage change in enrollment for tax-credit and non-tax-credit scholarship states.](image)

N = 17,840 Non-Tax-Credit Scholarship; 4,972 Tax-Credit Scholarship
FIGURE 4C
Biannual Percentage Change in Enrollment Over Year 1 in Individual Tax Credit and Non-Individual Tax Credit States—School Means

\[ N = 20,933 \text{ Non-Individual Tax Credit; 1,880 Individual Tax Credit} \]

FIGURE 4D
Biannual Percentage Change in Enrollment Over Year 1 in Individual Tax Deduction and Non-Individual Tax Deduction States—School Means

\[ N = 21,342 \text{ Non-Individual Tax Deduction; 1,471 Individual Tax Credit} \]
We drew the public school data from the Elementary and Secondary Information System (ElSi). ElSi data were available for all years that corresponded to the PSS data, and we matched public schools to private schools based on the grade levels they offer.

We created the specific outcome measure in the analyses by dividing each private school's enrollment by the total enrollment in the surrounding public schools. This ratio enabled us to track changes in the enrollment of private schools as compared to surrounding public schools. If the enrollment of private schools increased relative to the surrounding public school enrollment, for example, the ratio should increase. Conversely, if enrollment increased in public schools but remained constant or decreased in the private schools, then the ratio should decrease.

The analysis for this question was similar to that used in the previous analyses, where we examined the enrollment ratio trend in both a linear and a curvilinear pattern, paying particular attention to differences in the trend lines based on the presence of choice programs. Time-varying control variables included the presence of a charter school law and the percentage of free and reduced-price lunch (FRL) students in the public schools used in the comparisons. Finally, as in the previous section, one analysis measured differences using a broad measure of choice, and a second analysis disaggregated by different choice programs.

As Table 4 indicates, the only significant effect when using a broad measure of choice was the interaction between status as a choice state and year. The positive coefficient indicates choice states saw a greater increase in relative enrollment over time, but the effect was very small, too small to be practically significant. Specifically, the outcome variable is a ratio (private school enrollment/average public school enrollment). Thus, in practical terms the coefficient of 0.004 means that from one year to the next, private schools in choice states saw an average increase in enrollment of 0.004 percentage points above the average growth evident in schools in non-choice states vis-à-vis surrounding public schools.

Similarly, when choice was disaggregated into the respective programs, only one program saw significant effects—tax-credit scholarship—and the effects were quite small as seen in Table 5. Schools in tax-credit scholarships states saw a slight relative increase in enrollment but then saw a slight decrease. For practical purposes, however, the differences were not meaningful.

Taken together, the results across the different analyses of enrollment tell a consistent story. The enrollment patterns in private schools in choice states did not differ meaningfully or in most cases statistically from schools in non-choice states. This was the case whether choice was measured broadly or when disaggregated into specific programs or when enrollment trends are compared to general population trends.

Is there a significant difference in the percentage of racial/ethnic minority students after the introduction of private school choice programs?

Choice Measured Broadly

We examined trends in the percentages of racial/ethnic minority students served in private schools. As Figure 5A on page 23 illustrates, in general, the average percentages of minority students enrolled in private schools increased from 1994 through 2012. (The racial composition of private schools was not captured in the PSS in 1990 or 1992.) This was the case in states offering choice (measured broadly as any type of choice program) and those not offering choice. Although both types of states saw an increase, Figure 5B on page 23 suggests that the rate of growth compared to the first year of data was greater in choice states than non-choice states. Based on these descriptive results, it appears
### TABLE 4
Private School Enrollment as a Function of Public School Enrollment Disaggregated by Choice Measured Broadly (significant variables in bold)

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter</td>
<td>-0.008</td>
<td>0.006</td>
<td>0.214</td>
</tr>
<tr>
<td>FRL</td>
<td>-0.170</td>
<td>0.071</td>
<td>0.017</td>
</tr>
<tr>
<td>Year</td>
<td>0.007</td>
<td>0.006</td>
<td>0.211</td>
</tr>
<tr>
<td>Year²</td>
<td>-0.000</td>
<td>0.000</td>
<td>0.260</td>
</tr>
<tr>
<td>Choice State x Year</td>
<td>0.004</td>
<td>0.001</td>
<td>0.008</td>
</tr>
<tr>
<td>Choice State x Year²</td>
<td>-0.000</td>
<td>0.000</td>
<td>0.442</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.099</td>
<td>0.015</td>
<td>0.000</td>
</tr>
</tbody>
</table>

$R^2_{adj} = 0.31; N = 193,272$; dependent variable = ratio of average private school enrollment to average public school enrollment


### TABLE 5
Private School Enrollment as a Function of Public School Enrollment Disaggregated by Specific Choice Programs (significant variables in bold)

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter</td>
<td>-0.009</td>
<td>0.007</td>
<td>0.164</td>
</tr>
<tr>
<td>FRL</td>
<td>-0.172</td>
<td>0.071</td>
<td>0.016</td>
</tr>
<tr>
<td>Year</td>
<td>0.008</td>
<td>0.006</td>
<td>0.193</td>
</tr>
<tr>
<td>Year²</td>
<td>-0.001</td>
<td>0.000</td>
<td>0.226</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year</td>
<td>-0.005</td>
<td>0.004</td>
<td>0.270</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year²</td>
<td>0.001</td>
<td>0.000</td>
<td>0.154</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year</td>
<td>0.001</td>
<td>0.002</td>
<td>0.692</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year²</td>
<td>-0.000</td>
<td>0.000</td>
<td>0.914</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year</td>
<td>0.006</td>
<td>0.002</td>
<td>0.000</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year²</td>
<td>-0.000</td>
<td>0.000</td>
<td>0.006</td>
</tr>
<tr>
<td>Voucher State x Year</td>
<td>0.001</td>
<td>0.002</td>
<td>0.736</td>
</tr>
<tr>
<td>Voucher State x Year²</td>
<td>0.000</td>
<td>0.000</td>
<td>0.772</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.101</td>
<td>0.015</td>
<td>0.000</td>
</tr>
</tbody>
</table>

$R^2_{adj} = 0.31; N = 193,272$; dependent variable = ratio of average private school enrollment to average public school enrollment

FIGURE 5A  Biannual Percentage Racial/Ethnic Minority Students in Schools in Choice and Non-Choice States

N = 14,003 Non-Choice; 9,132 Choice

FIGURE 5B  Biannual Percentage Change in Racial/Ethnic Minority Students Over Year 1 in Choice and Non-Choice States

N = 14,003 Non-Choice; 9,132 Choice
private schools operating in choice states have not grown “whiter,” on average, as compared to those in non-choice states and perhaps may have grown more diverse.

Those are, of course, descriptive trends only, but when subjected to the same type of statistical testing described previously, the results told a similar story. Table 6 indicates the interaction of choice and the time variables are not statistically significant, indicating the percentages of minority students in choice schools did not diverge from the pattern of non-choice schools. Specific to the hypothesis guiding this analysis, these results mean the student body demographics of private schools operating under choice mirror those of non-choice schools. Put simply, the demographics of private schools have not grown “whiter” while operating under conditions of choice, broadly measured.

### Choice Measured by Specific Programs

When choice was disaggregated into different programs, results were similar to when choice is measured broadly. As Figures 6A through 6D starting on page 25 illustrate, the percentages of minority students increased over time in states with no type of choice and states that offered the specific school choice programs. Moreover, the growth in choice states appeared to be greater in later years studied herein.

When subjected to statistical analysis, however, the results—found in Table 7 on page 27—were essentially the same as Table 6 suggests. For all programs save one, the interactions between program indicator variables and the time variables were not significant, again meaning the percentages of minority students in choice schools did not diverge from the pattern of non-choice schools once choice was introduced into the environment. The one exception is the interaction of voucher states and year squared. In later years, the coefficient indicates a small increase in schools operating in voucher states. Though, again, the difference is small. Consistent with the broader measure of choice, private school demographics have not grown “whiter” while operating under specific measures of choice, including vouchers and different types of tax-credit programs.

### Percentage Minority Trends Compared to Population Trends

On average, the student populations of private schools in choice states have grown more diverse over time and similarly so compared to non-choice states, but how does the diversity of the schools
FIGURE 6A
Biannual Percentage Change in Racial/Ethnic Minority Students Over Year 1 in Voucher and Non-Voucher States

N = 17,871 Non-Voucher; 5,265 Voucher

FIGURE 6B
Biannual Percentage Change in Racial/Ethnic Minority Students Over Year 1 in Tax-Credit Scholarship and Non-Tax-Credit Scholarship States

N = 18,046 Non-Tax-Credit Scholarship; 5,090 Tax-Credit Scholarship
**FIGURE 6C** Biannual Percentage Change in Racial/Ethnic Minority Students Over Year 1 in Individual Tax Credit and Non-Individual Tax Credit

- **SCHOOL YEAR ENDING**
  - 1996
  - 1998
  - 2000
  - 2002
  - 2004
  - 2006
  - 2008
  - 2010
  - 2012

- **PERCENTAGE CHANGE**
  - 0%
  - 10%
  - 20%
  - 30%
  - 40%
  - 50%
  - 60%
  - 70%
  - 80%

- **NUMBER OF INDIVIDUAL TAX CREDIT PROGRAMS**
  - 0
  - 1
  - 2
  - 3
  - 4

- **N** = 21,273 Non-Individual Tax Credit; 1,863 Individual Tax Credit


**FIGURE 6D** Biannual Percentage Change in Racial/Ethnic Minority Students Over Year 1 in Individual Tax Deduction and Non-Individual Tax Deduction States

- **SCHOOL YEAR ENDING**
  - 1996
  - 1998
  - 2000
  - 2002
  - 2004
  - 2006
  - 2008
  - 2010
  - 2012

- **PERCENTAGE CHANGE**
  - 0%
  - 10%
  - 20%
  - 30%
  - 40%
  - 50%
  - 60%
  - 70%
  - 80%

- **NUMBER OF INDIVIDUAL TAX DEDUCTION PROGRAMS**
  - 0
  - 1
  - 2
  - 3
  - 4

- **N** = 21,664 Non-Individual Tax Deduction; 1,472 Individual Tax Credit

TABLE 7
Percent Racial/Ethnic Minority Students Between Schools in Choice and Non-Choice States
(significant variables in bold)

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter</td>
<td>-0.077</td>
<td>0.166</td>
<td>0.643</td>
</tr>
<tr>
<td>Year</td>
<td>9.054</td>
<td>2.253</td>
<td>0.000</td>
</tr>
<tr>
<td>Year²</td>
<td>-0.364</td>
<td>0.113</td>
<td>0.001</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year</td>
<td>0.084</td>
<td>0.250</td>
<td>0.737</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year²</td>
<td>0.000</td>
<td>0.019</td>
<td>0.996</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year</td>
<td>-0.099</td>
<td>0.249</td>
<td>0.690</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year²</td>
<td>-0.008</td>
<td>0.019</td>
<td>0.664</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year</td>
<td>0.056</td>
<td>0.249</td>
<td>0.741</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year²</td>
<td>-0.003</td>
<td>0.013</td>
<td>0.804</td>
</tr>
<tr>
<td>Voucher State x Year</td>
<td>-0.250</td>
<td>0.172</td>
<td>0.146</td>
</tr>
<tr>
<td>Voucher State x Year²</td>
<td>0.027</td>
<td>0.013</td>
<td>0.042</td>
</tr>
<tr>
<td>Intercept</td>
<td>-27.914</td>
<td>11.203</td>
<td>0.013</td>
</tr>
</tbody>
</table>

$R^2_{adj} = 0.76; N = 231,358; \text{dependent variable = average percentage racial/ethnic minority students per school}$


compare to the geographical areas surrounding the schools? To answer this, we compared the percentage of racial/ethnic minority students in each school to the matched school-aged population within a one mile area around the respective schools.\textsuperscript{69} In so doing, the analysis “benchmarked” each school’s composition to the surrounding community.

We drew the population data from the decennial census for 2000 and 2010. Although 1990 census data were available, the percentage of minority students were not available for the PSS, so this analysis is limited only to 2000 and 2010. The census data indicate the number of people in geographic areas disaggregated by age groups and race/ethnicity. We matched these age groups to the private schools whereby ages 5–9 in the population were matched to elementary schools, ages 10–14 to middle schools, ages 15–19 to high schools, and various combinations.

To create the specific outcome measure in the analyses, we divided each private school’s minority student percentage by the percentage of minority students within the surrounding school-aged population. This ratio enabled us to track changes in the composition of private schools as compared to the surrounding population. If the racial/ethnic composition of private schools increased relative to the surrounding population, for example, the aforementioned ratio would increase. Conversely, if the percentage of minority children increased in the population but stayed constant or decreased in the private schools, then the ratio would decrease.

The variable measuring changes over time is named “number of years.” This variable indicates the number of years respective choice programs were in effect in 2000 and 2010. For example, if a state’s voucher program went into effect in 1997, then “number of years” would show a value of four in 2000 and a value of 14 in 2010. For states with no programs in operation, “number of years” would
### TABLE 8
Racial/Ethnic Composition of Private Schools as a Function of Composition of Population
Disaggregated by Choice Measured Broadly

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>0.067</td>
<td>0.035</td>
<td>0.052</td>
</tr>
<tr>
<td>N Years of Choice</td>
<td>0.022</td>
<td>0.032</td>
<td>0.496</td>
</tr>
<tr>
<td>Year x N Years of Choice</td>
<td>-0.001</td>
<td>0.021</td>
<td>0.955</td>
</tr>
<tr>
<td>Median Income</td>
<td>0.000</td>
<td>0.000</td>
<td>0.885</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.939</td>
<td>0.107</td>
<td>0.000</td>
</tr>
</tbody>
</table>

$R^2_{adj} = 0.48; \, N = 30,059; \, \text{dependent variable} = \text{ratio of percentage racial/ethnic minority students per private school to percentage racial/ethnic minority of school-aged children in surrounding population}$


### TABLE 9
Racial/Ethnic Composition of Private Schools as a Function of Composition of Population
Disaggregated by Specific Choice Programs

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>0.043</td>
<td>0.034</td>
<td>0.215</td>
</tr>
<tr>
<td>N Years of Individual Tax Credit</td>
<td>-0.011</td>
<td>0.064</td>
<td>0.866</td>
</tr>
<tr>
<td>Year x N Years of Individual Tax Credit</td>
<td>0.009</td>
<td>0.040</td>
<td>0.832</td>
</tr>
<tr>
<td>N Years of Individual Tax Deduction</td>
<td>-0.022</td>
<td>0.057</td>
<td>0.701</td>
</tr>
<tr>
<td>Year x N Years of Individual Tax Deduction</td>
<td>0.009</td>
<td>0.036</td>
<td>0.793</td>
</tr>
<tr>
<td>N Years of Tax-Credit Scholarship</td>
<td>0.066</td>
<td>0.096</td>
<td>0.491</td>
</tr>
<tr>
<td>Year x N Years of Tax-Credit Scholarship</td>
<td>-0.051</td>
<td>0.083</td>
<td>0.545</td>
</tr>
<tr>
<td>N Years of Voucher</td>
<td>0.067</td>
<td>0.058</td>
<td>0.250</td>
</tr>
<tr>
<td>Year x N Years of Voucher</td>
<td>-0.007</td>
<td>0.042</td>
<td>0.859</td>
</tr>
<tr>
<td>Median Income</td>
<td>0.000</td>
<td>0.000</td>
<td>0.581</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.899</td>
<td>0.106</td>
<td>0.000</td>
</tr>
</tbody>
</table>

$R^2_{adj} = 0.48; \, N = 30,059; \, \text{dependent variable} = \text{ratio of percentage racial/ethnic minority students per private school to percentage racial/ethnic minority of school-aged children in surrounding population}$


take a value of zero in both 2000 and 2010. This type of coding reflects the fact that states that may offer the same type of choice program often did not begin offering the programs in the same years. By the year 2000, for instance, one state might have offered a program for two years, while another might have offered a program for eight years. Thus, the programs’ effects on student composition may not be the same in 2000.

If choice has the effect predicted by critics, the “number of years” variable would be statistically significant. It would also have a negative sign, showing the ratio of average percentages of
minority students in private schools to surrounding areas decreasing as the number of years of choice increased.

In the analysis, we also controlled for the median income within the geographic areas surrounding the private schools, included a year variable for 2000 and 2010 to control for any effects that would be idiosyncratic to those years, and included a variable interacting the year and “number of years” variables to measure a differential effect between “number of years” and the two different points in the decade. As with results above, we first examined a broader measure of choice and then disaggregated by type of choice program.

None of the variables were significant, using both a broad measure of choice (Table 8; number of years of any kind of choice) and number of years of specific types of choice (Table 9). That means the average percentage of minority students enrolled in private schools compared with the surrounding school-aged populations did not appear to change as a function of choice. Although the ratio did not increase, neither did it decrease, suggesting private schools under circumstances of choice do not grow “whiter.”

The results tell a consistent story across all the analyses specific to the percentage of minority students present in private schools. Contrary to charges by critics that private schools would grow less diverse as a result of choice, results show the average percentage of minority students in private schools grew over time in choice states similar to schools in non-choice states. Moreover, the percentage of minority students enrolled in private schools compared with the surrounding school-aged populations did not appear to change as a function of choice programs. As with the other analyses, this suggests private schools under circumstances of choice did not grow “whiter,” and the student body composition appeared consistent with the populations surrounding their schools.

Is there a significant difference in the number of grade levels schools offer after the introduction of private school choice programs?

Choice Measured Broadly

For the final research question, we examined the extent to which the infrastructures of schools changed over time after the introduction of choice. Infrastructure was measured by the number of grade levels each school offers. Figure 7A shows the average number of grades private schools offer over time in choice and non-choice states, while Figure 7B shows the percentage change over time. In both figures, the trend lines show similar patterns for choice and non-choice states, with schools in choice states offering slightly fewer grades. It is important to note, however, that the scales on the Y-axes show small increments, thereby exaggerating differences. In Figure 7A, for example, the trend lines are moving within the space of two-tenths of a grade. Thus, the differences between states over time are tiny.

When subjected to statistical testing, the results confirm that differences in numbers of grades private schools offer over time did not differ meaningfully between choice and non-choice states as demonstrated in Table 10 on page 33. Interactions between choice and the time variables showed significance on the year term but not year squared. That means choice schools saw a slightly sharper decrease in the number of grades offered in early years (i.e., an average of two-hundredths of a grade per year), but a subsequent increase was not significantly different from non-choice schools. To reiterate, the differences were not meaningfully large. In fact, all of the changes relevant to the number of grades schools offer were exceptionally small.
**FIGURE 7A** Biannual Average Number of Grades Private Schools Offered in Choice and Non-Choice States

<table>
<thead>
<tr>
<th>SCHOOL YEAR ENDING</th>
<th>NUMBER OF GRADES OFFERED</th>
<th>CHOICE</th>
<th>NON-CHOICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>8.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>8.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>8.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>8.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>8.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>8.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>8.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>8.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>8.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>8.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>9.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>9.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ N = 13,809 \text{ Non-Choice}; 9,009 \text{ Choice} \]


**FIGURE 7B** Biannual Percentage Change in Number of Grades Private Schools Offered Over Year 1 in Choice and Non-Choice States

<table>
<thead>
<tr>
<th>SCHOOL YEAR ENDING</th>
<th>PERCENTAGE CHANGE</th>
<th>CHOICE</th>
<th>NON-CHOICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>0.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>0.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>-3.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>-3.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>-3.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>-2.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>-2.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>-2.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>-2.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>-2.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>-2.6%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ N = 13,809 \text{ Non-Choice}; 9,009 \text{ Choice} \]

**FIGURE 8A** Biannual Percentage Change in the Number of Grades Private Schools Offered Over Year 1 in Voucher and Non-Voucher States

![Graph showing biannual percentage change in grades offered in Voucher and Non-Voucher States from 1992 to 2012.]


**FIGURE 8B** Biannual Percentage Change in the Number of Grades Private Schools Offered Over Year 1 in Tax-Credit Scholarship and Non-Tax-Credit Scholarship States

![Graph showing biannual percentage change in grades offered in Tax-Credit Scholarship and Non-Tax-Credit Scholarship States from 1992 to 2012.]

Biannual Percentage Change in the Number of Grades Private Schools Offered Over Year 1 in Individual Tax Credit and Non-Individual Tax Credit States

\(N = 20,938\) Non-Individual Tax Credit; 1,880 Individual Tax Credit

Biannual Percentage Change in the Number of Grades Private Schools Offered Over Year 1 in Individual Tax Deduction and Non-Individual Tax Deduction States

\(N = 21,348\) Non-Individual Tax Deduction; 1,471 Individual Tax Credit
### TABLE 10
Number of Grades Schools Offered by Choice and Non-Choice States (significant variables in bold)

<table>
<thead>
<tr>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter</td>
<td>0.024</td>
<td>0.015</td>
</tr>
<tr>
<td>Year</td>
<td>-0.009</td>
<td>0.012</td>
</tr>
<tr>
<td>Year²</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>Choice State x Year</td>
<td>-0.020</td>
<td>0.008</td>
</tr>
<tr>
<td>Choice State x Year²</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>8.302</td>
<td>0.011</td>
</tr>
</tbody>
</table>

\( R^2 \text{adj} = 0.82; \ N = 273,822; \) dependent variable = average number of grades offered per school


### TABLE 11
Grades Private Schools Offered Based on Choice Programs (significant variables in bold)

<table>
<thead>
<tr>
<th>Coeff.</th>
<th>se</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter</td>
<td>0.019</td>
<td>0.015</td>
</tr>
<tr>
<td>Year</td>
<td>-0.011</td>
<td>0.012</td>
</tr>
<tr>
<td>Year²</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year</td>
<td>-0.008</td>
<td>0.014</td>
</tr>
<tr>
<td>Individual Tax Credit State x Year²</td>
<td>-0.000</td>
<td>0.001</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year</td>
<td>0.010</td>
<td>0.017</td>
</tr>
<tr>
<td>Individual Tax Deduction State x Year²</td>
<td>-0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year</td>
<td>-0.006</td>
<td>0.011</td>
</tr>
<tr>
<td>Tax-Credit Scholarship State x Year²</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Voucher State x Year</td>
<td>-0.018</td>
<td>0.011</td>
</tr>
<tr>
<td><strong>Voucher State x Year²</strong></td>
<td><strong>0.002</strong></td>
<td><strong>0.001</strong></td>
</tr>
<tr>
<td>Intercept</td>
<td>8.301</td>
<td>0.011</td>
</tr>
</tbody>
</table>

\( R^2 \text{adj} = 0.82; \ N = 273,822; \) dependent variable = average number of grades offered per school

Choice Measured by Specific Programs

When we measured choice by specific programs, we found similar results to our broad measure of choice. As Figures 8A through 8D on pages 31 and 32 show, the trend lines for each of the specific choice programs follow similar patterns, and any divergences are quite small and magnified only by the very small increments present on the Y axes.

When subjected to statistical testing, results indicate non-significant differences for almost all of the school choice program types, again indicating choice schools did not appear to expand the number of grades they offered at a rate different from non-choice schools. Vouchers were the one program type that showed significant interactions with time squared. As Table 11 indicates, schools in states with voucher programs saw a slightly sharper increase (after an initial nonsignificant decrease) in the number of grades schools offered compared to non-voucher schools. We hasten to add, however, that the effect here was extraordinarily small. Schools in voucher states saw growth in the number of grade levels schools offered at a rate of about two-thousandths of a grade per year above the growth evident in non-voucher states. In other words, the practical significance associated with voucher policies was essentially zero.

Together, these results indicate the number of grade levels private schools offered in choice and non-choice states changed very little over time. And the trends showed little or no divergence based on the introduction of choice. Thus, school capacity trends in private schools under conditions of choice look substantively the same as conditions without choice, both broadly measured and disaggregated by different types of choice programs.

DISCUSSION AND CONCLUSION

This study began with a simple but important premise: The introduction of school choice programs should result in an increase in private school enrollments and capacity over time. Choice and economic theories suggest that choice increases the ability of a broader range of families to exit their neighborhood public schools in favor of private schools. In light of increased demand, private schools should expand their capacity and enroll a greater number of students. This study also tested whether school choice results in private schools serving smaller percentages of racial/ethnic minority students, a common concern among choice critics.

The results were not, however, consistent with such expectations. Across all analyses, the enrollment trends of private schools in states with private school choice programs either did not differ significantly or differed only trivially from schools operating without the presence of choice. This was the case whether school choice was measured broadly or in disaggregated form based on different types of choice programs. Similarly, the trends in racial/ethnic composition of private schools in choice states differed little from those in non-choice states, no matter how choice was defined.

Considering these findings in reverse order, the fact that private schools in choice schools did not grow “whiter” seems contrary to the persistent assertion that choice programs will result in segregation. For several reasons, however, this is not entirely surprising. First, private school choice programs have historically been targeted toward specific student populations, such as low-income families, students with special needs, or those trapped in under-performing or “failing” schools. Because of the strong correlation between income and race/ethnicity, the disproportionate representation of minority students in special education, and the greater likelihood of “failing” schools to be located in urban areas populated by minority families, it is entirely logical that the greatest proportion of students taking advantage of choice programs would be racial/ethnic minorities.

The trend evident in these results may also stem
from school choice enabling religious schools to fulfill one of their historic missions to an even greater degree—providing children who are financially challenged, including racial and ethnic minorities, the opportunity to attend rigorous academic and faith-based programs.74 Seeing such efforts as a form of social welfare, many religious school leaders have set as one of their goals to help break the cycle of poverty by providing disadvantaged students a rigorous education.75 Then, there is the simple explanation that, even in circumstances of universal choice, white parents may not see a need to leave public schools they perceive as high-quality.76 Higher-quality schools continue to be populated disproportionately by white students.77 If parents think their children are receiving the education they need or want from such schools—except for religious instruction that can be provided at their houses of worship—then paying twice for a private school might seem irrational. In that case, this report’s results appear contrary to predictions of racial sorting. Though the impulse among some may be to ascribe this study’s enrollment and capacity results to a failure of school choice to live up to theoretical expectations, other reasons—working in concert—are more likely.

First, as other authors have found, private school leaders appear slow to respond to changes in their environments. In the context of choice interventions, this is logical.78 New school choice programs have often been limited in their scope, meaning the number of new students any given private school may see after policy adoption may be small, so small, in fact, as to limit the ability of schools to significantly increase their capacity. Adding a grade, for example, requires hiring at least a new teacher plus curricular material and other related resources, all of which demand enough student growth to cover the increased costs. The prudent school leader would naturally be reluctant to take on the additional costs absent clear and present demand.79 Such reluctance would be even more pronounced among private school entrepreneurs, who would need to see sufficient demand before committing to opening and operating a new school.

Second, the significant decline in size of the Catholic school system, which largely pre-dated the adoption of many of today’s choice programs, likely has contributed to small or non-significant differences in capacity and enrollment present in this study. The closure of private schools occurs with some regularity,80 but it has been particularly acute among Catholic schools.81 In 1930, Catholic schooling comprised 60 percent of private school enrollment,82 but since 1990, a little more than 20 percent of Catholic schools closed, displacing about 300,000 students.83 Thus, by the time many of the contemporary school choice programs saw adoption, many Catholic schools were gone, with little to no likelihood of reopening. The effect was to further limit capacity of the private school market to show growth under conditions of choice.

Third, limitations in school choice policies themselves may depress demand and growth in enrollment and capacity. Historically, most choice programs have been targeted in nature, designed to serve only low-income students or those with special needs.84 Moreover, until recently, many programs operated on a small scale, some as trials, with firm caps on participation,85 limits on the percentage of students in a school who may be school-choice students, income limitations on the parents to qualify for the program, geographic limitations, grade limitations, and limitations based on where the student last attended school.86

Then there are the financial limitations associated with subsidies. As several authors note, subsidies, such as vouchers, must be large enough to cover or nearly cover private tuition to enable many families to enroll in private schools.87 On the school side, if the voucher is set significantly below the average per-pupil cost, then many private schools may choose not to participate by taking voucher students.88 As David Fleming noted, “Minimal voucher amounts may motivate some private schools to use vouchers to fill empty seats, but they will not encourage educational entrepreneurs to open schools.”89
Program limitations are not purely financial, however. Religious schools may be cautious about participating in programs that could be accompanied by intrusive government regulation and oversight, thereby depressing increased enrollment and capacity. Almost 20 years ago, survey evidence indicated more than half of private schools were likely to refuse to accept voucher students because of over-regulation. One analysis of Milwaukee private schools found that the accreditation requirement imposed upon schools that sought to participate in the voucher program caused many schools to stop participating in the program or close altogether, and the issue was manifest again in 2016 in Louisiana’s newly created voucher program. Under one of the most highly regulated school choice programs in the nation, Louisiana’s private schools that accept voucher students may not use their own admissions criteria, may not charge more than the amount of the voucher, and must administer the state test. The result was that two-thirds of Louisiana private schools refused to accept voucher students. Indeed, Louisiana private school leaders expressly identified intrusive regulations that would affect their schools’ independence, character, or identity as a reason for non-participation.

Caution to participate may also stem from a fear that even constitutionally “safe” private school choice programs can disappear if funding is eliminated in the state budget. Some programs often depend on annual appropriations in state budgets, and a change in the legislature’s makeup could result in insufficient funding. Anticipating this possibility, private school leaders might hesitate to expand the number of seats made available to choice program students out of fear their school would be vulnerable in the event that funding were taken away.

If legislators are sincere in their intent to see choice work at scale, the issue of capacity can no longer be ignored. More than 25 years ago, John Chubb and Terry Moe predicted the capacity problem when they warned against policies that focused exclusively on creating demand and ignored mechanisms to encourage and promote the emergence of new and different types of schools. Their warning was prescient. As Foundation for Excellence in Education’s Matthew Ladner observed of current programs,

“Existing school voucher and tax-credit programs have been designed, in essence, to allow students to transfer from public schools into a preexisting stock of nonprofit private schools....Few state lawmakers have created choice programs robust enough to spur the creation of new private schools.”
Consequently, others have recently begun referring to capacity as one of the most significant limitations on the choice movement. Results from this report confirm such observations.

Increasing capacity will likely mean, among other things, finding a balance between light regulatory restrictions or burdens and accountability; adopting programs that are more universal rather than targeted, thereby producing enough demand to reduce risk for private school leaders to expand; and structuring financial subsidies, whether in the form of tax programs or vouchers, to incentivize greater private school involvement and to put a greater number of schools within reach of more families. We recognize such recommendations are rather general, but because this issue has seen surprisingly little attention among researchers, pundits, policymakers, and others, we position these results and recommendations as an initial catalyst to begin creative and productive discussion and, undoubtedly, debate about the role of capacity in school choice and recommendations for its expansion.

**FUTURE RESEARCH**

Further debates and discussions would also benefit from additional studies that build on the methods and results reported here. Methodologically, future research should apply different statistical models to these research questions. These can include difference-in-difference analyses or fixed effects models that include year as discrete variables rather than modeling time as linear and non-linear trends. Further analyses could also include additional control variables. For example, we do not control for changing patterns of religiosity over time, which could play a significant role given that most private schools in the United States are affiliated with a faith-based organization. Specific to the analyses in which we compared enrollment and school demographic characteristics to surrounding communities, future research could adjust the buffers we imposed around the schools. Particularly in dense urban areas, differences in the sizes of the buffers may produce different comparison groups, thereby yielding different results than what we report.

Perhaps one of the more significant additions to this work would be differentiating states’ school choice programs based on how “strong” or “weak” such programs are. In our analyses, all programs are treated equally, even though the features of voucher programs differ non-trivially, for example. Moreover, temporal changes in these programs are not captured in our analyses and may play an important role in the outcomes we measured.

New data are always being reported, of course, so future research would benefit from adding more years of data from the PSS and EISi. The analysis of school demographics compared to surrounding communities could also take advantage of annual census data now made available through the American Community Survey. These annual data did not become available in a comprehensive form until the mid-2000s, so the addition of more recent years of data in the PSS will allow for more robust analyses than were possible at the time we started this study.

Finally, we took a national approach to our study, which necessarily means localized effects, differences, and nuances are lost. The analyses we report here could be applied at state, county, and even district levels to understand better local effects and contexts.
APPENDIX
Methods

This appendix provides a more detailed description of the analyses used in this report.

As a reminder, the study was guided by this question: Is there a significant difference in the following three factors after the introduction of private school choice programs?

1. Private school enrollment
2. The percentage of racial/ethnic minority students in private schools
3. The number of grades private schools offered (i.e., capacity)

Of the only other two studies to use PSS data for a longitudinal analysis similar to ours, one used t-tests and ANOVA$^{103}$ and the other used interrupted time series,$^{104}$ with both studies comparing trends across states. We used a time series analysis with linear and quadratic trends interacted with program indicator variables and school and year fixed effects. This enabled us to detect differences in trends between schools in choice states and those operating in non-choice states. As noted in the Future Research section above, several types of analyses could have been employed in this study. We elected to use models with linear and quadratic trends because we were interested in studying trends rather average differences over time, such as what would be produced in a difference-in-differences analysis, and the descriptive statistics clearly indicated non-linear trends. Ultimately, a number of different models and variations on models could have been applied here. For the sake of report length, we could not apply all of the possibilities and hope other researchers will exploit the recommendations for future research above.

For all three research questions, the analyses began with a parsimonious model in which the primary independent variables of interest were whether a state offered any type of choice program, year, year squared, and the interaction of choice and the two year variables. Standard errors were clustered on school. The first model took the form:

$$Y_{it} = \alpha + \beta_1(\text{charter}_{it}) + \beta_2(\text{year}_{it}) + \beta_3(\text{year}^2_{it}) + \beta_4(\text{choice } \times \text{year}_{it}) + \beta_5(\text{choice } \times \text{year}^2_{it}) + \epsilon_{it}$$

where

- $Y = $ each school’s enrollment, percentage minority students, or total grade levels offered per year
- $\text{choice} = 0$ for states with choice programs and 1 for non-choice states
- $\text{charter} = 0$ for when a school’s state did not have a charter law and 1 when it did
- $\text{year} = $ integers, with the first year of data as zero and integers increasing by one each subsequent year
- $\alpha = $ intercept
- $\epsilon = $ error term

To examine the possible effects of specific program types, a second model disaggregated the choice variable into the different choice programs and took the form:

$$Y_{it} = \alpha + \beta_1(\text{charter}_{it}) + \beta_2(\text{year}_{it}) + \beta_3(\text{year}^2_{it}) + \beta_4(\text{individual tax credits } \times \text{year}_{it}) + \beta_5(\text{individual tax credits } \times \text{year}^2_{it}) + \beta_6(\text{individual tax deductions } \times \text{year}_{it}) + \beta_7(\text{individual tax deductions } \times \text{year}^2_{it}) + \beta_8(\text{tax-credit scholarships } \times \text{year}_{it}) + \beta_9(\text{tax-credit scholarships } \times \text{year}^2_{it}) + \beta_{10}(\text{vouchers } \times \text{year}_{it}) + \beta_{11}(\text{vouchers } \times \text{year}^2_{it}) + \epsilon_{it}$$

where terms are as defined above, except the individual choice programs = 0 for states with the respective choice programs and 1 for non-choice program states.

For analyses in which we compared the dependent measures of enrollment and percentage minority to surrounding populations, we used two different models, one for enrollment and one for percentage minority. The analysis for enrollment looked similar to models (1) and (2), but with a different...
dependent measure and an additional control variable. The dependent measure is an enrollment ratio, where each private school’s enrollment is divided by the average enrollment of matched public schools each year within five miles. The additional control variable is the average percentage of free and reduced-price lunch (FRL) students per year in the public schools used in the comparisons.

The analyses for percentage minority took different forms. With only two years of decennial census and PSS data available to match, only two years of data—2000 and 2010—were present in the models. The first analysis took the form:

$$3. \ Y_{it} = \alpha_i + \beta_1(\text{year}_{it}) + \beta_2(\text{number of years of choice}_{it}) + \beta_3(\text{year} \times \text{number of years of choice}_{it}) + \beta_4(\text{median income}_{it}) + \epsilon_{it}$$

where

- $Y$ = ratio score of each private school’s percentage minority to surrounding school-aged population percentage minority within one mile
- $\text{year} = 0$ for 2000 and 1 for 2010
- $\text{number of years of choice} = \text{integers, 0 to 11}$
- $\text{median income} = \text{median income of geographic area surrounding each private school}$

The variable measuring changes over time is named “number of years of choice.” This variable indicates the number of years respective choice programs were in effect in 2000 and 2010. For example, if a state’s voucher program went into effect in 1997, then “number of years” would show a value of four in 2000 and a value of 14 in 2010. For states with no programs in operation, “number of years” takes a value of zero in both 2000 and 2010. This type of coding reflects the fact that states that may offer the same type of choice program often did not begin offering the programs in the same years.

The use of the year variable controlled for any effects that would be idiosyncratic to those years, and a variable interacting the year and “number of years” variables to measure a differential effect between “number of years” and the two different points in the decade. As with the analyses above, we first examined a broader measure of choice and then disaggregated by type of choice program. Thus, in model (3) “number of years of choice” measures the number of years a state had any kind of choice. In model (4), this is adjusted to be the number of years of a specific type of choice program.

For the disaggregated measures of choice, the model took the form:

$$4. \ Y_{it} = \alpha_i + \beta_1(\text{year}_{it}) + \beta_2(\text{number of years of individual tax deductions}_{it}) + \beta_3(\text{number of years of tax-credit scholarships}_{it}) + \beta_4(\text{number of years of vouchers}_{it}) + \beta_5(\text{number of years of individual tax credits}_{it}) + \beta_6(\text{number of years of individual tax deductions} \times \text{year}_{it}) + \beta_7(\text{number of years of tax-credit scholarships} \times \text{year}_{it}) + \beta_8(\text{number of years of vouchers} \times \text{year}_{it}) + \beta_9(\text{median income}_{it}) + \epsilon_{it}$$

Finally, it is important to note that in all models, the unit of analysis is the school. The results reported above indicate average effects at the school level, not at higher levels of aggregation.

**LIMITATIONS**

All studies have limitations, of course, and this one is no different. First, time series and fixed effects analyses are strong quasi-experimental methods of isolating the effects of the independent variables of interest, but they cannot answer questions of causality with the same robustness as randomized control trial studies. Thus, the results reported herein should be understood to be strongly correlational. Second is the inclusion of two potentially important covariates—public school quality and religiosity. Specific to the former, the theory of markets suggests private schools will enter markets or expand their capacity in areas...
where competitors (i.e., public schools) offer a sub-standard product, thus spurring demand for a superior product.\textsuperscript{105} Of course, the lack of a consistent, standard measure of public school quality makes this rather difficult. Prior studies have attempted to use proxies for quality (e.g., class size or student to teacher ratio), but results have been mixed and indeterminate.\textsuperscript{106} If or when other research identifies a reliable and consistent proxy for public school quality that can be applied in longitudinal research spanning many years, the use of that proxy in future like that above has the potential to be a useful improvement.

As to the second potential covariate, prior cross-sectional research suggests the religiosity of geographical areas may explain, in part, differential patterns in new private school entrants into a market or other forms of increased capacity.\textsuperscript{107} Like measures of public school quality, however, limitations on consistent, reliable, longitudinal data on religiosity disaggregated to the level of analysis used herein were prohibitive. Given the improved measures of religiosity now available, future research could benefit from the inclusion of this construct.

Third, in addition to covariate limitations, this study is also constrained by its analytical approach. As a report rather than a book, this study necessarily took a focused analytical approach. Future research could expand upon our study as described above.
NOTES


4. To be clear, education saving accounts can be used to fund expenses associated with public, private, and home schools.

5. Emphasis added; Huriya Jabbar, “‘Every Kid Is Money’: Market-Associated with public, private, and home schools.


17. See note 18 above.


23. Anna J. Egalite, “Choice Program Design and School Supply,” in *New and Better Schools: The Supply Side of School Choice*, ed. Michael Q. McShane (Lanham, MD: Rowman and Littlefield, 2015), pp. 163-84; see note 8 above. If private schools add grades, an alternative explanation could be that a contracting market leads to an increase in grades offered. For example, if a school offering three grades requiring 100 students per grade to operate finds itself in a contracting market and drops to 75 students per grade, it might add an additional grade to compensate for the lost per grade enrollment. We acknowledge this may reduce the definitiveness of our findings on this measure, but given the limitations in the data, this is the best possible measure. Results should be seen as suggestive rather than conclusive.


27. See note 25 above.


32. See note 25 above.


34. See note 25 above.


37. Joel Bohlken, “Tax Credits for Private School Tuition and
the Relationship to Private School Enrollment” (PhD diss., Iowa State Univ., 2011), http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1493&context=etd.


43. See note 14 above.


45. Although longitudinal, they compared two cross sections in the respective years. Howard L. Fuller and George A. Mitchell, The Impact of School Choice on Racial and Ethnic Enrollment in Milwaukee Private Schools, Current Education Issues 99-5 (Milwaukee, WI: Marquette Univ., 1999), http://files.eric.ed.gov/fulltext/ED441903.pdf. There are, of course, studies on the demographics of private schools (see Sean F. Reardon and John T. Yun, Private School Racial Enrollments and Segregation (Cambridge, MA: Harvard Univ., Civil Rights Project, 2002), http://files.eric.ed.gov/fulltext/ED467108.pdf), but their connection to choice is tenuous at best. Suits, for example, descriptively studies the over-representation of white students in private schools by, among other things, comparing—as at the state level—the percentages of white students in private schools in 1998 to the percentages in 2012. Overrepresentation is determined by comparing the percentage of white students in private schools to the percentage of white children in the school-aged population, where the former typically exceeds the latter. The author finds the percentage of white students in private schools did not change substantively from 1998 to 2012. Although Suits discusses implications of his findings for school choice, the analysis does not actually empirically test any relationship between choice and the demographics of private schools. Steve Suits, Race and Ethnicity in a New Era of Public Funding of Private Schools: Private School Enrollment in the South and the Nation (Atlanta, GA: Southern Education Foundation, 2016), http://www.southerneducation.org/getattachment/be785c57-6ee7-4682-b80d-04d89994a06b/Race-and-Ethnicity-in-a-New-Era-of-Public-Funding.aspx.


48. Note that this differs from the number of classrooms in a given school. Instead, it measures whether a school adds new grade levels to those already existing, such as when a K-5 school adds middle school grades.

49. As noted on the NCES’ PSS website, the purposes of the PSS are: “a) to generate biennial data on the total number of private schools, teachers, and students; and b) to build an accurate and complete list of private schools to serve as a sampling frame for NCES surveys of private schools. The PSS began with the 1989-90 school year and has been conducted every two years since. The target population for the survey consists of all private schools in the U.S. that meet the NCES definition (i.e., a private school is not supported primarily by public funds, provides classroom instruction for one or more of grades K-12 or comparable ungraded levels, and has one or more teachers. Organizations or institutions that provide support for home schooling without offering classroom instruction for students are not included.). The survey universe is composed of schools from several sources. The main source is a list frame, initially developed for the 1989-90 survey. The list is updated periodically by matching it with lists provided by nationwide private school associations, state departments of education, and other national private school guides and sources...The PSS consists of a single survey that is completed by administrative personnel in private schools. Information collected includes: religious orientation; level of school; size of school; length of school year; length of school day; total enrollment (K-12); number of high school graduates, whether a school is single-sexed or coeducational and enrollment by sex; number of teachers employed; program emphasis; existence and type of kindergarten program. The Private School Universe Survey produces data similar to that of the NCES’ Common Core of Data (CCD) for the public schools. The data are useful for a variety of policy- and research-relevant issues, such as the growth of religiously-affiliated schools, the length of the school year, the number of private high school graduates, and the number of private school students and teachers.” See “Private School Universe Survey (PSS),” National Center for Education Statistics, accessed Oct. 10, 2016, http://nces.ed.gov/surveys/pss.

50. Ungraded schools are those that do not assign students to traditional grade levels, such as 1st grade, 2nd grade, and so forth. Without such grade designations, it was impossible to measure differences in the number of grades offered. Thus, they were dropped from the sample.

51. See notes 14 and 21 above.

52. Stephen P. Broughman (statistician, National Center for Education Statistics), e-mail message to authors, Nov. 17, 2015.


54. Not all choice programs are created equally. Some have greater restrictions on who may benefit from the programs, How much money participants can claim or receive, what kind of schools can participate,
and so forth. For analytical purposes, however, we made no distinction between programs other than the broad categories identified above (individual tax credits, vouchers, etc.).


56. Number of observations for these and all figures represent averages, as the number of schools changes per year.


59. See note 35 above.

60. Downes and Greenstein, “Understanding The Supply Decisions of Nonprofits”; see note 38 above.

61. Ibid.

62. Ibid.


66. Charter schools were excluded from the comparison public schools.

67. Because of the relative scarcity of school choice literature that uses GIS, there was little definitive direction on how large the buffers needed to be for this comparison. We chose five miles for two reasons. First, we wanted to ensure that the buffer would be large enough to include multiple comparison schools, as more data points would mean greater representation and more stable averages. In high density areas, we could have achieved this with smaller buffers, but this would not be so in areas with smaller population density. We also sought to avoid buffers that would be too large and thereby include comparison schools that were unrepresentative of populations surrounding the private schools. Thus, we chose a buffer size that balanced between larger and smaller population density. Second, it is increasingly common that students commute to school, both public and private. Thus, the relevant populations in schools may not be those who live directly in adjacent neighborhoods but also may include those who travel some distance. Recent research suggests average commuting distances are approximately 2.7 miles, with non-trivial percentages of students traveling up to four, five, or six miles or more. Thus, the use of a five-mile buffer enabled us to capture comparison populations taking into account student commutes. Julia Burdick-Will, “Neighbors, But Not Classmates: Neighborhood Disadvantage and Educational Heterogeneity,” (paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, Apr. 17, 2015); Glazerman, “School Quality and Social Stratification”; Elizabeth J. Wilson, Julian Marshall, Ryan Wilson, and Kevin Krizek, “By Foot, Bus or Car: Children’s School Travel and School Choice Policy,” Environment and Planning A 42, no. 9 (Sept. 2010), pp. 2168-85, doi:10.1068/a435.

68. These models included school and year fixed effects.

69. Note that this buffer is smaller than what we used with the comparison to public schools. This is because for the census data, we needed to limit the number of tracts intersecting within a buffer. For some schools in rural areas there would only be one census tract; for dense areas there were multiple numbers of tracts. Using a five-mile buffer to examine population would have negated the usefulness of understanding surrounding neighborhoods because a large buffer would capture areas outside of neighborhoods.

70. See notes 24 and 25 above.


88. See note 79 above.


78. Downes and Greenstein, “Understanding the Supply Decisions of Nonprofits.”


80. See note 16 above.

81. See note 42 above.

82. See note 35 above.


84. See note 79 above.


86. See note 79 above.


88. See note 79 above.

89. See note 42 above.


92. See note 42 above.


96. See note 79 above.

97. See note 95 above.

98. See note 42 above.

99. Chubb and Moe, Politics, Markets, and America’s Schools.


101. See note 95 above.

102. See note 6 above.

103. See note 37 above.

104. See note 14 above.

105. See note 78 above.

106. Ibid.; see notes 16 and 21 above.

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The views expressed in this report are the authors’ and do not necessarily represent the views of EdChoice.
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If research adheres to proper scientific and methodological standards, its findings can be relied upon no matter who has conducted it. If rules and methods are neither specified nor followed, then the biases of the researcher or an organization may become relevant, because a lack of rigor opens the door for those biases to affect the results.

The authors welcome any and all questions related to methods and findings.
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Background

California Baptist University (CBU) is a comprehensive, liberal arts university located in Riverside, California. Founded in 1950 by the Southern Baptist Convention, the one-time college (university status gained in 1998) has grown to 11 colleges, schools, or divisions offering 72 bachelor degree programs with 150 major concentrations and 47 minors, 25 master degree programs with 45 concentrations, and 3 doctoral programs, with a total enrollment of 9,157 students (as of Fall 2016). While the specific verbiage of CBU’s mission statement may have changed since the original 1950 version, the actual mission remains largely the same. California Baptist University believes each person has been created for a purpose. CBU helps students understand and engage this purpose by providing a Christ-centered educational experience that integrates academics with spiritual and social development opportunities. Graduates are challenged to become individuals whose skills, integrity and sense of purpose glorify God and distinguish them in the workplace and in the world. The University seeks to provide academic programs that prepare students for professional careers, as well as co-curricular programs that foster an environment supporting the intellectual, physical, social and spiritual development of each student. Upon completion of a degree program, each student at California Baptist University should be able to:

- Demonstrate spiritual literacy, including Biblical Christian faith and practice, Baptist perspectives, and the Christian's role in fulfilling the Great Commission.
- Respect diverse religious, cultural, philosophical, and aesthetic experiences and perspectives.
- Use critical thinking skills to demonstrate literacy: listening, speaking, writing, reading, viewing, and visual representing.
• Demonstrate competence in mathematical, scientific, and technological skills.
• Transfer academic studies to a profession and the workplace.
• Implement a personal and social ethic that results in informed participation in multiple levels of community.

(These are condensed to a Core Four; Academically Prepared, Biblically Rooted, Globally Minded, Equipped to Serve)

**Division of Online and Professional Studies**

The Division of Online and Professional Studies (OPS) was conceived in 2010 to better serve non-traditional students primarily seeking a distance learning environment (hybrid or online). Additionally, OPS provides traditional students the benefit of taking up to two online courses per semester, at a reduced rate, in order to expedite their time to degree completion. The separate division has complete oversight of faculty and curriculum, and operates largely independent from its traditional, main campus counterparts, while it remains under the control of CBU’s President and Board of Trustees. The OPS division launched with 12 undergraduate degrees in 2010, and as of Fall 2016 offered 18 undergraduate degrees, 10 graduate degrees, and 2 doctorates. Within many of the previously listed degrees are multiple concentrations and specializations. The Online and Professional studies division of California Baptist University undergraduate program maintains a 70% first year retention rate and the graduate programs maintain an 87% retention rate.

**Distance Learning at CBU**

A major report from the U.S. Department of Education concluded that, in terms of student learning, the most successful delivery models are, in order of effectiveness, (1) the hybrid or “blended” model, (2) fully-online coursework, and (3) traditional face-to-face on-
Three primary factors account for the higher effectiveness of online and hybrid models: First, they tend to be “competency-based” or designed to achieve clearly-defined learning objectives. Second, they promote “interactive learning” or personal engagement with the course materials at deeper levels and over a longer period of time. Third, they support the formation of learning communities, which facilitate individual student progress (U.S. Department of Education Office of Planning, Evaluation, and Policy Development, 2009).

The Course Development Paradigm

The authors, as educators, have been heavily influenced by concepts such as Bloom’s cognitive taxonomy, Wiggins’ backward design, and Fink’s integrated course design. OPS has attempted to create support for course design in order to better create significant learning experiences for all students. The course design standard is required to adhere to the cognitive taxonomy (Bloom, 1956) and provide course objectives and testing for student learning for each of the six kinds of learning in the hierarchical sequence (evaluation, synthesis, analysis, application, comprehension, and knowledge). Additionally, Fink (2003) suggests that any taxonomy of significant learning must include a human dimension, the idea of caring to provide energy for learning more, and learning how to learn. While many educators have discovered that dealing with assessment first may greatly enhance teaching and learning, the idea is not intuitive. Wiggins (1998) implies that backwards design, planning with the end in mind, assists in a more effective identification of basic learning goals, learning activities, and assessment activities. Fink’s integrated course design model (2003) helps to identify how connected these three components may or may not be. In other words, learning goals must match up with teaching and learning activities. Teaching and learning activities must be connected with feedback and assessment events. Feedback and assessment events need to align with learning goals.
Associations between each of the three major components of integrated course design must be connected in order to support learning.

While the Division of Online and Professional Studies relies heavily on fully online and hybrid modalities, it typically asks course writers to develop their courses for 100 percent asynchronous delivery. OPS uses the online version to serve students anywhere in the world, who may not be able to come to the University campus. It uses the hybrid version to serve students from the same geographical region which desire occasional face-to-face interactions. Hybrid courses are usually identical to the fully online version, with the exception that some of the learning activities are moved to the on-ground sessions.

OPS’ standard practice is to ask the course writer him/herself to teach the course the first time it is offered. Afterwards, the writer usually repeats the course on multiple occasions. However, since the University often offers too many sections of a course for one instructor to handle, the administrative team actively recruits additional faculty members to share the workload. For this reason, OPS requires course writers to develop all the materials a second instructor would need in order to teach that course.

OPS delivers online course elements via Blackboard, the nation’s leading learning management system (LMS). Each course has its own website through which students interact with their professor and classmates, access course materials, explore digital library resources, engage in a variety of learning activities, submit assignments, and receive grades. The latest technology enables participants to do virtually everything online that they could do in a traditional classroom setting. The Blackboard site includes minimum system requirements and orientation tutorials designed to equip class members for online study. A 24/7 Help Desk supports both faculty and students.
A hybrid course typically includes one 2-hour face-to-face session per week at a CBU education center, along with online follow-up activities. Since fully online courses are primarily designed for “asynchronous” learning, this enables students to log-in and complete their studies at whatever time of the day or night they wish. Occasionally, online courses include “synchronous” sessions where students may interact with one another in real time.

**The Course Development Process**

Philosophically, OPS uses a behaviorist approach to course development. This approach allows OPS to deliver relevant programs and courses, while simultaneously collecting needed data to maintain accreditation. As course developers, faculty are asked to utilize a backward planning strategy for course development. This means beginning with the end in mind, identifying the assessment evidence necessary for students to complete to demonstrate mastery, and then framing learning experiences around that evidence.

The basic components of the OPS model of integrated course design are the same as those found in other models of instructional design: analyze the situational factors, formulate the learning goals and objectives, design the feedback and assessment procedures, and select the teaching/learning activities. What is distinctive about this model is that these components have been put together in a way that emphasizes their interrelatedness. Course designers are gathering information and making decisions about how the course will be taught. Engaging in both of these activities ensures the high likelihood that the students will have a significant learning experience. In order to do this, faculty work through the course design process in a systematic way. This means completing each step before going on to the next one. This is important because all of the later steps build on the earlier ones.
Infancy Stages of Assessment

The Division of Online and Professional Studies model of course design begins with the end in mind in that each course has an identified critical assignment designed to assess student learning outcomes, university learning outcomes, and accrediting body core competencies using a standardized rubric. The result is that each time a course is completed; data indicating the level of student achievement is aggregated based on the outcomes of what students should be learning in the identified course. At the end of each semester, assessment data is aggregated by course and program and then annually serves to determine any immediate necessary improvements as well as information that is vital to the redevelopment stage of a course. The collected assessment data and subsequent analysis provide a basis for evaluation, decision making, planning, and budgeting. In addition, annual assessment aggregation serves an important element in the program/major's formal program review that takes place every five years, analyzing multiple data points to determine the level of student achievement for each set of outcomes identified with the program.

Prior to using automated assessment, each program assessment coordinator was required to create an excel spreadsheet indicating the collected data points from each course critical assignment rubric which was pulled from the Blackboard site. The program assessment coordinator created columns with formulas to add the results of each outcome measurement and then divided by the number of times the course was taught over a given period in order to obtain an average indicator of student achievement for each identified outcome being measured.

Literature Review

Assessment is a basic element of academic life and has been consistently shown to be beneficial to higher education (Suskie, 2003). The primary concern of assessment in the field of
higher education is deciding what students should be learning and making sure they are learning and achieving to those levels (Suskie, 2003). Assessment specifically involves the systematic collection of data, review of this information, and the following use of the data to improve student development and learning (Kezar, 2013). This process has often been described as a loop, as it comprises a never-ending system of assessment, changes, and growth as long as the loop is being completed successfully (Banta & Blaich, 2010). However, as there are many differing approaches to assessment, it has become important to establish the best practices in higher education assessment.

**Current View of Assessment**

Over time, schools have grown to accept assessment, moving from a “why do we have to do assessment?” approach to a “how can we utilize assessment more effectively” approach as more and more schools have begun to utilize assessment approaches in their institutions (Banta, Suskie, & Walvoord, 2015). More recently, accreditation has been a driving factor in assessment, as it is seen as an internal process of evaluation and something all institutions would like to achieve and/or maintain (Kezar, 2013). However, although assessment has become more greatly used, it has had a very modest impact, due to the preoccupation with the process of assessment, instead of utilizing the results of the assessments (Kuh et al., 2015). Assessment results are difficult to implement for many, because while assessments are inherently based on causing change, most institutions would prefer to assume they are doing everything correctly (Banta & Blaich, 2010). Nonetheless, due to many current cultural trends such as the harsher economic environment, technology enhanced platforms, and the emergence of more transparent and comprehensive credentialing frameworks, a measure of student achievement has become more important than ever (Kuh et al., 2015).
Focus on Student Learning

The purpose of assessment should be to help students learn (Banta & Blaich, 2010). As assessments are primarily based on determining the gap between actual student achievement and the student achievement goals, a focus on student’s achievement and how to increase it is the only way to successfully achieve goals (Nichols, Meyers & Burling, 2009). The most successful assessment campuses have a focus on learning and achievement and embed these values in their ongoing assessment processes, in order to make the most difference in the lives of a student and as an institution (Kezar, 2013; Kuh et al., 2015).

Engaging Faculty

In order for assessment programs to be effective, the instructional faculty must be engaged, share ownership in the goals and objectives, and tie into their ability to find individual significance in the overall process (Driscoll & Wood, 2004; Kinzie, Jankowski, & Provezis, 2014). Unfortunately, assessment is often viewed as the job of someone else and can become overburdening if not done well (Driscoll & Wood, 2004; Sum & Light, 2010). In order to overcome the burden of assessment, faculty members must also be trained in the assessment methods, as well as being aware of the goal, or have the opportunity to collaborate with others on determining the objectives to assess (Driscoll & Wood, 2004; Sum & Light, 2010). In one instance, the instructors of each course in the institution were able to work together to determine their own learning objectives for each course, and in doing so, came away from the experience with a personal investment in the assessment process (Driscoll & Wood, 2004).

Transparency

Although there is a tendency to want to keep the presence of assessments and the results hidden from both the students and other faculty, if data is hidden or controversial, the assessment
cannot be effective (Banta & Blaich, 2010). Assessment programs rely on the ability to freely use and grow from the knowledge gained in assessments, and without that ability, there is no point in completing assessments. (Banta & Blaich, 2010). In addition, a pressure to hold institutions accountable and a desire for transparency has increased dramatically, and is unlikely to go away (Banta et al., 2015). Institutions now have to be able to prove achievement of student learning outcomes and share assessment information transparently with both internal and external audiences (Henning et al., 2008; Kinzie et al., 2014).

**Flexibility**

Assessment programs should be constantly reassessed themselves and given the opportunity to learn and grow from the past (Banta & Blaich, 2010). An assessment program cannot thrive if it lingers on old policies that have never been adjusted with the growth and change of both the institution and culture (Suskie, 2003). In addition, an assessment program that allows no room for flexibility is much more likely to become burdensome and later neglected than one that is able to adjust to affecting factors when needed (Suskie, 2003). The need for standardization must be balanced with the individualized needs of both the institution and the faculty responsible for completing the assessments (Banta et al., 2015).

**Alignment with Course Objectives**

In order to have an effective assessment program, a plan must be developed regarding what outcomes should be measured (Henning et al., 2008). As completing assessments is not the goal, but a process to achieve multiple other goals, the specific goals and objectives to be measured are important to determine (Sum & Light, 2010). Many institutions now choose to align the student learning objectives with objectives for individual courses, in an attempt to develop a straightforward unit of measurement (Driscoll & Wood, 2004; Kezar, 2013). Some
schools have begun to include capstone classes as well as a measurement of what students should have learned throughout their educational journey and to pinpoint the holes in their current program that should be filled with more specific instructions or classes (Henning et al., 2008; Sum & Light, 2010). These class-based learning objectives provide a straightforward method of assessment and allow for more definitive reporting of whether the institution’s students are meeting learning objectives.

**Utilizing Results**

As great as assessment programs are, they are irrelevant if their results are not creating change and improvements in the institutions utilizing them. In a study conducted by Banta and Blaich, only 6% of good practice profiles contained evidence of student learning improvements, with very few instances of actual change being specifically reported (2010). Very few institutions are “closing the assessment loop” and utilizing the results to make improvements (Banta & Blaich, 2010). Assessments need to both indicate the gap in achievements, as well as suggest valid actions to close the gap, so the information on current achievement can be used to impact future achievement (Nichols, et al., 2009). Assessment information therefore needs to be actionable, focused on the needs and application of end users, understandable, and specific in order for it to be effectively utilized (Kuh et al., 2015). Without the utilization of results, there is no point running assessments and there is unlikely to be much growth and improvement in student learning.

**Managing Change**

According to Wilson (2014), leaders must develop a change strategy, execute the related communications and implementation, acknowledge change agents and encourage those slow to adopt, and continually access progress in order to successfully managing effective change in an
organization. Developing a change strategy and accompanying communications may be the most important of these elements. Leaders first need to determine what change is expected and be able to document the specifics of what new behaviors are required, what steps should be taken, and what is not expected to change. Also, being able to articulate internally and externally why the change is occurring, the factors driving the change, and the benefits the change will produce is essential. Rogers (1995) suggests that people are more likely to change when five factors are present. The first factor is when there is a belief that an advantage or personal benefit is likely to occur based upon the change. Second, when similarities are identified with the change to the current state people are more likely to change based upon their familiarity. Third, people are more likely to accept change when it is understood, despite any complexities. Fourth, whenever possible, testing the change in some sort of pilot or test group allows a smaller group to embrace the change prior to seeking wide spread approval. Finally, learning how others have successfully implemented a similar change can provide a powerful assurance. Wilson (2014) also suggests that leaders must decide, and communicate effectively, which individuals and groups will be affected by the change and in what ways. All stakeholders should be considered here, along with responsibilities for leading all aspects of the change. Finally, leaders of change must consider not only when and how the change is to occur, but also how each of those aspects will be communicated, and to whom. Once this change strategy and communication plan has been developed, the key to successful implementation is execution during each phase.

Kotter and Lewin Models

Kotter (2014) with an eight-step model, and Lewin (n.d.) with a three-step model, have developed models for change that seem prescriptive and fairly unambiguous. Lewin’s process change model consists of three stages; unfreeze, change, and refreeze. The first stage, unfreeze,
includes determining what needs to change, ensuring strong support from management, creating the need for change, and managing and understanding stakeholders’ doubts and concerns. The second stage, change, begins with communicating often, and moves to dispelling rumors, empowering action, and involving multiple stakeholders in the process. The final stage, refreeze, involves anchoring the changes into the culture, developing ways to sustain the change, providing support and training, and ends with celebrating success. This model appears to be a straightforward framework for managing change. Kotter’s change model begins with developing a sense of urgency around the need for change. This first step includes identifying potential threats, examining opportunities, beginning frank discussions and requesting support from stakeholders. The second step, forming a powerful coalition, involves identifying leaders and stakeholders, seeking commitment, working on team building, and ensuring a good team mix. Next, the third step, deals with creating a vision for change. A clear vision can be accomplished by determining central values, developing a concise version of a vision, creating a strategy to fulfill the vision, and ensuring that all members of the team are able to effectively articulate the vision in simple, concise terms. After creating the vision, the fourth step is communicating the newly formed vision. This can be accomplished by talking often about the change, addressing stakeholders concerns, tying everything back to the vision, and leading by example. As the change initiative begins to emerge, the fifth step becomes necessary which is removing obstacles. Tasks include identifying leaders to assist in change delivery, ensuring that the organizational structure is congruent with the vision, rewarding stakeholders involved with making the change, identifying change resistors, and removing barriers. As this action step naturally unfolds, the sixth step, creating short-term wins, becomes crucial. These shorter-term targets are best created by choosing targets absent of change critics, justifying investments in
each project, analyzing potential pros and cons of targets, and again, rewarding those individuals responsible for meeting targets. Immediately following these short-term or quick wins, step seven is building on the change. Analyzing the projects for improvements, setting goals for continued momentum, seeking continuous improvement, and bringing in new change agents will help to ensure that change continues to be built. The final step, step eight, is anchoring the changes in the culture. In this step, leaders should be talking about progress at every opportunity, hiring new staff that matches the vision, recognizing key change initiators, and planning for the replacement of key change personnel. While these two models (Kotter and Lewin) are similar in the early stages in that each focus on determining the specific change initiative, creating a vision and forming the necessary coalition, Kotter seems to place more emphasis on developing a sense of urgency in the message. In the middle stages, both models focus on communication, dispelling anxieties in an open fashion, removing obstacles, and creating short-term wins, Lewin seems to focus a bit more on stakeholder support. Both models focus on anchoring the changes into the existing culture and sustaining change in the final stages, although Kotter may focus a bit more on the hiring and training of new staff, and succession planning for possible outgoing change agents.

**Vendor Search Process**

The search for a suitable vendor to assist with automating the assessment process was a year-long process. Initially, multiple vendors suggested that meeting the objectives of automating assessment was possible, but when it came to unpacking the process down to the specifics of assessing every course, every time it was taught, and connecting the assessment to multiple outcomes, only Taskstream could provide a comprehensive package. The assessment functionality outcomes that were nonnegotiable were the following: assessing a critical
assignment in every course, every time it was taught; connecting/assessing course level objectives to program level outcomes; connecting/assessing course level objectives to university student outcomes; connecting/assessing course level objectives to WASC core competencies (including general education); connecting/assessing course level objectives to professional accreditation outcomes; aggregating/disaggregating data among all variables of course level objectives; aggregating/disaggregating data among all variables of student and instructor biographic and demographic information. As with any initiative of this magnitude, multiple unforeseen challenges arose such as students having to select the program to be assessed and instructors having access to courses where they were not the instructor of record. To date, all challenges have been handled satisfactorily.

Implementing the Change Process

The following narrative describes the planning of the addition of an automated assessment initiative using Kotter’s 8-step change model as a framework. To create a sense of urgency (step 1) the administrative team shared with the academic leadership (chairs and deans) some of the major challenges with the current, manual assessment process. Generally speaking, the manual process was not sustainable due to validity and reliability factors. In an era of assessment, valid and reliable data must be accessible in order to inform program growth. For step 2, forming a coalition, stakeholders were identified which included deans, chairs, discipline leads, and key faculty in a potential pilot group. The group seemed to be a diverse, but complementary group of stakeholders. The administrative team shared their vision of change (step 3) that was, “assessment for learning,” which was meant to convey the importance of students, faculty, and programs growing through assessment. In step 4, communicating the vision, all team members were encouraged to communicate the change vision at every
opportunity, and to address stakeholders’ concerns. The academic dean led by example in communicating the vision with much help from the program change agent, the dean of assessment. As the change initiative progresses, removing obstacles (step 5) became paramount. During this phase, the leadership team identified those whose main roles were to assist in delivering the change (new assessment program with new procedures for assessing student work), ensuring that the organizational structure was in line with the vision of “assessment for learning,” rewarding those people who are affecting change, helping those resistors align with the shared vision, and removing any barriers impeding the change process. In step 6, creating short term wins, the leadership team identified those mini-projects that were inexpensive, relatively easy to address, and were guaranteed to be successful. These targets were analyzed to ensure success and positively enhance momentum building. The seventh step, building on the change, was a total team effort consisting of goal setting designed to continue momentum, seeking continuous improvement by analyzing best practices and listening to constituents, and bringing in new change agents when necessary. The final step, step eight, was anchoring the changes in the culture. To ensure anchoring the changes in the culture the change leaders communicated progress at every opportunity, hired and realigned staff to better matched the vision, recognized key change initiators, and planned for the replacement of key change personnel. The combination of Kotter’s 8-steps may allow the best chance at initiating a successful automated assessment program that truly does create value for students, faculty, and the university and its programs.

Automated Assessment

Two full semesters before the automated assessment was set to launch for all courses taught through the Division of Online and Professional Studies, a dedicated behind the scenes
preparation was required to personalize the cloud-based software program. First, it was necessary to create a program template for all 18 undergraduate degrees, 10 graduate degrees, six specializations and concentrations within the graduate degrees, and two doctorate degrees. Next, following the creation of 34 program templates, every course offered in each of the degree programs were added to the program template along with the specific critical assignment name for each course. Finally, 389 rubrics were uploaded, one for each course attached to a degree program. The uploaded rubric indicated the four levels of student achievement used by OPS: exemplary; accomplished; developing; and beginning, along with the dimensions of the assignment to be graded using the rubric. For each dimension of the rubric, learning outcomes were attached one-by-one until the rubric fully indicated which student learning outcomes, university learning outcomes and accreditation core competencies were to be measured from the critical assignment submitted by the students. The above-described process required both the dean of assessment along with the academic support coordinator to dedicate full working days of uploading and personalizing rubrics over a period of four months.

**Pilot Group**

The uploading process for the cloud-based software program began and was completed between the end of the spring session and before the fall session opened in 2016. A pilot program launched in the late spring and summer sessions of 2016 for one of the doctoral degree programs while the uploading process was being completed for the remainder of the OPS degree programs. The doctoral program involved two cohorts, one with 15 students, and the other with 17 students, and two professors of record. The intent of the pilot run was to identify questions from both faculty grading and students uploading the critical assignment in a venue outside of the
Blackboard learning management system, and then to prepare the training for the remainder to the faculty to begin to use the new system based on the feedback.

Faculty Training

Multiple faculty meetings were held to train the 53 full time faculty how to use the cloud-based software program to grade the critical assignment and how to support the students enrolled in their courses who would be uploading their critical assignment for the first time in a manner outside of the Blackboard site. The training session included power point slides with screen shots of what the faculty members would see when they entered the cloud-based software program via a link in every Blackboard course. Short videos were produced by volunteer faculty members and sent to the faculty for the purpose of additional assistance with the steps necessary for the professor to grade and how to send the final score back to the Blackboard course to be tallied with the prior scores earned by the student during the course.

In addition to face-to-face training of the full time faculty with offices located on the campus, it was necessary to train the 250 adjuncts who are located throughout the United States. A system of e-mails were generated which included narratives, screen shots, attached videos, and training manuals created by the dean of assessment and the academic support coordinator. The phone number and email address for the cloud-based software programs’ information and technology services provided additional support in learning to the faculty during the training.

Lessons Learned

The Division of Online and Professional Studies has sought from its inception to establish best practices for higher education assessment and to earn buy-in from faculty members who understand that using assessment ultimately allows for improvement of student development and learning. Recognizing the four assessment misconceptions or myths identified
by Suskie (2003) that may drive university faculty away from keeping assessment alive, current, and thriving, OPS seeks to address each of these proactively. The first of these myths that faculty may believe is that student coursework cannot be used to assess a program’s learning outcomes. In OPS, multiple measures for assessing the key learning outcomes are embedded in the critical assignment for each course that will be assessed annually and in the five-year review. Faculty clearly understand by contributing to the creation of the critical assignment rubric how it effectively measures student, program, and university learning outcomes. The second misconception is that quantitative assessments are more valuable than qualitative assessment. The critical assignments developed by OPS faculty range from traditional multiple choice tests, to research papers, multi-media presentations, oral presentations, case studies, and capstone projects created to demonstrate competency in the outcomes for each discipline as well as university and program learning outcomes. The third myth is that using a single assignment was not sufficient for assessing multiple measures. For OPS faculty, each of the types of assignments named above and submitted as the critical assignment use multiple dimensions to measure diverse learning outcomes. For example, an American Sign Language course that has the signing of a song as the critical assignment is designed to measure ability to effectively communicate and demonstrate presentation skills. The ASL signed song presentation also measures the university learning outcome of academic preparedness and a program outcome of assimilating grammatical sentences using ASL. The fourth misconception is the belief by faculty that assessment measures are etched in stone and cannot ever be changed even though they became outdated. OPS faculty undergo training and are encouraged to use the results of assessment data to determine the effectiveness of the critical assignment for appropriately measuring the key learning outcomes for the course. A systematic process for the use of collection of data, review
of the results, and use of the data for changing an outdated critical assignment is in place for
course leads to implement appropriate changes so that key learning outcomes effectively
measure improvement of student development and learning (Kezar, 2013). This process
emphasizes and supports that the most important outcome of higher education assessment is to
use the findings to provide academic programs that prepare students for professional careers, as
well as co-curricular programs that foster an environment supporting the intellectual, physical,
social and spiritual development of each student.
References


E-Mentorship: Providing Support to Non-Traditional Learners

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Introduction

California Baptist University (CBU) is a comprehensive, liberal arts university located in Riverside, California. Founded in 1950 by the Southern Baptist Convention, the one-time college (university status gained in 1998) has grown to 11 colleges, schools, or divisions offering 72 bachelor degree programs with 150 major concentrations and 47 minors, 25 master degree programs with 45 concentrations, and 3 doctoral programs, with a total enrollment of 9,157 students (as of Fall 2016). While the specific verbiage of CBU’s mission statement may have changed since the original 1950 version, the actual mission remains largely the same. California Baptist University believes each person has been created for a purpose. CBU helps students understand and engage this purpose by providing a Christ-centered educational experience that integrates academics with spiritual and social development opportunities. Graduates are challenged to become individuals whose skills, integrity and sense of purpose glorify God and distinguish them in the workplace and in the world. The University seeks to provide academic programs that prepare students for professional careers, as well as co-curricular programs that foster an environment supporting the intellectual, physical, social and spiritual development of each student. Upon completion of a degree program, each student at California Baptist University should be able to:

- Demonstrate spiritual literacy, including Biblical Christian faith and practice, Baptist perspectives, and the Christian's role in fulfilling the Great Commission.
- Respect diverse religious, cultural, philosophical, and aesthetic experiences and perspectives.
- Use critical thinking skills to demonstrate literacy: listening, speaking, writing, reading, viewing, and visual representing.
• Demonstrate competence in mathematical, scientific, and technological skills.
• Transfer academic studies to a profession and the workplace.
• Implement a personal and social ethic that results in informed participation in multiple levels of community

The Division of Online and Professional Studies (OPS) was conceived in 2010 to better serve non-traditional students primarily seeking a distance learning environment (hybrid or online). Additionally, OPS provides traditional students the benefit of taking up to two online courses per semester, at a reduced rate, in order to expedite their time to degree completion. The separate division has complete oversight of faculty and curriculum, and operates largely independent from its traditional, main campus counterparts, while it remains under the control of CBU’s President and Board of Trustees. The OPS division launched with 12 undergraduate degrees in 2010, and as of Fall 2016 offered 18 undergraduate degrees, 10 graduate degrees, and 2 doctorates. Within many of the previously listed degrees are multiple concentrations and specializations.

The Online and Professional studies division of California Baptist University undergraduate program maintains a 70% first year retention rate and the graduate programs maintain an 87% retention rate. The evidence indicated the majority percentage of our non-retained students was due to academic suspension. Students were experiencing challenges which caused below standard academic achievement resulting in Academic Suspension. Though students were given the opportunity to appeal their Academic Suspension, there were no systems in place to address the challenges that resulted in the student’s initial suspension, resulting in being academically disqualified from taking any future courses.
Mentorship

Mentorship has been defined as a developmentally oriented relationship between a younger or less experienced individual and an older or more experienced individual (Eby et al., 2013). Other definitions have expanded upon this to clarify the relationship’s goals of providing ongoing guidance, instruction, and encouragement to develop the competence and character of the protégé (Randolph & Johnson, 2008). Research has indicated positive outcomes from mentoring between college faculty and various student populations in regard to students’ persistence and academic achievement, as well as positive outcomes from mentoring in general (Eby et al., 2013; Gotian, 2016; Hodges, Payne, Dietz, & Hajovsky, 2014). This academic mentoring can lead to improvements in academic achievement, scholarly productivity, professional development, identity development, academic persistence, and psychological health, and because of this, is of great help to the students (Eby et al., 2013).

Support Types

Three types of mentoring support exist, instrumental/career support, psychosocial support, and relational support (Allen & Eby, 2004; Eby et al., 2013). Each of these three types of support are linked to mentoring success, and are therefore important in a mentoring relationship (Eby, et al, 2013).

Instrumental/Career Support

Instrumental Support is often considered career support. Depending on the circumstances instrumental support would include all explicitly academic mentoring or any career guidance in an academic setting and include work-related and career-related guidance in a professional setting. Allen and Eby (2004) defined career support as those aspects of the mentoring relationship that prepare the protégé for career advancement, such as sponsorship, exposure,
visibility, coaching, protection, and challenging assignments. Similarly, Eby et al., (2013) defined instrumental support as mentor behaviors that are geared toward facilitating protégé’ goal attainment. These include the specific mentor behaviors of providing task-related assistance, sponsorship, exposure and visibility, and coaching (Eby et al., 2013). Two more tasks, assistance in studying and scheduling strategies, and providing advice regarding classes and work, have been found to be significant forms of instrumental support as well (Hodges et al., 2014).

**Psychosocial Support**

Psychosocial support refers to the aspects of the mentoring relationship that enhance the protégé’s sense of competence and self-image such as role modeling, friendship, counseling, acceptance, and confirmation (Allen & Eby, 2004). Mentor behaviors that enhance a protégé’s perception of competence and facilitate both personal and emotional development, including offering counseling, unconditional acceptance, encouragement, and role modeling (Eby et al., 2013) are also parts of psychosocial support. A qualitative study has been completed to examine the specific behaviors of advocacy, teaching self-advocacy, and goal-setting that have been found to be perceived as helpful contributions from the mentors to the mentees (Hodges, et al., 2014). The psychosocial supports attempt to address the protégés personal well-being and confidence in their academic abilities and in personal identity (Freis-Britt & Snider, 2015).

**Relational Support**

Relational support relates to and implies a high relationship quality. Positive relationships between faculty and students based on trust, integrity, opportunity, and understanding have a critical impact on student persistence (Freis-Britt & Snider, 2015). Three of the principles for mentoring defined by Fries-Britt and Snider involve relational support: building authentic relationships, having transparency and trust, and being vulnerable with each other (2015).
Mentoring relationships that seek authenticity will strengthen and not diminish over time (Freis-Britt & Snider, 2015) because both parties understand the importance of building a meaningful relationship based on accountability and appreciation that will remain in good times and bad. Just as important to maintaining a mentor/mentee relationship is transparency and trust. When transparency and trust are in place, the relationship can deepen and gain strength that fortifies the relationship for decades (Freis-Britt & Snider, 2015). Vulnerability is also a major factor of relational support, as it moves the relationship to a new level, according to Britt and Snider (2015). Every mentor and mentee has to be vulnerable to the other and trust the other person to be non-judgmental, to create an ideal foundation for mentoring (Fletcher, 2007; Mullen, 2000). There also must be sufficient mutual trust for the mentee to feel safe defining and redefining him or herself with the help of the mentor (Fletcher, 2007).

**Contributing Factors**

**Racial Differences**

As established by Eby et al. (2013), deep level similarity and experiential similarity between mentor and mentee are tied to greater instrumental support, psychosocial support, and relationship quality, as well as to higher situational satisfaction. This may be because race and culture have been found to play a large role in mentoring relationships (Figueroa & Rodrigues, 2015). As our perspectives regarding higher education are shaped by our experiences, a difference in experience can provide a major difference in perspective (Figueroa & Rodriguez, 2015). In addition, role-modeling is important for minorities, as mentors reflect the positive characteristics of their mentors, and can therefore pass along more culturally relevant characteristics and provide a roadmap for the mentee (Freis-Britt & Snider, 2015). Interactions of race and gender can be unique to each population and faculty sharing common ground with
students tend to better humanize the educational experience, are more proactive in serving them, provide holistic support, and positively influence success (Freis-Britt & Snider, 2015).

**Gender Differences**

Although not confirmed in every study, gender appears to make a difference between both the mentors and mentees in the mentoring relationships (Allen & Eby, 2004). Females mentors provide more psychosocial mentoring, while male mentors provide more career/instrumental mentoring (Allen & Eby, 2004). According to Allen & Eby, (2004) as women tend to have greater comfort with intimacy and men are perceived to hold greater power within organizations. To that end, the greatest amount of psychosocial mentoring occurred between female mentors and female protégés and the least amount between female mentors and male protégés (Allen & Eby, 2004). Allen and Eby (2004) additionally describe several possible reasons for this including that female mentors recognize and prepare young females for organizational barriers that may exist, females place higher emphasis on interpersonal support, or that males may not ask for this type help for fear of feeling weak.

**Interaction Frequency**

Within studies of mentorship, a common theme is the importance of frequent interaction (Eby et al., 2013; Fletcher, 2012; Hodges et al., 2014; Randolph & Johnson, 2008). Interaction frequency has been shown to increase instrumental support, psychosocial support, and relationship quality, as well as provides an increase in the perceived helpfulness of the mentor (Eby et al., 2013; Hodges et al., 2014). A key to success is soliciting weekly reports from the mentors although some institutions require daily contact with the mentor to maintain frequent mentor-mentee interactions (Fletcher, 2012). Also of note is the significant increase in helpfulness of face-to-face interaction. Although, students like the multiple forms of instant
communication that are available (email, text, phone, or social media), they still find more in-depth help from face to face interactions (Hodges et al., 2014). The results of Hodges et al. (2014) study lends to the idea that a persistent and systematic mentoring program tends to improve satisfaction while helping students develop a sense of belonging.

Training Mentors

Although mentors aren’t usually trained in mentorship, training mentors in mentorship skills has been shown to be effective in increasing mentorship success (Gotian, 2016; Randolph & Johnson, 2008). Success has also been found in co-mentoring, where colleagues help each other to develop as unique equals to better learn from each other’s strengths (Mullen, 2000). Co-mentoring values diversity in areas such as ethnicity, gender, status, and learning style to name a few, which are all crucial aspects in mentor protégé relationships as well (Mullen, 2000). Good mentors should be able to bounce ideas off of each other and ask open ended questions to refrain from simply telling the mentee how to solve his or her problem (Gotian, 2016). According to Gotian, skilled mentors should also train their junior mentors in an effort to pass along gained knowledge to an ever improving process of developing.

Mentorship for Student Success

Just as the little boy in the Starfish story (Eiseley, 1979) makes a difference for every starfish he picks up from the dry shoreline and tosses back into the ocean to save, educators have always sought to find ways to make a difference in the lives of each and every student. Research indicates that everyone learns at different ways and at different rates (Gagne, 1985; Vygotsky, 1978). Mentoring between a faculty member and an online non-traditional student is an innovative solution to promote student success and increase student retention. This is the story of how one online university seeks to make a difference in the lives of non-traditional students.
Evidence of the need for Mentorship for Student Success

The OPS division of CBU undergraduate program maintains a 70% first year retention rate and the graduate programs maintain an 87% retention rate. The Mentorship for Student Success program was designed to support students experiencing challenges which caused below standard academic achievement leading to academic suspension resulting in a student being academically disqualified from taking additional courses. The evidence indicated that a percentage of our non-retained students were due to academic suspension.

Prior to the mentorship program, students who were academically suspended were given the opportunity to appeal suspension. This resulted in arduous meetings of the Admissions and Retention committee, which would receive upwards of 100 appeals, each to be carefully researched and considered. The committee would meet for 2-3 hours at a time over 2-3 days. If the student was approved to continue, he/she was placed on Academic Probation which limited him/her to 12 units per semester. Since students in the OPS program only take 12 units in a semester, this limit was not a restriction on students nor was there anything in place to monitor students during the semester.

Since the OPS mission is to respond to the non-traditional student who balances professional and family responsibilities while advancing their education, we piloted a non-traditional support initiative for our students to regain academic qualification and be allowed to continue enrolling in courses. Pairing a student with an academic mentor was born.

Who the mentorship program serves

The Mentorship for Student Success program serves the OPS students who have been placed on academic suspension and who prior to the initiative were not allowed to continue to enroll in courses. Undergraduate students in the mentorship program failed to earn a minimum 2.0
cumulative GPA and a 1.7 semester GPA or a minimum 2.3 semester GPA during their probationary semester. Students who agreed to the terms of the mentorship program, through a phone conversation with their One-Stop Advisor, were allowed to continue under the terms of the mentorship program instead of being academically disqualified.

**How the mentorship works**

The Mentorship for Student Success program was developed in the fall of 2014 to assist select students currently on academic suspension in returning to CBU to finish their degree. The initiative allows students to have their academic suspension lifted for one semester if they agree to two conditions: 1) Enroll in one course per eight-week session resulting in total enrollment of two courses per semester. 2) Agree to be paired with a faculty mentor for an academic semester and connect weekly via the phone, Web-Ex and email with the mentor.

Under the mentorship program, students who are academically suspended the first time are given the opportunity to sign up for the program instead of going through the appeal process. The limit of just one class per 8-week session along with the guidance of a mentor assures us that we are giving students the best possible opportunity to be successful. If students are suspended again, they are still given the opportunity to appeal. However, the Admissions and Retention committee receives about half the appeal numbers than they did prior to the Mentorship for Student Success program. Students who are given the mentorship opportunity and are still not successful often do not submit an appeal. If they do appeal, the appeal is only approved if there were extreme extenuating circumstances for the student. When the committee denies students, the members do so with assurance that we have given the students every opportunity to succeed. The meeting process has been reduced to one two-hour meeting.
Innovate practice

The Mentorship for Student Success program allows the identified students to continue their education rather than be placed on academic suspension and cease enrollment in courses leading to a degree. Mentoring between a faculty member and an online non-traditional student is an innovative solution to promote student success and increase student retention.

Students receive a personal letter from the Associate Vice President of Academics offering them the opportunity to participate in the Mentorship for Student Success program. One-stop advisors maintain contact with the student promoting and explaining the advantages of participating in the mentorship. The Associate Dean for Student Development contacts, recruits, and supports faculty members who participate in the Mentorship for Student Success program.

How data is collected

The Mentorship for Student Success program uses cumulative grade point average and semester grade point average to determine which students are eligible to participate in the program. Data is collected at the end of each grading period and calculated to determine progress of each student. Participating students are assigned a faculty mentor and communications were originally logged by faculty members on an excel spreadsheet.

For this study, the enrollment was researched for every student suspended from Fall 2012 (2 years prior to creation of mentorship program) through Summer 2016 (2 years after creation of mentorship program). Individual student transcripts were evaluated for each student to determine the percentage of students that returned after their initial academic suspension. Additionally, the percentage was calculated of how many students were retained, as determined by each student’s current enrollment or by their posted degree. Once data was compiled on each student, comparison graphs were run in Microsoft Excel on the retention rates of students who
returned prior to the mentorship program versus the retention rates of students who returned through the mentorship program.

Student success from the initiative

Prior to the Mentorship for Student Success program, the identified students were placed on academic suspension and could not continue enrollment. By pairing each student with a faculty mentor for a semester and limiting the unit enrollment, students were able to continue their education and achieve success academically. OPS initiated the program in the fall semester of 2014, continued in the spring semester of 2015 and the summer semester of 2015. By the fall of 2015

The 2014-2015 academic combined data indicates that 108 (40.4%) students successfully navigated their Mentorship for Student Success program semester and were able to continue enrollment for the succeeding semester. It is too early to tell if there is an effect on the amount of students posting degrees because not enough time has elapsed. Many mentorship students are still enrolled, working toward their degrees but there was a 10.6% increase in amount of suspended students who were retained (currently enrolled or posted degree). There was also an 14.5% increase in amount of students who returned after suspension for at least one semester (corresponding 14.5% decrease in students who never returned).

The breakdown for each semester:

Fall 2014 data indicates that 33 (35%) students successfully continued enrollment

Spring 2015 data indicates that 45 (49%) students successfully continued enrollment

Summer 2015 data indicates that 30 (37%) students successfully continued enrollment
Adapting mentorship as the program grows

As the Mentorship for Student Success program continued for the 2015-2016 academic year OPS reflected on ways to improve the mentoring process for students based on the data collection both quantitative and qualitative. During the first year OPS solicited volunteer faculty to accept 3-5 students to mentor in addition to their regular faculty teaching load of courses. This process was not sustainable for the number of students OPS continued to mentor. Beginning in the spring semester of 2015 selected adjunct faculty were identified and recruited to mentor the students on a semester basis. The faculty were specifically selected based on student data suggesting that the faculty possessed exceptional skills involving encouragement and understanding of non-traditional student needs. For the spring of 2015 faculty members mentoring students began logging all communication during the mentoring semester so that additional qualitative data would also be available.
The Mentorship 101 Blackboard course has changed significantly since its inception. Initially, the learning management system (LMS) space was a community for students seeking assistance and a repository for their communication. The latest iteration contains eight weekly modules, each of which contains a devotional and check-in components. The weekly modules cover topics including managing stress, research tips, note-taking tips, Microsoft Office support and assistance, an introduction to internships, staying healthy, proofreading assistance, and staying positive while balancing work, home, and school commitments. The goal is to provide a high level of support in a highly sustainable manner, while not adding significantly to the student workload. In other words, providing the most value to the student, with the least possible investment in time.
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Flipped lessons in Teaching EFL with Mobile Technologies

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Abstract

Students were exposed to flipped lessons for 24 weeks using a variety of materials such as a digital text with iPad, ATR CALL Brix, Newton e-Learning, and TED Talks. An assessment of pre-treatment and post-treatment TOEIC, OPIc computer-based speaking test, and CASEC Computer test results showed that the students improved more in each test. Surveys administered to students indicated more satisfaction with their flipped lessons and more motivated by the blended learning environment.

1. Introduction

E-mobile learning technologies such as the iPhone, iPad, podcasting, and video-casting, and others, are rapidly gaining popularity as an effective means to improve foreign language skills around the world. E-mobile learning is highly motivating to learners, as it offers them a rich, informal, contextual, and ubiquitous learning environment, and ubiquitous learning environment in which it is possible for them to control their learning time, environment and speed (space and pace). m-Learning has other advantages over conventional teaching and learning methods, including the almost limitless number of English news programs, language learning apps, podcasting (audio series), vodcasting (video shows), and so forth, that can be easily accessible and downloadable for free or for little cost (2016, MaCarthy).

In this paper, several case studies are introduced to find out the effectiveness of blended and flipped learning with the use of ICT and mobile technologies in teaching EFL.

2. Theoretical Background

In the field of second language learning (L2), and in computer-assisted language learning (CALL) in particular, there has been an increasing body of research dedicated to the use of mobile devices in language learning in recent years. More technologically oriented teachers and researchers use the term mobile-assisted language learning (MALL) readily as an extension of CALL, as if the term were familiar to everyone in the L2 field. Regarding the roots of MALL and its place in language learning, see Stockwell (2012b) for a detailed discussion. My purpose here as educators is rather to try and determine whether mobile-assisted learning holds benefits for our students, to see how and why students come to use this technology, and how mobile learning compares with more traditional classroom approaches.

Gardner (2007), in a study pertaining to language learning in Spain, revisits his construct of the socio-educational model first proposed in 1985, which emphasizes integrativeness – how well a student wants to interact with members of another culture—and his or her attitude toward a learning situation as being the keys to successful language learning. Ryan and Deci (2000) return to their earlier Self-Determination Theory and further theorize on motivations, intrinsic and extrinsic, claiming that autonomy plays a large role in the former, while with extrinsic motivation, attitudes toward the teacher, methodology, and the learning environment are factors that promote or inhibit motivation.
e-Mobile or m-Learning technologies such as the iPhone or iPad, with Internet affordances such as podcasting, video-casting, and more, are rapidly gaining popularity as an effective means to improve foreign language skills around the world. Mobile learning is highly motivating to learners, as it offers them a rich, informal, contextual, and ubiquitous learning environment. Users can control the time, pace, and speed of their own learning, which is motivating and liberating for many learners. m-learning can also be more personalized than other methods of computerized instruction, as mobile devices can be more easily customized, resulting in the creation of an emotional bond between the user and machine (Sherimon, Vinu, & Reshmy, 2011).

m-Learning has indeed emerged as the next generation of e-Learning. One of the reasons for this has been the high availability of mobile devices worldwide. For example, nearly 100% of Japanese own a mobile phone, with the number of smartphone users in Japan rapidly increasing (Obari, Kojima, & Itahashi, 2010). The smaller screen size and touch interface of smartphones and tablets also leads to more focused learning, as the learner typically has running in the background just a single program at any given time, as opposed to the more common multitasking operations found on desktop and notebook PCs (Gualtieri, 2011).

3. **Flipped Learning**

“Flipping” the classroom is both a pedagogical approach and a theoretical framework rooted in constructivist and problem-based theories of learning. It involves reversing the traditional structure of the classroom, such that in-class time is dedicated to interactive activities and homework is dedicated to would-be in-class lecture materials (Kerry Pusey, Evelyn Doman, and Marie Webb, 2014).

The flipped classroom describes a reversal of traditional teaching where students gain first exposure to new material outside of class, usually via reading or lecture videos, and then class time is used to do the harder work of assimilating that knowledge through strategies such as problem-solving, discussion or debates (Brame, C. 2013).

4. **TED Talks**

TED is a foundation that, for the purposes of this book, makes professional quality presentations in many fields available freely from its Website http://www.ted.com or through various platforms including YouTube, podcasts, television, radio, and, significantly for the purposes of this chapter, mobile apps for smartphones, tablets, and other devices that can play digital videos. TED talks utilized for educational purposes typically feature innovative research presented concisely in less than 18 minutes, and made as interesting as possible with various media and appeals to human interest. Thus TED talks can serve as a relatively painless way for learners to explore a wide range of fields. For non-native English users at intermediate or advanced levels in listening comprehension, the recorded videos available online allow for control of the experience such as repeated viewing, and access to talks on the go with mobile apps.

Students were required to watch 20 TED Talks and write 20 summaries with 300 English words, sometimes made several presentations about the contents with Power Point slides.
The goal of this study 2014 reports on the effectiveness of blended and flipped learning activities using mobile devices for the purpose of improving the English language proficiency of Japanese undergraduates, including their writing, oral communication, presentation skills, and improvements in TOEIC, CASEC scores, and OPIc Speaking test. This study was conducted over a ten-month period during two academic semesters (April 2015 to January 2016). A total of 24 undergraduates were the participants of the study. All of the participants were native speakers of Japanese studying at a private university in Tokyo. The students were administered TOEIC as a pre-test in April 2015 and again as a post-test in January 2016. The purpose of this was to serve as a measurement to help determine if the students’ scores would improve as a result their exposure to the flipped classroom activities, and thereby help ascertain the effectiveness of the lessons.

5.1 Research questions

The research questions targeted in this study were as follows:

a. Are blended and flipped learning using ICT and mobile devices useful in improving students’ overall English skills?

b. Are flipped learning activities using a digital text of Lecture Ready 3 and the several projects of the world religions and Japanese cultural studies with a tablet or a smartphone useful for improving the TOEIC, CASEC, and OPIc scores of Japanese EFL students?

c. Is SNS (Facebook) useful in learning EFL?

5.2 Pedagogy

The blended and flipped learning activities of this study included the following: (1) students watched the online digital textbook Lecture Ready 3 (Frazier & Leeming, 2013b) with their iPads; (2) students spent extensive time watching the lectures with the support of COOORI (Web-based language learning software downloadable from iTunes) during their commuting hours and later wrote a 300-word summary of one lecture per week; (3) students created PowerPoint presentations and presented oral summaries of the e-textbook lectures to their classmates both face-to-face and in front of the entire class; (4) students used Globalvoice CALL software along with their Lecture Ready 3 summaries to attempt to improve their English pronunciation in terms of segmental and prosodic features before their presentations; (5) students used the online program Newton m-Learning with the use of a PC and mobile device during their free time; (6) students used the online program ATR CALL Brix in and out of the classroom during their free time with the use of a PC and mobile device; (7) students watched online TED talks with the use of PC or mobile devices; (8) students spent extensive time watching TED Talks during their commuting hours and writing a 300-word summary of each lecture each week; (9) students presented oral summaries of the TED talks to their classmates both face to face and in front of the class; (10) students used Globalvoice CALL software; (11) students prepared for the special seminar between NUS and AGU and had a join seminar at NUS in Singapore; (12) students made special movies about world religions and presented in the class.

At the end of the course, a questionnaire was administered to students after their exposure to the above activities for the purpose of ascertaining their impressions of their learning activities.
The blended and flipped learning activities of this study included the following: (1) students watched the online digital textbook *Lecture Ready 3* (Frazier & Leeming, 2013b), using a PC and with their mobile devices; (2) students created PowerPoint presentations and presented oral

5.3 Assessments

To assess the results, a sampling of the data is summarized and interpreted in the following sections, including the results from TOEIC tests and CASEC tests which revealed that the students’ overall English proficiency had improved after their exposure to the BL and flipped learning activities. Also included are some of the results of the survey administered to students for the purpose of attaining feedback on how they felt about using their learning activities.

A sampling of the data results is presented below, including the results from TOEIC and CASEC tests, which revealed that the students’ overall English proficiency had improved after their exposure to the blended and flipped learning activities. Also included are some of the results of the survey administered to students for the purpose of attaining feedback on how they felt about all the activities. Twenty-four students took the OPIc computer speaking test, a total of twice (in April 2015 and again in January 2016) to measure their oral proficiency.

a. **TOEIC Test Results**

The TOEIC results revealed that the mean scores increased from a mean TOEIC score of 639 (SD: 118) to a mean score of 727 (SD: 136), which indicated that the students improved their overall English proficiency. The TOEIC pre- and post-test results were analysed using a t-test, indicating that the difference between pre- and post-test scores of both classes were statistically significant at a 1% level.

b. **CASEC Test Results**

The CASEC results revealed that the mean scores increased from a mean CASEC score of 626 (SD: 90) to a mean score of 720 (SD: 65), which indicated that the students improved their overall English proficiency. The CASEC pre- and post-test results were analysed using a t-test, indicating that the difference between pre- and post-test scores of both classes were statistically significant at a 1% level.

c. **OPIc Computer Speaking Test Results**

An increase of roughly 20% in the OPIc speaking test was observed between the pre-test and post-test. This improvement would seem to indicate that the utilization of a learning environment of blended and flipped lessons did help the students to improve their overall English proficiency (cf. figure1 below).
d. Questionnaire

A survey was administered to the participants after their exposure to the blended learning lessons incorporating Lecture Ready 2 and TED Talks through the use of mobile technologies. In response to the survey question, “did you find the digital Lecture Ready 2 (1) useful in improving your English proficiency?” 91% of students felt that the online lectures were very useful. In response to the questions “did you find the ATR CALL Brix program (2), Newton m-learning program (3), and Globalvoice CALL software (4) useful in improving your English proficiency and pronunciation?” , the percentage of students responding that they felt they were effective and useful were, respectively: (2) 82%, (3) 84%, and (4) 91%. Finally, in response to the question “to what extent did you use mobile technologies to study with the online Newton m-learning program?” 30% responded that they had used their mobile devices to study the online English programs.
6. Discussion

An assessment of pre- and post-training TOEIC, CASEC, and OPIc scores revealed that various types of on-line materials and activities included in this study had a positive effect on the students’ overall English skills. Additionally, the students’ listening and oral communication skills improved as a result of integrating blending and flipped learning activities through m-learning.

The questionnaires indicated they were satisfied with the variety of online course materials and programs and were motivated by the BL environment incorporating m-learning. The students’ English writing and oral summary skills also improved after their exposure to Lecture Ready 3. Overall, these results indicated that blended and flipped learning using mobile technologies can effectively be integrated into the language learning curriculum and play a positive role in improving students’ overall language proficiency.

7. Conclusions

The flipped learning environments helped students to improve their English proficiency with the help of ICT and mobile technologies. Students who took part in these projects were pretty much satisfied with the way 24 students were highly engaged in various types of learning activities.

Mobile m-Learning can be motivating to learners to help improve their foreign language skills, as it offers them a rich, informal, contextual, and ubiquitous learning environment. This case study focused on examining a variety of emerging technologies, from speech recognition to Web-based learning, to help determine the effectiveness of flipped classroom activities. Various emerging technologies such as a mobile learning-oriented TOEIC Practice program, Course Power, online TED Talks, and other learning materials were utilized, including an empirical study that indicated their effect on improving the TOEIC, CASEC, and OPIc scores of native Japanese speaking undergraduates (Obari).

M-learning helped to increase the amount of comprehensible English input with the aid of revolutionary education/learning applications. It was also highly motivating to students by offering them a rich, informal, contextual, and ubiquitous learning environment which enabled them to control their learning opportunities or occasions (time), environment (space), and speed (pace).

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Awareness of class evaluation of dental hygiene students

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Awareness of class evaluation of dental hygiene students

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Objectives: The purpose of the study is to investigate the awareness and influencing factors of class evaluation in dental hygiene students. This study will establish the measures for educational quality improvement and basic data for effective way of education.

Methods: A self-reported questionnaire was filled out by 968 dental hygiene students in Busan, Gyeongnam, and Ulsan from August 26 to September 6, 2013. SPSS 19.0 was used for statistical analysis.

Results: 1. Senior students felt the necessity of class evaluation improvement. 2. In class evaluation items by grade, evaluation entity was the most significant factor. 3. The students answered that teaching sincerity was the most important factor in class evaluation.

Conclusions: The students thought that class evaluation depended on the entity and sincerity of the class contents.

Key words: class evaluation, dental hygiene, students factors
Performance of Self-Management Program for Hypertensive-Diabetic Patients

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Performance of Self-Management Program for Hypertensive-Diabetic Patients

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Objectives: To exchange mutual opinion and form a bond through the meeting of patients with the same disease. To promote cultivation of self-management ability for disease through empowerment-centered educational program.

Methods: Subjects consist of 12 hypertensive patients and 12 diabetic patients (applied diabetic program for associated hypertension). Conducted 2-hour program for 10 weeks from February to April, 2016.

1st – Orientation

2nd – To know correct self blood pressure (blood sugar) measurement method

3rd – Proper dietetic therapy for hypertension and diabetes

4th – To eat bland food and taste test

5th – Taking hypertension (diabetes) medications
6th – Prevention and management of hypertensive(diabetic) complication

7th – Exercise in life(stretching, walking), diabetic foot care

8th – Stress management

9th – To become a self-health leader(self-help experience)

10th – Promise for tomorrow(writing a letter to yourself)

Results: 1. Hypertensive patient- Systolic blood pressure showed 17mmHg of decrease with an average of 143mmHg to 126mmHg, and diastolic blood pressure showed 5mmHg of decrease with an average of 78mmHg to 73mmHg. 2. Diabetic patient– Systolic blood pressure showed 12mmHg of decrease with an average of 133mmHg to 121mmHg, and diastolic blood pressure showed 8mmHg of decrease with an average of 73mmHg to 65mmHg. Fasting plasma glucose showed 22mg/dL of decrease from 131mg/dL to 109mg/dL. 3. 11.35 points in average increased for self-efficacy.

Conclusions: Can work in health service area after completing the education, and is expected to get vitalized as a continuous self-management program.

Key Words: diabetes, hypertension, self-management program

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Objectives: By looking into previous research studies for its methods and topics chosen for discussion, the following paper draws upon the problems of precedent researches, evaluates the current research standards and suggests the right direction to take for future studies.

Methods: The paper analyzed a total of 996 published thesis papers registered at Korean Society of Dental Hygiene website (www.ksdh.or.kr) from 2001 to 2015. The details of the analysis involved the following categories: number of researchers, researcher affiliation, research target, major location where the research is conducted, considerations for ethics, research methods, analysis methods, keyword classification and whether or not research funds were obtained. For each category, researcher affiliations (differentiated between lead author and corresponding author then further by professor, dental hygienist, graduate student and others)
were further classified. In terms of research subjects, the targets (dental hygienists, children, male, female, patients, adolescents, college students, adults, senior citizens and others) were categorized. Preschoolers were identified as children, and elementary school to high school students were identified as adolescents. Multiple selection was coded to be possible. In terms of research methods, quantitative research (surveying (self-recorded, interview-based, observation and others), experimental research, application of secondary data, method study and others), qualitative research (research phenomenon, content analysis, grounded theory and others), meta-analysis, program development and concept analysis were classified. Key words were classified as basic studies, clinical, educational and societal dental hygiene.

**Results**: 1. In terms of the number of authors, ‘2-5 people’ was 73.1%, ‘sole authorship’ was 21.5%, ‘6 or more’ was 5.4%. ‘professor’ made up 90.0% of lead authors and 95.5% of corresponding authors. 2. In terms of research subjects, ‘college students’ were 21.3%, ‘adults’ were 21.4%, ‘dental hygienists’ were 14.8%. ‘quantitative researches’ made up 97.5%. 3. In terms of survey methods, ‘self recorded’ was 83.8%, ‘oral examination’ was 11.8% and ‘interview-based surveying’ was 2.1%. As for keyword classification, ‘clinical field’ took up the most at 41.0%. 4. Funded research was 21.7%.

**Conclusions**: Because the overall research trend in dental hygiene was identified, the following paper expects it to be able to provide baseline data for setting future direction in dental hygiene research.
Key words: dental hygiene, research trends
Lesson Planning and Creation of Instructional Materials (IMs): Factors that Affect Teacher’s Delivery of the Curriculum

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Lesson plan is a vital component in the delivery of curriculum. It serves as guide for the teacher of its target learning outcome and strategies to be incorporated in every learning session.

At San Nicolas National High School (SNNHS), lesson planning is not just a vital component in teaching but a major requirement to be submitted to school administrators. Teachers, either newly hired or has been in the service for many years, are required to write their lesson plan in a daily basis. A detailed approach is adopted wherein the teacher will also write down in the lesson plan everything that she will tell and do in the classroom.

Teachers complain about this very tedious work especially for one who has more than three subject preparations. They involve so much time in writing for the lesson plan and have limited time in preparation of instructional materials.

This gave way for the researcher to conduct a study about the perennial problem encountered by public school teachers. Findings and recommendations that will be generated from this study will be presented to local Schools Division office and this would somehow convince them to change some policies and guidelines in preparation of lesson plans and creation of instructional materials.

Objectives:

1. To determine the status and practices of the teachers of SNNHS in:
   a. Lesson planning
   b. Creation of instructional materials

2. To determine the problems encountered by the teachers of SNNHS in:
   a. Lesson planning
b. Creation of instructional materials
3. To examine what Department of Education states about lesson planning and creation of instructional materials based on memoranda.
4. To conduct benchmarking to other schools in terms of their practices in:
   a. Lesson planning
   b. Creation of instructional materials
5. To come up with recommendations based on the result of benchmarking that would address the problems encountered by the teachers of SNNHS.

**Method**

The respondents of this study will be the teachers of San Nicolas National High School. Other schools to be benchmarked will comprise (1) other public school; (2) private school; (3) school from other country. Interview, observation and questionnaire will be used as data gathering tool.
Background

In the heart of urban Nagoya, historic architectures of the late 19th and early 20th centuries have been preserved; moreover, some are open to the public. These buildings play the role of witness to the modernization of Nagoya. Here, we can find former residences of entrepreneurs—pottery manufacturers and exporters, inventors, bankers, educators, and missionaries, among others. The area is named the Cultural Path of Nagoya; recently, it has been attracting the attention of tourists from Japan and abroad.

Nagoya is the capital city of Aichi Prefecture, located at the center of Japan. Because of its geographical proximity to Toyota Motor Corporation and numerous other industrial production sites, Nagoya has been regarded as the center of the manufacturing industry. Although the city has attracted business-oriented tourists (Japan Tourism Agency, 2015), the Cultural Path of Nagoya has begun to be known as a new tourism destination. The Path used to be the residential area for middle to lower class samurai during the 17th and 18th centuries until Japan opened its doors to the international community. Many old houses have already been destroyed, and only a handful of them have been preserved. The Path is not just a remnant of the past that was left behind because of urbanization; rather, it is a unique and valuable asset that highlights the collaboration of city authorities and the owners of historic houses to overcome many difficulties and agree upon a preservation strategy.
Purpose

The purpose of this research is twofold. One aim is to shed light on inbound tourism (i.e., tourism focusing on visitors from foreign countries) associated with Japan’s traditional buildings of the late modern period located in an ultra-modern urban landscape. The author has attempted to demonstrate the cultural value of the buildings and roles played by the residents by gathering the hidden threads of their stories. The other objective is to explore pedagogic implications of programs integrating inbound tourism promotion and English language learning.

Method

The author conducted fieldwork regarding the Cultural Path of Nagoya in 2015 with participating university students from the Industrial Tourism and Oral English Guide class. The research theme for the 2015 academic year was “exploring remains of industrial sites and entrepreneurs of the late modern period and investigating linguistic hospitality of the area.” After having studied the Cultural Path of Nagoya in the classroom, students went to the site. They interviewed curators of preserved facilities, participated in a guided tour conducted in the Japanese language by volunteers of the local community, took photos of the entire area, and compiled their fieldwork achievements into a scenario of oral guide for visitors to the Path. They made presentations introducing the Path as they pretended to be giving an English language guided tour to foreign visitors. They concluded the presentations by pointing out several areas for improvement.

Results and Discussion

The students found strengths pertaining to current tourism strategies and areas for improvement, particularly in terms of receiving international tourists. In the post-work questionnaires, students replied as follows:

S1: I chose Nagoya City Archives (former appeal court) because I wanted foreign visitors to view the mixture of good old historical elements and the modernity of Nagoya. Since the English language brochure includes many specialized terms, I tried to paraphrase them so that people from different linguistic backgrounds could understand them easily.

S2: I chose Nanao-Tenjin Shrine because this religious place is not well known among foreign visitors. Although the site offers English-language fortune-telling slips, the “English” sign is not posted. This is an area for improvement; also, this shrine has an
interesting narrative about a turtle and a god of academics. I imagined that foreigners would not know how to worship at Japanese Shinto shrines, so I wanted to introduce that aspect.

S3: I chose the Futaba Museum because this place does not seem to be that famous among foreign visitors. I was able to understand that people living along the Cultural Path played important roles in developing Nagoya into an advanced industrial city.

S4: I chose the former residence of Sasuke Toyoda. I could see a unique combination of genuine Japanese architecture and Western-style architecture here. I felt the young entrepreneur’s enthusiastic spirit. An English-language leaflet was distributed at the residence, and I tried to change the written language into language suitable for an oral guide.

These excerpts are just a few examples of students’ feedback. Respondents evaluated the fieldwork and resultant oral guides as valuable for language learning. Having been asked as to whether they wished to guide actual foreign guests the following semester, they similarly replied that they would. They also acknowledged that this endeavor would necessitate greater preparation.

The paper emphasizes that English for Specific Purposes (ESP) tourism education can serve as a powerful means to facilitate students’ awareness of their local communities and motivate their learning intentions. Such theme-based, hands-on education will contribute to the development of students’ capacities as well as to tourism promotion within the local community.

Reference
Revitalizing the Zuni Pueblo Language through Student-Created

Photo-Illustrated Dictionaries

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Introduction

The Zuni: Engaging Teachers and Community (ZETAC) project is collaboration between the University of New Mexico and the Zuni Pueblo School District (ZPSD), both located in the southwestern United States, funded by the W. K. Kellogg Foundation. As a progressive and dynamic attempt to redefine the nature of teacher preparation within Indigenous communities, one important part of this work is professional development for classroom teachers, educational assistants, and Zuni Language Teachers in Project-Based Learning (PBL) focused on Zuni history, language, and culture.

The purpose of this paper is to provide a brief history of Native American education and the importance of refocusing that education on the Indigenous culture and context through professional development, and to describe the photo-illustrated dictionaries created by teachers and students as a result of these PBL experiences. In addition, the authors provide information on PBL in connection with the Zuni Language as a key to perpetuate Zuni history and culture with the Zuni children.

Early Indigenous Education

Though much has changed since the early days of Indigenous education, the residuals are engrained in the community consciousness. Traditional Tribal education of their own children involved storytelling and mentorship in aspects of daily life and necessary community skills. Once Colonialism began, first with the Spanish followed by the Mexicans, Franciscan friars educated the Indigenous children in the Catholic doctrine (Mondragon & Stapleton, 2005; Pewewardy, 2005).
In the late 1800s, the U.S. government created the Bureau of Indian Affairs (BIE), which placed Native children in boarding schools, with the goal of removing the children from their Indigenous homes and assimilating them into *American* culture. These boarding schools had, and continue to have, damaging effects on children and families through the generations. A key aspect of the boarding schools was to forbid any communication in the children’s Native language. (Mondragon & Stapleton, 2005; Pewewardy, 2005). By the 1930s, Indian Education was deemed a success by the U.S. Government. After all, 90% of Indian children were enrolled in schools; however, this statistic is misleading because of the high drop out rate and the few students who finished school and returned home could not apply their BIE training to life on the reservation as their coursework had no relation to their reservation environment or culture. In addition, the children were responsible for supporting the boarding schools utilizing essentially child labor to do the laundry, farming, cleaning, and servicing of the facilities as part of their required service (Szasz, 1999).

After closure of the majority of boarding schools in the mid-1930s, Indian Day Schools were created on the reservations and Pueblos. Even though the children were not removed from their homes to attend these schools, the curriculum of the Day Schools was still centralized and speakers of Indigenous languages were continually dissuaded from speaking and writing their home language ((Mondragon & Stapleton, 2005; Pewewardy, 2005). During the Depression and the New Deal of the 1930s and 40s, Indigenous education became more vocational, and in some instances focused on Indigenous artisan skills: pottery-making, painting, weaving, beading, and the like. However the move away from Indigenous language still continued. The strictly enforced rules of speaking only English in schools created an even deeper chasm between these children and their families and communities (Szasz, 1999).
When fast-forwarding to today, extensions of these assimilationist practices exist in the current school-based assessment systems, which favor Western knowledge over Pueblo cultural values and community practices. Even the Common Core State Standards are seen as an extension of Colonialism for the Indigenous children of our country. These standards are yet another way the centralized government has removed local control from school districts and created national standards for education, regardless of region, culture, or language. The Zuni Public School District, where this partnership operates, is a district under the jurisdiction of the New Mexico Public Education Department, and therefore, is accountable to the State of New Mexico for its operations.

The Zuni Public School District

The Zuni Public School District is located within Pueblo of Zuni, New Mexico. The Pueblo encompasses approximately 450,000 acres across counties in two states, where the Indigenous tribe has lived for thousands of years. The current population of the Pueblo is approximately 12,097, and 32% of its residents live below the poverty line (Public School Review, 2014). ZPSD encompasses approximately 600 square miles, and is located approximately 160 miles from the main campus of the university, a three-hour drive on highway and two-lane roads.

ZPSD was established as a way of asserting local autonomy over the education of Zuni Pueblo children, even though the District operates under the laws of the Public Education Department of the State of New Mexico. Four schools (Elementary, K-5; Middle School, 6-8; High School, 9-12; and Alternative School, 7-12) serve a total of 1,300 students (Zuni Public Schools, 1979).

Efforts to Reconnect Schooling to Culture

As a part of ZETAC, teachers and educational assistants participate in professional development in partnership with ZPSD. This professional development is
co-designed by university faculty and ZPSD personnel to assist the district and its teachers in creating meaningful ways to connect the learning of the Zuni language to the context of the Pueblo specifically. In the ZETAC Summer Institute in 2016, teachers worked with middle school and high school students to create photo-illustrated dictionaries of Zuni words for the Zuni Language Teachers to use throughout the year to instruct their students in the Zuni Language.

**The Zuni Language**

**Origins**

There are 19 Pueblo tribes in New Mexico and their languages come from three distinct language groups (Sando, 1992). The Zuni language is considered a language isolated and unrelated to the languages spoken by other Pueblo People of New Mexico. According to the Zuni, their language has been spoken since their emergence into this world (Cocke, Porterfield, & Wemytewa, 2002). As of 2006, 85.7% of Zunis spoke their Indigenous language at home with 14.3% speaking English only; most Zuni speakers are bilingual, speaking both English and Zuni. Generally, the Zuni children are fluent Zuni speakers, with 1,818 children between the ages of 5-17 being identified as fluent speakers of Zuni (Bonvillain, 2006). This trend is important in the continuation of the language into future generations, and reflects the vitality of the Zuni language. Comparatively, trends for other Indigenous languages indicate that only a small percentage of young people speak their Native languages (Bonvillain, 2006). Traditionally, language was learned in all the Pueblos verbally through daily use. These languages are essential to the continuation of the Pueblo way of life as they contain cultural knowledge, songs, kinship organization, and ceremonial rituals that will not survive otherwise.

Further, ceremonies and prayers cannot be conducted in English, nor can English be spoken in religious spaces (Zuni Pueblo, 1999). Due to the knowledge embedded in Pueblo
languages, tribes have been resistant to creating a written form of the language as a way to maintain control of sacred information. This thinking is changing to a degree as Pueblos attempt to maintain their languages by investigating multiple strategies including written forms (Bishop, 2008; Martinez, 2000).

**Transition to Print**

In the 1960s, linguist Curtis Cook wanted to translate the *Bible* into Zuni, but finding that an alphabet did not exist, proceeded to create one using the International Phonetic Alphabet (Romero, 2006). The written form of the Zuni language, or *Shiwi’ma Bena:we*, utilizes the English alphabet, minus eight letters (Cocke, et al., 2002). Other characters were added or altered to incorporate Zuni sounds not represented. Cook also recorded community elders and storytellers as part of his work to document the language. In 1974, Cook authored the *Zuni Language Learning Manual*, published by the Gallup-McKinley County Schools, for bilingual education use within the schools (Gallup-McKinley County Schools).

In 1989, the Zuni Literacy Project was created to support teachers in incorporating the language into their classrooms, however; development of classroom materials to support such instruction is a time-consuming and detailed process. The Zuni language teachers have worked to develop these types of materials that must then be reviewed and approved by the Zuni Tribal Council. Because the Zuni Language has only been written down for a little more than 50 years, there are still discrepancies by those who speak and write the language as to the exact spelling and usage of certain words. This review, critical to accuracy in the language, results in a shortage of classroom resources, and has therefore led teachers to create materials themselves for specific class projects, (D. Kostolecki, personal communication, April 25, 2015). The Zuni Photo-Illustrated Dictionary Project is an example of such student- and teacher-created materials as a result of a true PBL project, with an authentic audience and meeting a genuine community need.

What is ZETAC?

Developing the Project

ZETAC began in 2013 with funding from the W. K. Kellogg Foundation, which had been in conversations with the university and ZPSD, resulting in a collaboration seeking to redefine the nature of teacher preparation within Indigenous communities. The ZPSD invited the university to provide support, technical assistance, and professional development for its teachers, while at the same time recruiting and supporting students to earn degrees to become teachers. ZETAC serves as a model partnership for the ways in which necessary and culturally enabling collaboration can yield strong student educational attainment, as well as solidify community engagement in the educational process.

Goals of ZETAC

ZETAC takes a blended approach toward professional development by grounding the instruction in culturally sustainable pedagogy (Lee & McCarty, 2014) in order to create a solution for Indigenous communities challenged by creating strong curriculum that balances local Indigenous culture with the wider need for Western knowledge and skills. To this end, ZETAC established five goals as follows:
a) Provide a social and cultural orientation for current and future teachers in the Pueblo;
b) Reestablish a sense of empowerment among principals and teachers;
c) Facilitate collegial and collaborative work across the district;
d) Recruit current Pueblo students to become teachers; and
e) Provide educational opportunities through tuition support for teachers and future teachers to obtain graduate and undergraduate degrees.

The hope of the project has been to provide new teacher cultivation and a strong core of professional development that can serve as a foundation for the long-term development of the Pueblo schools and the Pueblo itself.

**ZETAC Goals in Action through Project-Based Learning**

A pillar of ZETAC is to integrate Pueblo culture, language, and history into PK-12 education. Workshops occur two weeks each summer with additional week-long follow up sessions three times during the school year. The focus of these workshops has been the integration of Pueblo language, culture, and history and Project-Based Learning (PBL) for teachers to implement in their classrooms.

Project-Based Learning is a fitting strategy to incorporate Pueblo culture in the classroom because of its focus on solving authentic issues, facilitating learning in community-based settings with authentic audiences where students do the work of real people, while incorporating specific curricular standards throughout the project (Buck Institute, 2016). The major components of PBL (see Figure 1) incorporate teaching the curriculum using inquiry methods, employing student voice and choice, with students revisiting their work through reflection, critique, and revision, and finally producing a public product that speaks to the authentic community issue of focus (Mergendoller, 2015).
Figure 1. The 8 Essential Elements of Project Based Learning. This figure illustrates the aspects of Project Based Learning and their intersections.

The Connection with Culturally Sustaining and Revitalizing Pedagogy

As a PBL Project, the ZETAC Photo-Illustrated Dictionary Project also exemplifies culturally sustaining/revitalizing pedagogy (McCarty & Lee, 2014). Zuni students’ literacy in their Zuni Language will be their key to sustaining and revitalizing their community and this project empowered the students through their language instruction. Students are reclaiming their history and heritage by being directly involved in saving their language in their community through partnering with parents and other community members through interviews, stories, and sharing, these students and teachers are directly responding to the community’s use of their Zuni language.

Project-Based Learning for Language Preservation and Revitalization

The Zuni Photo-Illustrated Dictionary Project is an authentic example of PBL. PBL incorporates the important elements of multicultural education through its major components of hands-on exploration, connection to community and curriculum, valuing local knowledge and expertise, and reflection. Seven Zuni teachers and educational assistants participated in a series of professional development workshops held in Zuni and facilitated by Partnerships Make a Difference (n.d.), a non-profit professional development organization that aims at
assisting teachers in implementing PBL in their classrooms. Middle school and high school students joined the sessions each afternoon to implement the PBL projects the teachers planned during the morning.

The students and their teachers followed the processes illustrated above during their PBL participation: a) Seek to solve or answer a challenging problem or question, b) participate in sustained inquiry c) provide authenticity, d) include student voice and choice, e) participate in reflection, f) follow-up with critique and revision, and g) create a public product. Specific examples illustrate the components of PBL as they connect to the Zuni Photo-Illustrated Dictionary Project.

**Challenging problem or question.** ZETAC participants were challenged to connect the Zuni Language to their own Zuni Core Values (Appendix 1) and to the ideas behind entrepreneurship. Entrepreneurism was one of the themes of the Summer Institute because of the need for economic development in the area. The participants focused on the idea of capitalizing on the incredible artistic skills of members of their community in order to create economic growth.

**Sustained inquiry.** Throughout the week, participants not only explored entrepreneurship, but they also explored their community. Using their phones and digital cameras, they explored their community through entrepreneurial eyes, and photographed ways entrepreneurship was evident in their community, and also lost opportunities for entrepreneurship. In addition, they photographed their Zuni Core Values in action in the community.

**Authenticity.** Because the Zuni Language Teachers led the students during their exploration, the students learned the Zuni words for the concepts they were exploring, such as value, opportunity, creation, dedication, innovation, and organization, as they photographed
representations of these ideas. They also created their own hard cover books using Snapfish, a free online software designed for such projects.

**Student voice and choice.** The students had total control over the key concepts on which their individual books focused and what they photographed. They also had autonomy regarding what photos they chose for their Photo-Illustrated Dictionaries.

**Reflection.** Each day after the exploration and photography sessions, students reflected on what they had learned by reviewing their photographs and the Zuni words that represented their ideas. They also reviewed what ideas were missing and set goals for the next day’s photography outing.

**Critique and revision.** After the initial one-week ZETAC Summer Institute, the students and teachers continued to meet for the next four Wednesdays to revise and finalize their work, continuing to add words and photographs to their books. They also revised the layouts of the books and their graphic design.

**Public product.** As a result of their work, they created four hard cover Zuni language books that are being used by Zuni Language Teachers in their classrooms to teach other students not only Zuni words, but also the Zuni Core Values and entrepreneurial skills necessary for success in their community.

**Conclusion and Next Steps**

As a result of this work, books were distributed to all Zuni Language Teachers, and were donated to all four ZPSD school libraries and the Zuni Public Library. In addition, copies were donated to the Zimmerman Library at the University of New Mexico. This partnership opportunity indeed met the goals of continuing to empower Zuni Pueblo members to use these types of strategies in their classrooms, and also to assist Zuni children in connecting with their language in personal ways, while creating an authentic product that will be used in the Zuni community for years to come.
Successful implementation of all components of PBL led to the creation of meaningful books that will be used by Zuni Pueblo members for years to come. Because teachers now have the knowledge and skills to implement PBL, other projects are being created within the District to continue to educate Zuni Pueblo members in Zuni history, language, and culture.

Sample Cover and Pages from Zuni Photo-Illustrated Dictionary Project
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A:shiwi Core Values

“To Empower a Community of Learners”

(1) Hon ansammo le’na a:dek’yanna.
We will live accordingly.

(2) Hon i:yayyulashshik’yana:wa.
We will respect one another.

(3) Hon ko’hol lewuna:wediyahnan, wan hon i:tse’manna.
We will think before we act and consider the consequences.

(4) Hon i:yansatduna:wa.
We will help one another.

We will give advice and counsel one another.

(6) Hon i:yayyumola a:dek’yanna.
We will be honest and trust one another.

(7) Hon i:wichemana:wa.
We will love one another.

(8) Hon dewulashshi’ iwillaba’ a:dek’yanna.
We will be kind and generous to one another.

(9) Hon i:yanhadiya:na:wa, hon i:yayyu’hadiyahk’yana:wa.
We will listen and pay attention to one another.

(10) Hon delanko’ha:willi:wa.
Be empathetic to one another.

(11) Ihadiya:wa.
Listen.

(12) Don dehwan illaba.
It is your turn.

(13) Hom dehwan ukna:we.
It is my turn.
Title: Keeping Students Personality Types in Mind: Online vs. Face-to-Face Discussions

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Abstract: This study explored evidence of student learning perception in a pre-service methods course in relation to psychological factors such as personality type along with gaining insight about how to best utilize face-to-face and online discussions for diverse students in educational settings. Results suggest students preferred face-to-face literature circles regardless of personality type. Implementing pedagogical options such as Google Hangout and Skype in online settings is suggested to meet the needs of diverse learners.

Keywords: Face-to-face discussions, discussions, literacy circles, motivation, online discussions, personality types, technology, teacher learning, pre-service teachers
How will open source hardware influence our business and education in the future?

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Abstract—This paper presents how open source hardware will influence our business and education in the future. The open source hardware has been playing a key role in business and education. Historically, for example, the vacuum tube radios technology was invented and patented by Dr. Hiroshi Ando. Mr. Konosuke Matsushita (founder of Panasonic) purchased Ando’s patents and delivered the technology to the manufacturers in 1932 at no charge. Since 1932, every family in Japan has been owning an inexpensive consumer radio set. The vacuum tube radios technology is the first, and only the first open source hardware. Thanks to open source hardware, 3D printers and laser cutters are becoming cheap and available for personal use together with open source software. In this paper, our experience of building a laser engraving machine with less than US$70 is presented where gcode plays an important role. Innovations of open source hardware including Raspberry Pizero($5), CHIP($9), NanoPi-NEO($7.99), GPU, and others will bring us inexpensive artificial intelligent system. In other words, we may lose many of our jobs in the near future because such cheap AI system can put you out of a job. We must dramatically change the contents of education in order to prepare for the future human jobs. We must determine what contents of education will be needed in the future society. We should rethink how we can have a fun time or a good time with shortened working hours from the global viewpoints.

Keywords—open source hardware, vacuum tube radios, 3D printers, laser engraving machines, artificial intelligence, GPU, gcode

I. INTRODUCTION

Wikipedia states that Open-source hardware (OSH), consists of physical artifacts of technology designed and offered by the open design movement [1]. Both free and open-source software (FOSS) as well as open-source hardware is created by this open-source culture movement and applies a like concept to a variety of components [1].

Wikipedia also says that First hardware focused "open source" activities were started around 1997 by Bruce Perens [1]. This paper would like to correct the Wikipedia statement. The vacuum tube radios technology was invented and patented by Dr. Hiroshi Ando. Mr. Konosuke Matsushita (founder of Panasonic) purchased Ando’s patents and delivered the technology to the manufacturers in Japan in October 1932 at no charge [2]. Since 1932, every family in Japan has been owning an inexpensive consumer radio set. The vacuum tube radios technology is the first, and only the first open source hardware.

Since the advent of hardware description language (HDL), instead of schematics, sharing HDL code has been forming open source hardware where semiconductor intellectual property cores or IP cores have been playing a key role. ARM-based CPU is one of HDL incubated CPUs. However, ARM IP core is a proprietary product of ARM Ltd and not for free. ARM based devices occupies over 70% market share of embedded system [3]. ARM-based CPU market share in 2010: over 95% in smartphone market [4]. Inexpensive ARM-based CPU has brought a series of Raspberry Pi including Pizero ($5) [5], CHIP($9) [6], and NanoPi-NEO ($7.99) [7], and others. In February 2016, the Raspberry Pi Foundation announced that they had sold eight million devices.

From Gartner, iOS and Android have 98.4% of smartphone market share. Both iOS and Android operating systems are based on open source software as shown in Fig.1.

Fig.1 Open source operating system of smartphone market share:

http://www.macrumors.com/2016/02/18/ios-android-market-share-q4-15-gartner/

Downloading/updating/upgrading Linux operating systems, applications, development tools, device drivers, other software from the internet for free of charge, you can make a small artificial intelligent system with inexpensive open source hardware.

It is understood that ARM-based CPU and open source software play a key role with open source hardware which can build inexpensive artificial intelligent machines. The system of ARM-based CPU and open source software has globally dominated the smartphone market (95%) and the embedded system market (over 70%) as mentioned earlier.

Innovations of open source hardware including Raspberry Pizero($5), CHIP($9), NanoPi-NEO($7.99), and others will bring us inexpensive artificial intelligent system where they are
all based on ARM-CPU. ARM-based CPU will be a heart of IoT devices as shown in Fig. 2.

![Fig. 2 Pizero, CHIP, NanoPi-NEO from left](image)

Open source software libraries for machine learning include TensorFlow from Google, CrowdFlower, Keras, CNTK from Microsoft, Caffe from UC Berkeley, Deeplearning4j, MXNet, SINGA from Apache, Theano, Chainer, and others. Most of open source machine learning can be programmed by Python. Fig. 3 shows race for AI where many giant companies have been involved in the business competition.

![Fig. 3 Race for AI](https://www.cbinsights.com/blog/top-acquirers-ai-startups-ma-timeline/)

We have been using CPUs for long time. However, for machine learning, GPU has been used for fast computation. As shown in Fig. 4, the size of GPU core is much smaller than that of CPU core so that massive GPU cores can be embedded in a single silicon chip.

![Fig. 4 difference between CPU and GPU](image)

The latest NVIDIA GPU as of Aug. 5 of 2016, Titan X Pascal packs in 3,584 CUDA cores with a 1,417MHz base and 1,531 MHz boost clock in a single chip. The GPU chip is composed of 12 billion transistors with 11 TFLOPS (32bit floating point) capability. It is sold for $1200. The GPU can be used with open source machine learning libraries. Because of the recent progress of GPUs, a student can buy and own a supercomputer by himself/herself.

The GPU computing environment and open source machine learning software will make us to build inexpensive artificial intelligent system. Professor Andre Spicer said that AI could put you out of a job [8]. AI will quickly replace many forms of complex knowledge work ranging from lawyers to librarians, professors to policy analysts [8]. As of Aug. 5 of 2016, the google search result using keywords of AI and "out of a job" is 332,000. Many people believe that AI will be able to improve the efficiency of our jobs or to put you out of a job. In other words, sooner or later, our working hours will be significantly reduced by AI.

We must dramatically change the contents of education in order to prepare for the future human jobs. We must determine what contents of education will be needed in the future society. We should also rethink how we can have a fun time or a good time with shortened working hours from the global viewpoints.

Arduino is another open source platform which uses 8-bit microcontroller of Atmega328 (around $1) and related AVR 8-bit chips. Most of the existing sensors and actuators can be easily controlled by Arduino system where Arduino chip can be connected to GPIO, serial UART, i2c bus interface, spi interface. Arduino will be a heart of IoT devices as like ARM-based CPU.

With the progress of the Drone technology, a variety of MEMS (Micro Electro Mechanical Sensor) sensors have become cheaper for personal smart sensing. Recent two MEMS sensors are distinguished: GY-801 and BME280.

GY-801 is composed of four sensors for Drone: L3G4200D (three-axis gyroscope), ADXL345 (three-axis accelerometer), HMC5883L (three-axis digital compass), and BMP180 (digital pressure sensor). GY-801 module is sold for $8.39.

![Fig. 5 GY-801](image)

BME280 is composed of three sensors for sensing humidity( ± 3%), temperature( ± 1°C), and air pressure( ± 1hPa). BME-280 module is sold for $4.12.

![Fig. 6 BME280](image)
II. OPEN SOURCE LASER ENGRAVING MACHINE


**Fig. 7** Laser engraving machine kit

The kit is composed of a controller, two slide motors, a laser module where the controller controls motors and the laser without any software. Hacking the kit without manual is not so hard. The followings are described how to hack the kit:

1. Connect the kit to your PC through USB cable.
2. Find the port number (com number) of USB.
3. Use TeraTerm, picocom, or miniterm.py for USB connection between PC and the kit.
4. See the returned messages on the connected screen.

The returned messages include a keyword "GRBL". From "GRBL" we knew that the kit is based on open source laser engraving.

GRBL is a free, open source, high performance software for controlling the motion of machines that move, that make things, or that make things move, and will run on a straight Arduino. Most open source 3D printers have GRBL.

We need three software applications for laser engraving: one is to create a picture: picture editor, the second is to generate GRBL code (gcode) data, the last is to send gcode data to the kit from PC. "gcode" is a keyword for laser engraving/cutting and 3D printing.

The followings are shown how to reach three open source software applications for the purchased kit:

1. Search for "Lite Fire Laser" which is described on the kit web page.
2. We have found the interesting link:
   http://cnc-factory.eu/lite-fire-laser-engraver/
3. From the link, we have reached the name of "inkscape" which is an editor of open source engraving software.
4. Search for inkscape plug-in software.
5. We have found the import link for plug-in software:
6. Search for "Lite Fire Laser" for Windows device driver.
7. We have found that CH341 is a device driver.
8. Search for CH341 driver for Windows.
9. Searched result: CH341ser.zip
   https://docs.google.com/file/d/0B-mqOQablplXa1c1WV1COEZTU00/edit?pref=2&pli=1
10. Search for gcode sender
11. Download the gcode sender program:
    UniversalGcodeSender.zip

By hacking the kit, three software applications are found to be useful as follows: "inkscape" for picture editor, "JTP_Laser plug-in" inkscape software for generating gcode data, and "universalcodesender.jar" for gcode sender for sending gcode data from PC to the kit.

We have built the laser engraving kit within few hours and have learned a role of "gcode" for manipulating CNC (computer numerical control) machines including 3D printers, laser cutters/engraving machines, PCB fabrication machines, and others.

**Fig. 8** Engraving using the constructed kit

Fig. 8 shows the snapshot of engraving using the constructed kit. The picture was drawn by inkscape editor. The gcode data was generated by inkscape with the plug-in gcode generator. UniversalGcodeSender sent the generated gcode data to the kit. The kit successfully engraved the described picture which was edited by inkscape.
III. CONCLUSIONS

We would like to address that the first open source hardware (vacuum tube radio) was made by Konosuke Matsushita in 1932. The vacuum tube radio satisfies the statement of "open source hardware" described in Wikipedia [1]. From HDL (hardware description language), ARM-based IP cores were created. ARM-based CPU and open source software have dominated the embedded system business (over 70% market share) and smartphone business (over 95% market share).

Open source machine learning libraries make us to build inexpensive artificial intelligent system with open source hardware. GPU plays a key role for fast computation on machine learning. Two kinds of IoT devices are introduced: ARM-based CPU and Arduino.

AI will significantly reduce our working hours or will put you out of a job. We should also determine what contents of education should be needed for the future human jobs. We should also rethink how we can have a fun time or a good time with shortened working hours from the global viewpoints.

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How to Motivate Students to Encourage Personal Growth and Envisage their Career Goals

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Abstract: It is essential to provide students with career education that enhances their qualifications for becoming highly capable professionals, and motivates them to enter the workforce. The attrition rate among college graduates in Japan during their first three years of employment is increasing. The significant gap between the readiness of college students and the qualities required for entering the workforce and sustaining employment is contributing to a national problem characterized by a growing number of students incapable of integrating into society. In this paper, I will introduce the educational overseas career program designed and executed by the author and validate the effectiveness for students.

Keywords: Career education, Overseas Career Program, Active learning,

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Chapter 3. Change of Situation Surrounding Youth
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Introduction

The attrition rate among college graduates in Japan during their first three years of employment is increasing. The significant gap between the readiness of college students and the qualities required for entering the workforce is contributing to a national problem characterized by a growing number of students incapable of integrating into society. With a declining birthrate and aging population, Japan already faces an inevitable reduction in the workforce and the prospect of a shrinking economy. Employment conditions continue to change as structural shifts in industries and economies are resulting in further diversification and mobility of labour, and lifetime job security has become a remnant of the past. In order to cope with these issues, it is essential to provide Japanese students with career education that enhances their qualifications for becoming highly capable professionals, and motivates them to enter the workforce. In this paper, I will introduce the educational overseas career program designed and executed by the author and validate the effectiveness for students.

Chapter 1. Overseas Career Program with the Active Learning Approach

In Japan, classes are often offered in the didactic lecture style where many students are enrolled, and it is only recently that they began to promote a more “Active Learning” style in
classes. This Overseas career program is Active Learning style. The program aims to cultivate general capabilities (cognitive, theoretical, social, and cultural skills as well as broad knowledge and experience) through students’ own proactive quest with active learning. The program entails discovery learning, problem-solving learning, experience learning, and explorative learning. It offers two credits and entails completing pre- and post-internship guidance in Japan, overseas training at local companies, and compiling a final report. The program started in 2008, and so far has conducted overseas programs in California, US (2008, 2009), Paris, France (2010), San Francisco/ Silicon Valley, California, US (2011), and New York City, US (2012-2016), with a total of 69 participating students.

Before students participate in the program, they have to take a class which aims to learn business communication skills that are the foundation and basic requirements for global business people, and are imperative for smooth interaction and transaction with colleagues and clients from a variety of backgrounds. Furthermore, it aims to learn cross-cultural communication skills and presentation skills that are essential for global business persons to exercise leadership, especially when major Japanese companies such as Toyota and Nissan rely on more than 70% of their sales from countries outside of Japan in a progressively globalized world economy. The program invites instructors with experience in international businesses to teach with a hands-on learning approach, as well as industry experts operating globally as guest speakers to give lectures. Moreover, in response to a pre-internship guidance request from students, the program invites a master of international protocols to teach table manners and etiquette at a French restaurant with a full-course dinner.

The program takes place in early February for 10 days. The purpose is to visit and talk with employees at local companies and a law office in New York City, a creative city in an advanced media nation. The students are encouraged to learn about current businesses conditions and the purpose of working overseas, and to utilize the findings for their own career planning by understanding the importance and value of having expertise in a region as diverse as New York City. Furthermore, they are encouraged to learn the importance of originality and creativity by experiencing local entertainment, and to understand the ways social media has become the foundation of the business society in the US with the development of information technology. They also have an opportunity to contemplate the reason for declining uses of older media, and to envision the nature of future business. Below is the summary of the overseas training in New York.

**Day 1:**
All day: Visit commercial facilities in New York City: The Museum of Modern Art (MoMA), The New York Public Library, Broadway musical theatres, luxury brand stores, etc.

**Day 2:**
Morning: Orientation at Global Labo
Afternoon: The United Nations (UN) tour
Evening: The Ride NYC bus tour

**Day 3:**
Morning: Lecture at Moses & Singer LLP, a New York City law firm
Afternoon: Visit Columbia University & Campus tour

Day 4:
Morning: Courtesy visit to Consulate General of Japan in New York
Afternoon: Lecture at JETRO (Japan External Trade Organization) New York office
Evening: Lectures from Japanese guest speakers working in New York at Global Labo

Day 5:
Morning: Lecture at Bloomberg
Afternoon 1: Lecture at the Permanent Mission of Japan to the UN
Afternoon 2: Debate at PricewaterhouseCoopers LLC (PwC)

Day 6:
Morning: Alexander Technique lesson and lecture
Afternoon: Lecture at Kodansha USA Inc.
Evening: Cross industry networking at Global Labo,
          The guest speaker, Mr. Yoroku Adachi, CEO of Canon USA

Day 7:
All day: Visit of cultural facilities in New York as a creative city: Indoor complexes such as Chelsea Market, Macy’s etc.

Day 8:
Departure to Japan

The active learning style includes students preparing and giving presentations, then taking part in discussions and debates, or colleges offering experience-based classes such as domestic and overseas fieldwork and volunteering. The students visit companies, collect information, conduct research, and find agendas on their own, then seek clues to address these problems though hands-on experience.

Chapter 2. Report from Campus Career Center

From the perspective of career centers, the problems students have are the following: lack of ability to write and articulate for preparing entry sheets (82.5%), difficulty in coaching mock interviews due to a lack of thinking ability and oral communication skills (70.7%), polarization of students among those who obtain job offers and those who cannot (70.3%), lack of basic academic skills (60.2%), increase of students with passive attitude toward job-hunting (53.0%), inability to project one’s own voice and instead use cookie-cutter answers (50.1%), lack of experiences that are appealing to employers (49%), and lack of corporate etiquette and ability to properly use honorifics (47.1%).

The following is a list of the important tasks for career education and placement support for the future: cultivation of general capabilities (problem solving ability through thinking, expressing, and reviewing), which is the foundation of employment competence (90.4%), building a stronger relationship between career centers and faculty members (89.7%),
professional development for career center staff (86%), integrative approach for planning and operation between career education activities and placement support (84.7%), head start of guidance in early college years (81.2%), enhancement of career education skills among faculty members (75.1%), and cooperation with high quality private recruitment support businesses (61.6%). Addressing the career-related challenges students face today requires a more comprehensive and unified approach that involves not just career education alone, but also increased cooperation among career centers, college departments, and private businesses.

Among the topics brought up by students for consultation, problems related to self-analysis (statement of purpose and self-promotion) and recruitment exams (interviews and written exams) are high on the list. However, career centers point out that a lack of basic academic skills including writing, problem solving, communication make it increasingly difficult to coach students during interviews. Prior to teaching career oriented specialized skills, it is important to cultivate self-analysis, communication skills, and basic academic skills. A growing number of Japanese students are unable to proactively and autonomously explore their own career choices, and information and consultation provided by career centers are not sufficient to cope with these challenges. Therefore, discussion on career education with a more comprehensive unified approach by the college as a whole calls for urgent attention. It should be noted that career education may not yield immediate results. Therefore, it is important to start implementing programs to cultivate general capabilities at the time of enrollment. It is also essential for colleges to collaborate with their faculty members and private recruitment support agencies.

In Japan, most companies hire new graduates as their core recruitment practice. Usually their aim is not necessarily to find work-ready graduates, but to discover students with potential who have a wide range of experiences and abilities to cooperate, solve problems, and take actions independently along with academic achievements. Acquisition of certifications or qualifications is a great opportunity to prove what one has learned, and it is important to study hard to pass the exam. Nonetheless, obtaining certifications alone is not enough if it cannot be utilized in the real world. Therefore, it is essential to review career education at the college level to find ways to cultivate the fundamental skills required in the workforce during the four years of schooling while pursuing academic achievements.

Chapter 3. Change of Situation Surrounding Youth

In Japan, school year starts in April and ends in March. Likewise, in general newly hired employees start working from April. Japanese students normally start participating in recruiting activities in the mid to end of their junior year, and some students start receiving job offers in May or June of their senior year. Many students wish to obtain a job offer as soon as possible, and enjoy the rest of their college life. The hiring rate for Japanese college graduates was 94.4% in 2013 (93.8% for males and 95.2% for females). The hiring rate for liberal arts graduates was 94% while math and science was 96.4%. Most students are currently hired upon graduation as full-time employees. It has been a norm in Japan for companies to invest in human resources development for new graduates regardless of their past professional experience. However, this traditional norm has changed in recent years.
Youth turnover rates have always been higher than that of the total workforce. According to a 2012 report published by Japan’s Health, Labour and Welfare Ministry, the turnover rate for new graduates who quit their job within three years was 32.3% among four-year college graduates, equaling approximately one third of the total workforce. Among those, the percentage of who quit within one year was highest at 13.1%, then within two years at 10.3%, and three years at 8.9%. In Japan, the norm was to spend an average of ten years training entry-level employees to become highly skilled professionals. Therefore, for those companies that can bear large costs for personnel training and development, employee’s resignation within three years poses a great risk. Furthermore, it makes re-employment harder for those who left the job before building enough career experience, leading many workers to land in new jobs as non-regular employees without benefits. The top reason for turnover within three years of employment is dissatisfaction with salary. Although the salary is disclosed before commencement of work, many feel the salary doesn’t match the job. The second reason is work-related stress, and the third is little hope in the company’s stability and future.

Professional skills development in Japan has excessively relied on corporate education and training. In Japan, students study general academic subjects at colleges that are less relevant to work, and they receive professional training at companies with their on-the-job training programs. However, when considering career education in Japan, it is imperative to motivate students and maximize their willingness to work and study. Listening to professionals and experts firsthand accounts of their purpose of career at their working place is a precious lesson for college students. Moreover, it is colleges’ mission to provide students with professional skills training coupled with career development opportunities, and that effort requires an interdisciplinary approach beyond departmental boundaries. Colleges must understand the characteristics of each business and industry, and offer students with employment support by teaching them how to conduct corporate and industry research, and how to find companies and job descriptions that match their visions and preference. Many Japanese youth quit their job without building a career. If this condition continues, Japan will fall into a critical situation where companies are unable to find competent professionals who serve as central roles in organizations.

Conclusion

The Council on Promotion of Human Resource for Globalization Development organized by Japan's Cabinet Office listed the requirements for global human resources as the following: linguistic and communication skills, self-direction and positivity, a spirit for challenge, cooperativeness and flexibility, a sense of responsibility and mission, understanding of other cultures and a Japanese identity, a broad and well cultivated mind and profound expertise, willingness to find and solve problems, team-work and leadership skills (in bringing together persons of various backgrounds), public-mindedness, moral sensibilities, media-literacy, presentation skills, and creativity and originality. The activities of overseas career training are compared to the above-mentioned factors along with international protocol, another factor the author considers important.

In career education, it is also essential to foster human resources that one can trust and rely on. For that goal, students must be able to think critically without prejudice, and assert
their opinions clearly. In order to articulate one’s opinion on a timely manner and persuade others, logical thinking and debate skills, as well as English fluency to communicate ideas are all crucial, hence these skills must be trained in early years. Japanese students often tend not to speak up even when they have their own opinions due to their shyness and fear of making mistakes, or fear of standing out in public. Likewise, teaching them explicitly at home and school the importance of actively speaking up is a good thing to do.

The reports submitted by students who participated in the New York training illustrate how much they were inspired and learned, even more so than we the professors had expected. These students will start participating in recruiting activities later this year. Many students reported that they would like to brush up on their English skills and become fluent communicators overseas, suggesting that they are no longer hesitant about utilizing English and have become more confident. Furthermore, upon their return from the overseas career training, they enrolled not only in English classes, but also international-relations classes, deepening their ability to understand more specific and concrete global agendas. They became more open to overseas travel, and many students started traveling alone by themselves. They now actively select and find employment at companies operating worldwide.

Along with the changes in environment surrounding companies and youth, teaching students not only basic academic skills and specialized knowledge but also communication skills to collaborate with others has become increasingly more important than ever. It was a great opportunity and the right timing for the students to consider their future. It would be meaningful to conduct a survey after their graduation, and find out which aspects of the training were beneficial and influential to their later career, and then reflect the findings onto the planning of future trainings.

In recent years, more colleges have started to engage in career education efforts. Nonetheless, students’ utilization and participation in career education activities is limited, and it is not well integrated into a whole college education from entry to graduation in a four-year program. Our overseas career training with the active learning approach is highly valuable and influential for students not only as career education activities, but also for their lives at large. The program offers students the opportunity to engage in conversations with professionals and experts, to actually visit their offices, and to learn in a group work setting overseas. The active learning approach enables students to engage in independent and proactive learning, and to cultivate general capabilities (cognitive, theoretical, social, cultural skills) as well as broad knowledge and experiences. It entails discovery, problem-solving, experiential, and explorative learning, all which make the whole learning experience more satisfying. It is highly recommended to incorporate an overseas internship program with the active learning approach into the curriculum, especially during early college years. It would motivate students to envision their career goals and plans earlier, and serve as the catalyst for building a stronger foundation for becoming more proactive and independent individuals who can thrive in the recruitment activities following their junior year.

References


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Harvesting and Reaping the Benefits of Healing LAYnguage
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As more and more doctors, nurses and allied health professionals in Japan are coming into contact with non-Japanese patients, being able to discuss a condition without sounding like a walking-medical-textbook is a highly useful skill set. Teaching lay terms enhances the core competency of medical professionals in training. While there has been concentration on “Plain Language” and circumlocution in the past, little or no research has been done on building a core vocabulary of lay terms. The author has created a series of classroom materials and two self-study trade books for professionals that call attention to these expressions. In addition to those the author has identified, terms have been elicited from actual student research and posted for learners to share on the university’s online learning management system, Moodle (Dougiamus). The ultimate goal is to create a unique “Lay Corpus” resource for medical English learners.

Medical English courses are often solely focused on teaching the same Greek and Latin words that native speaker medical professionals have to study. Much material is available on this subject. Most resources for non-native medical students are somewhat lacking when it comes to the inclusion of everyday words that ordinary people use to discuss diseases and conditions. Believing that being able to speak to patients naturally is a worthy goal, the author uses an original set of materials called Healing English© (Berman, 2013-2017) that employ English through Drama techniques (Via), (Nomura) in medical English classes to offer students dynamic practice with lay language mixed with some professional terms, representing plausible medical conversations in a variety of situations.

Students have also watched and analyzed scenes from scripted and non-scripted U.S. television shows in order to hear lay expressions in context. Shortly after the first group of Hirosaki medical students, in 2103, had studied the expression “Tender?” when questioning a patient about a painful area, the expression appeared in the reality show, “Top Chef” (Bravo TV), when one of the so-called cheftestants developed a “strep throat.” Of course, they did not refer to it as a “streptococcal infection,” but instead, a “strep throat.” The author shared the unscripted lines from the show with first year Japanese
medical students. The media not only provided immediate reinforcement of the use of lay language that students had been covering in class in a real situation, but also proved the point that this sort of language is very important in conversing with English-speaking patients. Predicated on the assumption that lay expressions such as “tender,” which, in this milieu means “sensitive to pain,” are less familiar to the learner, yet most familiar to patients, the author has created an array of materials that introduce, practice and reinforce lay language.

Theorizing that lay terms used in English often have equivalent lay expressions in Japanese, the instructor has asked students to start from their own awareness of non-medical terms used for conditions and diseases in their own culture and search for lay language in English. For the past three years, more than 300 learners have done independent research and contributed lay expressions to class Moodle forums. These students have successfully uncovered dozens of useful expressions and shared them with classmates.

The author is in the process of researching the citing of lay expressions in the various Brigham Young University corpora and other sources. The corpora seem to agree with the idea that lay expressions appear much more commonly in reference to familiar conditions. For example, in the latest Brigham Young corpus, “NOW,” News on the Web corpus, the term “chicken pox” appears 969 times. The technical equivalent, “varicella-zoster,” on the other hand, is mentioned only 50 times. Notably, in 6 of those 50 times the term “chicken pox” appears with the professional term, while as many as 29 times, the lay term “shingles” is present alongside the technical term.

Current research is focused on creating an official, independent Lay Corpus that offers a variety of information about everyday medical terminology. In conjunction with research on “Laynguage,” work has also been started on identifying seemingly professional terms for conditions and ailments that have found their way into the “Common Vernacular,” those which the author terms “CV” words. The contrast between CV words and lay terms, along with the knowledge of some cultural differences between English speakers and the Japanese in this regard, offer Japanese learners a broader window on how future patients will describe and discuss their conditions.

The average English speaker, for example, is familiar with the word “arthritis,” and it is used in the commonly, so it is a CV word, but “rhinitis,” is not. In conversation, rhinitis may be described as “nasal allergies.” On the other hand, the professional term for rhinitis, 鼻炎(bien) in Japanese is very
common. Japanese however don’t usually refer to their “sinuses,” in everyday conversation and may be surprised to hear a patient with nasal allergies complain of “sinus pain.” It is most likely true in both cultures that professional words have come into the common vernacular through television commercials for medication. At HICE 2017, the author looks forward to sharing a number of examples from ongoing research into both lay terms, including student examples, and common vernacular usage. It is hoped that this work will spark an interest in other EFL/ESL professionals teaching medical, nursing, pharmacy, and health science students.

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Bravo TV (2013), Top Chef

Bio
Shari Joy Berman is an Associate Professor in the Center for Liberal Arts & Practices: Institute for the Promotion of Higher Education at Hirosaki University. She moved to Hirosaki in 2012 to help launch a new English center with self-access, consultation and skills-improvement called “The English Lounge.” Her main areas of research are “tolerance of ambiguity,” “deliberate practice,” and “medical lay language.” She has authored or co-authored 40 textbooks and countless materials that include conversations and simulated standardized tests. Two recent books have been published by Natsume Company, Ltd. and can be loosely translate as: 1) If You Send it They Will Reply: E-mail Communication for Physicians and 2) English Conversations to Conduct Proper Medical Examinations. She taught at secondary, university and adult education levels and trained teachers in Tokyo for more than two decades. She also co-facilitated a listening practicum at the Tokyo Campus of Columbia Teacher’s College. She has a home in Kona and she has taught Japanese at Kealakehe Intermediate School. She has also trained teens and adults in Japanese and Biblical Hebrew.
1. [Title of the submission]
Practice of ICT-based remote exchange nutrition education for high-school students with “The Game of Healthy Life - Travels of Body Weight” – the second year

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6. [Abstract]

[Aim]
This study aims to examine the effects of three-year nutrition education for high school students that is conducted through distance communication with ICT with the objective of “preventing lifestyle diseases during a lifetime.” The themes of the second year are “to understand the relationship between foods and vigor,” and “intake of energy, carbohydrates, fats and salt and the way of taking snacks and hydration.”

[Subject and Methodology]
The subjects of the study were Private High School N in SI Prefecture and Private High School U in SA Prefecture. Quasi-experimental design was structured setting up an intervention group and a control group in each class. The following activities were conducted in the course of the study: group work (hereinafter referred to as “GW”) for “creation of The Game of Healthy Life” in June, preliminary research in July (measurement of body composition, preliminary questionnaire survey, FFQg, and Between-Meal Food Mapping), GW on between-meals and hydration in September, a distance communication class (simulation to buy a lunch in a convenience store) in December, and follow-up survey in March.

[Results]
The preliminary research revealed the tendencies of loving meat-based diet, drinking beverages frequently and eating too much and the predicted lifestyle diseases of rough skin and pimples, high-blood pressure and diabetes. The FFQg results in the second year indicated the overall decrease in intake of confectionery with the exception of no change of the girls in the control group. Many students showed the between-meal pattern of eating at all
hours and the frequency to drink beverages was 4.6 times per week at 350 ml each time on average.
As for the convenience store lunch selection types by sex, many boys were the staple food + main dish (without vegetables) type and many girls were the staple food + empty type, which was statistically significant. The Skype function to share the screens was applied to the distance communication and LoiLoNote was used for submission of answers to GW quizzes. In comparison with the classes in the first year, the use of tablets in the second year gained a good evaluation because of promotion of understanding.
The results of the factor analysis on 100 % of the preliminary questionnaires about the dietary habit, dietary behavior and constitution associated with body weight were: Factor 1 - motive of eating due to a sense of fullness/hunger, Factor 2 - content of the meal, Factor 3 - overeating caused by stress, and Factor 4 - extrinsic motive of eating. The boys of School N in the intervention group showed decreased average scores for each factor (improvement in the problems), which was not statistically significant, while those in the control group finished with increased scores. The girls of School N in the intervention group showed significantly decreased score for Factor 4 while those in the control group finished with increased scores. The girls of School U in the intervention group showed significantly decreased score for Factor 4. The girls of both schools in the intervention group had the tendency of improvement in Factor 4 (extrinsic motive of eating), which means the reduction in frequency of eating that was not motivated by physiology but words or behavior of others or the five senses stimulated by foods.

[Conclusion]
The intervention of nutrition education practice for high school students is effective for girls who are concerned about overweight and the importance to control the extrinsic motive of eating is inferred.

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1 Title of the submission
The Analysis of Peer-Evaluation Feedback in Teacher-Training Courses

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6 Abstract
This poster presentation will report on the results of a study investigating the effects of peer feedback on student teachers’ perception of their ability to teach English. As Wallace(1998) describes, repeated self-assessment is indispensable for teachers to develop their professional expertise. Korthagen’s ALACT cycle of reflection(2011) consisting of five elements: 1) Action, 2) Looking back on the action, 3) Awareness of essential aspects, 4) Creating alternative methods of action, and 5) Trial also indicates the importance of promoting teachers’ reflective process.

This research focuses on the role of peer feedback to promote the above process in an English Teaching Methodology Course in Japan. First, students in class were asked to write comments and suggestions about a demonstration class conducted by a student teacher. Second, these comments were categorized into three: content knowledge and skills, pedagogical knowledge and skills, and classroom teaching skills, then returned to the student teacher. Finally, the teacher was asked to reflect his/her performance and to
create alternative methods in order to improve their teaching. This process was repeated for forty student teachers.

Analyzing the final papers reveals that the peer feedback has a great effect on encouraging the students to reflect on their teaching performance with deeper understanding as well as to create alternative and effective teaching methods.
STEM: Schools of Excellence in an Australian Context?

Topic Area: STEM Education

Presentation Format: Paper Session

Short Abstract: This paper looks at the current efforts to address the challenges of declining student number in science, mathematics, engineering and technology (STEM) in upper secondary and tertiary education in Australia. One solution proposed is through teaching STEM as an integrated suite of disciplines within a STEM School of Excellence. A framework describing the process by which a STEM School of Excellence might be developed is described. The challenges, including the Australian curriculum documents and the availability of qualified staff, that would limit the capacity for such a school to be developed are also described.

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STEM: Schools of Excellence in an Australian Context?

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Abstract: The decline in student numbers at the upper secondary and tertiary level in STEM education in Australia has been identified as an ongoing problem for a number of years. The associated drop in the availability of qualified STEM graduates and its negative effect on Australia globally has also been described. A number of initiatives have been funded by the Australian Government since 2014 in an attempt to address these challenges. One approach that has been described as a possible solution to these challenges is the study of STEM as an integrated suite of academic disciplines using inquiry or problem based learning pedagogies. This paper proposes a framework that might be utilised to develop a STEM school of Excellence in Australia. It also describes a number of issues that exist within the Australian school context that limit the potential for an integrated approach to the study of STEM to be used.

Introduction

Much has been written in the last decade about the importance and associated challenges relating to science, technology, engineering and mathematics (STEM) in the educational arena. This situation has arisen because of concerns about the capacity of developed countries, such as Australia, the United States and England, to meet current and future needs in relation to the availability of graduates appropriately skilled in the STEM fields (e.g. Atkinson, Hugo, Lundgren, Shapiro, & Thomas, 2007; Chubb, 2012; HM Treasury, 2007). In the Australian context, it has been proposed that the lack of STEM qualified graduates will reduce the capacity for research and development in the future to such an extent that the country will not be able to compete effectively on the world stage (Chubb, 2012). The importance of this challenge and the need for Australia to be at the forefront of innovation globally has been promoted by Australia’s Prime Minister and has been accompanied by a federally funded innovation agenda (see http://www.innovation.gov.au/page/agenda). This agenda includes an allocation of $48 million over five years, commencing in 2016, to support the inspiration of scientific endeavour in STEM related activity.

This agenda has been supported by the Education Council, which has proposed a national strategy for Science, Technology, Engineering and Mathematics Education in Australia which recognised “that schooling should support the development of skills in cross disciplinary, critical and creative thinking, problem solving and digital technologies, which are essential in all 21st century occupations” (Education Council, 2015, p.3). The proposal calls for increased student STEM ability, engagement, participation and aspiration, increased teacher capacity in STEM areas, and support for STEM opportunities within school systems. The Australian curriculum (endorsed in December 2015) encompasses the required capabilities and conceptual understandings called for in this report, but have been presented
as discrete subjects, and not in an integrated form.

This is somewhat reflective of traditional teaching in that the disciplines that comprise STEM have been taught as separate school subjects, with little or no overlap. While there has been substantial movement towards integrating the study of STEM disciplines in the United States (Becker & Park, 2011), including the creation of speciality mathematics and science high schools (Atkinson et al., 2007), the situation in Australia is such that school subjects targeting science, mathematics and technology are still taught, almost without exception, as separate disciplines (Blackley & Howell, 2015). There is a need to consider how this curriculum can be used differently in ways that will allow development of the capabilities required to achieve excellence in the STEM area.

This paper will initially consider the epistemological difference in approach involved in achieving excellence when the STEM disciplines are pursued as separate areas of study and will contrast this with an integrated inquiry/problem based approach. The challenges associated with identifying the personnel resources that would allow either of these situations to be successfully achieved will also be described. A description of the possible structure and relationships that would be essential in supporting a STEM School of Excellence will be described, followed by a process by which such a school might be developed. The paper will conclude with an argument in relation to the limited capacity for development of an integrated STEM School of Excellence to be supported within the current Australian education context and the need for curriculum change to support any future endeavours in this area.

**STEM or S.T.E.M.**

In Australia, as in other western countries, there has been an ongoing decline in the percentage of students who have been studying mathematics at an advanced level and the various science disciplines (Ainley, Kos, & Nicholas, 2008; Goodrum, Druhan, & Abbs, 2011) with an associated reduction in mathematical and scientific literacy within the community (Thomson, De Bortoli, Nicholas, Hillman, & Buckley, 2011). A number of reasons have been offered for declining enrolments, including a lack of interest in the subjects, the inability of students to identify with career options in the STEM field, and a perception that STEM subjects are difficult conceptually. (Lyons & Quinn, 2010, 2012). These factors have been identified as a particular issue for students in rural and remote areas. It has been proposed that the point of disconnect with the study of science and mathematics occurs during the period associated with the transition from primary to secondary school (Lyons & Quinn, 2010; Tytler, 2007). One factor proposed as contributing to the problems with science and mathematics education at the lower secondary school level is the lack of qualified teachers (Harris, Baldwin, & Jensz, 2005; Marginson, Tytler, Freeman, & Roberts, 2013). Another primary area of discussion in relation to enhancing the outcomes from the study of STEM is the approach to the teaching pedagogies employed. Traditionally, science, mathematics and technology have been taught as separate disciplines. This separation has been evident in the syllabus documents available, with the science and mathematics documents making minimal attempts to address the substantial overlap between the disciplines. Most Australian States have not produced a syllabus document related to technology for primary and secondary school up to year 10. This was remedied with the production of the recent Australian Curriculum: Technologies
This syllabus brings together the related areas of digital technologies and design and technologies in a single document.

The Australian Curriculum: Science Rationale commences with the following statement:

Science provides an empirical way of answering interesting and important questions about the biological, physical and technological world. The knowledge it produces has proved to be a reliable basis for action in our personal, social and economic lives. Science is a dynamic, collaborative and creative human endeavour arising from our desire to make sense of our world through exploring the unknown, investigating universal mysteries, making predictions and solving problems. (see http://www.australiancurriculum.edu.au/science/rationale)

This description places science as an endeavour set within the students’ real and technological world that appears to require a wide range of academic disciplines to achieve successfully. However, the second paragraph immediately focuses the emphasis on school science as a specific discipline, seemingly separate from others.

The Australian Curriculum: Science provides opportunities for students to develop an understanding of important science concepts and processes, the practices used to develop scientific knowledge, of science’s contribution to our culture and society, and its applications in our lives. The curriculum supports students to develop the scientific knowledge, understandings and skills to make informed decisions about local, national and global issues and to participate, if they so wish, in science-related careers. (see http://www.australiancurriculum.edu.au/science/rationale)

An examination of the Aims of the syllabus includes no reference to disciplines other than science. The final aim includes the aim of enabling students “to select and integrate the scientific knowledge and methods needed to explain and predict phenomena”, but no reference to the use of any discipline outside of science is included when addressing this aim (See http://www.australiancurriculum.edu.au/science/aims).

The Australian Curriculum: Science does make specific reference to the relationship between the science and other disciplines, indicating that this would “offer opportunities to add depth and richness to student learning” (see http://www.australiancurriculum.edu.au/crosscurriculumpriorities/overview/learning-area-specific-advice), however the limit of the connection between these disciplines is via the use of an icon shown with the content description and is limited to the areas of Aboriginal and Torres Strait Islander Histories and Cultures, Asia and Australia’s Engagement with Asia and Sustainability. No explicit links are made between the syllabuses for science, mathematics and/or technology.

This situation with the status of the current Australian syllabus documents stands in contrast to attempts in recent years to improve the situation in relation to mathematics and science education through bridging the gaps between the STEM disciplines and approach the study of these subjects in an integrated manner in primary and lower secondary school. A primary goal of the integration is to enhance student engagement and learning through the study of real world contexts through focused inquiry, using mathematics, science, engineering and technology as appropriate (Becker & Park, 2011; Cantrell, Pekcan, Itani, & Velasquez-Bryant, 2006; Hurley, 2001). The similarity of what is being described and that stated in the Rationale of The Australian Curriculum: Science is evident. Tytler, Osborne, Williams, Tytler, and Cripps Clark (2008) support this integrated approach when they recommend that the teaching of science and mathematics should “reflect the way that these disciplines are represented and practiced in society more generally” (p. 15). The move to interdisciplinary approaches being explicitly incorporated into curriculum documents outside Australia is being evidenced. By way of example, Scotland has adopted such a curriculum...
and has moved towards the development of “schools of Excellence [that] arise out of an educational framework that uses broad themes, catalysts, or ‘hooks’ such as Space, to engage students” (Fairburn, 2011, p. 1139). Bruce-Davis et al. (2014), when examining the nature of STEM schools in the USA, propose that such a school will ensure that student learning is a live encounter and is done within a holistic and authentic learning landscape that applies to the curriculum, teaching pedagogy and assessment. They also propose that “the curriculum is centered around real-world problems and applications framed by the learner’s prior knowledge, lived experience, and the world’s and community’ ‘real needs’” (p. 296).

While the political support for STEM education has continued since the 1990s, the teaching of the STEM disciplines in an integrated way has not been evidenced in practice. Blackley and Howell (2015) argue that within the Australian primary and secondary school context, “the struggle to enact the STEM agenda, particularly in primary schools, has not been resolved as teachers have defaulted to the notion of S.T.E.M. rather than STEM” (p. 104). They identify a number of factors that have given rise to this approach, including “the curriculum structure [as described above] and the skill level and/or preparation of the teachers” (p. 106). Blackley and Howell (2015) also identify the core challenge to the effective integration of the STEM disciplines as the lack of understanding of what STEM education is: a view shared by others (Breiner & Johnson, 2012; Bruce-Davis et al., 2014; Dugger, 2010).

While there appears to be substantial challenges facing the individual STEM disciplines in terms of maintaining student numbers and adequately supporting society requirements for appropriately educated graduates, there appears to be positive educational outcomes that ensue from the successful integration of the STEM disciplines (Becker & Park, 2011; Stohlmann, Moore, & Roehrig, 2012). Kennedy and Odell (2014) propose that these outcomes will result when students address their study in STEM in a work-based contextual environment where “students have to apply the science and mathematics knowledge they learn to an engineering problem and utilize technology in finding a solution” (p. 254).

One challenge facing STEM education, identified by Blackley and Howell (2015), is a shortage of teachers at both the primary and secondary levels who would be appropriately qualified and experienced to be able to enact a truly integrated STEM curriculum. It is hypothesised that there exists within Australian education two principal reasons for the challenges that face the development of integrated STEM education in the future: the lack of a curriculum that adequately integrates the study of mathematics, science and technology, and the absence of an initial teacher training focus on STEM as an integrated area of teaching.

This situation presents two contrasting approaches to the situation in relation to current STEM education and the quest for excellence in the field. On the one hand, there is the traditional, teacher centric and, generally, didactic classroom, where the teacher ‘teaches’ and directs the process with the student being a passive recipient of the teacher’s knowledge. This contrasts with the integrated, inquiry and everyday problem based approach, where the teacher facilitates a student-centred learning process that utilises the different academic disciplines on a needs basis.

Possible requirements for a STEM School of Excellence

Overall Approach
Following on from the preceding section it is argued that before considering how to achieve excellence as a STEM school, the people tasked with the goal of setting it up need to be clear on what it is they are trying to achieve. There needs to be clarity in relation to what the overall epistemology is going to be for the school. One early decision that appears essential to the process, is whether excellence is sought in relation to academic performance within individual disciplines, or whether excellence is sought across the integrated STEM field. The goals for these approaches vary somewhat. It is proposed that the individual discipline approach will produce students who will be able to perform well in traditional assessment contexts, particularly in external, standardised examinations. It is also proposed that the external STEM approach will produce students who develop creative and adaptive approaches that utilise one or more STEM disciplines in the solution of real world problems. The integrated, inquiry approach to STEM is proposed as developing in students the skills that are appropriate in the workplace.

Once the overall epistemological approach to the idea of excellence is decided, there are a number of factors that have the potential to contribute to improving the quality of outcomes for students and setting a school culture that supports STEM excellence. Within the Australian and New Zealand context, Professor John Hattie (see http://www.aitsl.edu.au/about-us/directors/john-hattie) has conducted extensive research in relation to the factors that underpin excellence in teaching and has published a number of seminal articles. Hattie (2003, 2008) has identified a number of factors, based on a meta-analysis of the available literature, that he considers are essential to excellence in teaching and learning.

**Teachers**

Hattie (2003) proposes that the factor with the second highest influence on student outcomes is the quality of the teacher. In particular, it is what “teachers know, do, and care about which is very powerful” (p. 2) in the student experience. In a meta-analysis of many educational studies, Hattie (2003) identifies the greatest effect on student achievement as the quantity and quality of the feedback that students receive from the teacher. Of the factors which positively influence student achievement, eight of the top 10, when measured in terms of the effect size, relate to the teacher and their approach to teaching. It is at this point that the importance of the epistemological discussion presented earlier in this paper becomes important. The teaching staff that are chosen to be a part of a STEM school of excellence would need to be committed and passionate about the vision of excellence and the particular form that excellence is held to be.

While research would need to be conducted within the Australian context with a view to identifying exactly what teacher excellence in these two contrasting approaches would look like, it would be expected based on Hattie’s research (2003, 2008), that academic staff would demonstrate high level qualifications in the discipline content relevant to what they are teaching, previous experience demonstrating high quality outcomes for students and the possession of excellent teaching pedagogical approaches that support the epistemological approach adopted by the school.

These requirements present some very challenging issues when the earlier problems regarding a lack of qualified teachers in science and mathematics are considered. The research previously described in relation to this challenge (Harris et al., 2005; Marginson et
al., 2013) indicates an existing lack of qualified staff in mathematics and science which has existed while these disciplines have been taught with little integration. In the existing siloed environment, teachers only need to be qualified within a single field. If a school is to adopt an integrated approach to STEM education, staff will need to possess high level qualifications across multiple fields that would include science, mathematics and technology. Such a teacher would also need to be pedagogically sound across all of these individual disciplines, but also be able to demonstrate a teaching pedagogy that is able to successfully integrate them. Within an environment that already lacks highly qualified science and mathematics teachers, this staffing requirement would be very difficult to address without a long term strategy that looks to develop staff with the requisite content and pedagogical capacities to support an integrated STEM curriculum.

Students

Research indicates that a substantial amount of the variance in student achievement is based on what students bring to the school and classroom, with Hattie (2003) proposing about 50% and Watt and Barnholt (2000) proposing 64%. Fouad, Hackett, Haag, Kantamneni, and Fitzpatrick (2007), when examining the barriers and supports relating to subject choice for students in upper secondary school, identified that “the strongest predictor for pursuing a math career was math interest. For high school boys, the strongest predictor was parental support in making math decision and for high school girls, the strongest predictor was possessing math-related career goals” (p. 103).

The high level of variance associated directly with factors associated with the student suggests that one consideration in building a STEM school of excellence is the nature of the students who attend and whom the school seeks to attract through direct recruiting. It appears that a STEM school of excellence would need to promote itself as such and to be seen in the community as an institution devoted to excellence in the field. This promotion would promote the attendance of students with the requisite interest in STEM.

One feature that appears to be required before a school could be considered as a school of excellence in any field is the documented quality of the outcomes that are achieved by students. Towards this end, consideration could be given, particularly in the early stages of the school of excellence agenda is the use of scholarships for students who could be expected to provide high quality assessment outcomes.

Other factors

A number of other factors contribute to the success of schooling, including the home situation, particularly the quality of parental support available, peer support and the characteristics of the school and its culture that support students in their academic endeavours (Hattie, 2003, 2008; Tytler et al., 2008). Of these factors, the creation of a culture of STEM excellence within a collaborative learning community of staff, students and parents appears as the primary focus that school administrators would focus on.

STEM excellence and teaching
Lynch, Behrend, Burton, and Means (2013) provide a summary of the principles that underpin excellence in STEM education. These principles may be summarised as:

1. **STEM-focused curriculum:** Programs in all four STEM disciplines that are explicitly and intentionally integrated into STEM subjects and non-STEM subjects;
2. **Reform instructional strategies and project-based learning:** STEM education is characterised by instructional practices/strategies that provide the opportunity for project based learning;
3. **Integrated, innovative technology use:** Technology is used to connect students with the systems, models and existing research inherent in the STEM discipline and as a means of social networking and communication to facilitate learning both in and out of school hours;
4. **Blended formal/informal learning beyond the typical school day, week, or year:**
5. **Real-world STEM partnerships:** Student learning is integrated with the world of business, industry, research and the world of work through mentorships, internships or projects;
6. **Early college-level coursework:** Because excellence in STEM education is the goal of the process, it is expected that there will be high performing students in every year level. The capacity to cater for this diversity, by allowing students the flexibility to engage with work that is appropriate for their level of development, as opposed to their age, is essential;
7. **Well-prepared STEM teaching staff;**
8. **Inclusive STEM Mission:** The stated goals of the institution are written in the language of STEM and excellence;
9. **Administrative structure:** The structure of a school must be appropriate for inclusive STEM education and this will vary on a needs basis for each school.

These principles identify a number of aspects that will need to be pursued by the school administration to facilitate an educational climate that is supportive of excellence in STEM. A number of these requirements do not currently exist to any measure within the Australian education context. The challenges associated with the existing curriculum (point 1) and availability of well-prepared STEM teaching staff (point 7) have been previously described. Further challenges also exist in relation to the pedagogical approaches recommended. Project, problem and inquiry based approaches (point 2), while popular within initial science teacher education programs in Australia, are not common in mathematics. The current syllabus documents for these subjects are also not written to support an inquiry or problem based approach. Some steps are being taken to address this issue at the national level, including the funding of projects targeting inquiry learning in mathematics (see https://www.studentsfirst.gov.au/restoring-focus-stem-schools-initiative).

The need for partnerships with stakeholders outside of the school will be essential for a school to be able to support problem and inquiry based learning in real world contexts. These partnerships would include businesses, universities and individuals from the world of work that are able to provide safe and engaging contexts that support inquiry/exploration of real world problems. It is proposed that authentic STEM excellence cannot occur if students are confined to the classroom and school grounds.

**Conclusion – Developing a STEM School of Excellence**
This paper has presented a number of the issues associated with the establishment of a STEM School of Excellence. If all of the factors that have been identified are considered as an integrated whole, then the approach to creating such an institution would follow a process something similar to that shown in Figure 1. It should be noted that the process is presented as an iterative one, where the nature and quality of the whole process is evaluated and repeated to ensure a process that supports ongoing improvement over time and one which is able to achieve the standards of excellence desired.

Figure 1: STEM School of Excellence development process

The starting point for the process would appear to be a period of reflection by the school administration and key stakeholders in relation to what their vision of STEM excellence is. The culmination of this reflection would be the documentation of a school mission and culture statement in relation to STEM excellence that would articulate that vision for all staff, students, parents and others associated with the school. Once the school administration is satisfied that their vision of STEM excellence is soundly developed, the next phase would appear to be the identification of appropriate staff to implement that vision. It would not be expected that, in the first instance, curricula and the learning/teaching contexts would be developed until the teaching staff are available and able to be involved in the process. The particular teaching contexts that are used in real world, inquiry and problem based teaching contexts are very individualistic to the teachers who deliver them as often they are based on the teacher’s personal knowledge and experience base.

The resources and infrastructure that support a STEM school of excellence should reflect the curriculum and teaching/learning contexts that will be used as much as possible. Coherence between resources, infrastructure, curriculum and teaching/learning is essential to a high quality student learning experience. The final steps in the process would be the delivery of the learning and teaching experience for students and the evaluation of the entire process. It is important that evaluation is integrated into all aspects of the process and has the
capacity to change what exists. This has direct application to the staff that are involved in the process. Staff at all levels need to recognise that the development of a STEM School of Excellence does not occur immediately, but is an ongoing process that requires adaptability and resilience on the part of all concerned. It would not be expected that an endeavour such as the establishment of a STEM School of Excellence would be done quickly or through a single iteration of development.

The capacity for a particular school to develop itself as a STEM School of Excellence within the Australian education context appears very limited within the current curriculum and staffing context. The lack of a curriculum framework that adequately integrates science, mathematics and technology and which is written to support a problem and/or inquiry based approach to learning appears to be an essential pre-requisite to the task. The capacity to adequately staff such a school also appears problematic.

References


Considerations of STEAM for young children in Korea: A Delphi Study

Mi-Jin Lee (Andong Science College, Korea)

- topic area of the submission: STEM education
- presentation format: Paper Session

Abstract

This study showed some suggestions for effective STEAM education of young children (preK-K) conducting three-round Delphi with 11 experts of ECE and STEAM education in Korea. The experts agreed to set the necessities and goals of STEAM education and to find out the features STEAM education for young children considering the difference between the preK-K and other schools. Also, they proposed recommendations in four areas that need to implement STEAM education. From the results, we’re supposed to develop developmentally appropriate STEAM education for young children. And effective STEAM education is based on effective instruction design, serving teaching material and resource for teachers, collaboration, professional development programs for ECE teachers.

Key Words: STEAM education for Young Children, Delphi study

I. Instruction

STEAM that includes arts in STEM has come from the needs for artistic sense and creativity in the field of A (art) (Ashbrook, 2010; Moomaw & Dvis, 2010; Yahkman, 2008). STEAM education is suitable way to enhancing science, technology, engineering, arts and mathematics by integrated curriculum. Especially, arts is encouraging children’s creativity and stimulating children’s affective area. Also, it is to utilize the knowledge of science and mathematics for technological engineering procedures and methods, and solve problems by combining arts and humanities in Korea (Kim, 2011).

In Korea, it is necessary that accompanying the integration of subject matters, creative design, and emotional touch for effective STEAM education. And the lesson plan for STEAM education has ‘contextualizing’, ‘creative design’, and ‘emotional touch’. Contextualizing means understanding a problem, making children clarify ‘why I have to do this work’. Finally, the problem becomes children’s one not teacher’s one. From this part of lesson, children will have motivation and attention to activities and lesson. Usually, the problem need to come from children’s daily life (real life) or children’s fairy tale.

1 This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2015S1A5A8016837)

2 simplicity1024@gmail.com
Creative design is the process of solving problems that is associated technology and engineering. The creative design needs children’s various ideas and opinions, and collaborative learning, too. The emotional touch occurs when children are engaged in activities totally, or absorbed in activities. It is called Csikszentmialyi’s ‘Flow’, to. The emotional touch is easily occurred with hands-on activities and from experience of accomplishment. Children will take other new challenge from the emotional touch(Cho, Kim, & Huh, 2012). Korean STEAM highlights 4C-STEAM, that is stands for convergence, creativity, communication, and caring. They are the core competency pursued from STEAM education(Baek et al, 2012) Therefore, STEAM education is suitable not only for being interested in math and science and developing creative problem-solving ability but also a good personality that is knowing how to collaborate with other people having caring others.

Actually, Korean students have high academic achievement in math and science, but show low self-efficacy and interest in them. But young children are already scientists and engineers. They have a curiosity about the world and like to make and construct something they want or need in their play(Stone-MacDonald, Batolini, Douglass, & Love, 2011). STEAM education is emphasized by strengthening not only national economy not also problem-solving ability through 'learning by making'(Kim, 2011). For encouraging children’s curiosity about world and their creative problem-solving ability, STEAM education can give a meaningful way for young children and teachers.

Otherwise, STEAM education has emerged in early childhood education (Sharapan, 2012) and got attention from the STEAM education workshop for ECE teachers(Cho, 2013) in Korea. STEAM education pursues common educational ideas for young children with Nuri curriculum that is national curriculum for pre-K-K in Korea(Lee, 2014) and is appropriate for young children(Ashbrook, 2010; Moomaw & Davis, 2010). STEAM education has been implemented by Korean ministry of Education for elementary and secondary students, but young children(preK-K) hasn’t included in. Also, researches on guidelines and the factors for effective STEAM education, teaching materials and resource, and teacher training are for elementary and secondary teachers but for ECE teachers(Noh, 2015).

In the meantime, since the early childhood education already has the integrated education curriculum and the activity-centered and the child-centered curriculum is in operation (Lee, 2013), the period required to accept the STEAM education is relatively short compared to the elementary and secondary teachers. Even early childhood teachers have agreed the necessity and possibility of applying STEAM education, STEAM education is still unfamiliar and understandable to them(Noh, 2015). In this situation, STEAM education materials of other schools or other countries must not be borrowed unconditionally. It
is necessary first to identify the characteristics of STEAM education in the existing integrated education curriculum and to find the direction of STEAM education (Kim, Cho, & Kim, 2014).

For STEAM education that will help children to possess integrative understanding and problem-solving, to have interest and curiosity in STEAM subject areas to bring high self-efficacy and strong motivation, and to be considerate of others' feelings, it is necessary to find out a guideline and considerations for application of STEAM education for young children. The purpose of this study is figuring out the necessities and goals of STEAM, features of STEAM, and recommendations for STEAM of young children with Delphi study. Delphi study is adaptable for investing the formation of a group judgment, the exploration of ideas and information for making decision, and also facilitate consensus among expert of the area that is not enough professional researches and hasn't clarified like STEAM education for young children (Lee, 2001).

Research Questions

1. What are the necessities and goals of STEAM for young children?
2. What are the features of STEAM for young children?
3. What are the recommendations for STEAM of young children?

II. Research method

1. Panels of Experts

In the Delphi survey, panelists first referred to experts who had studied STEAM education in early childhood education or experienced STEAM education (have teacher training or field application). There are two groups in the panels of experts. 5 field teachers: Teachers who have experience in STEAM research, experience in STEAM training and on-site application of STEAM education, teachers who have experience in teacher competence research on STEAM, and teachers who have experience in teaching development for STEAM education. Although STEAM was not implemented, teachers who have more than 10 years of experience in daycare and kindergarten curriculum have been contacted in the field of early childhood education. 6 researchers: Researchers who have develop STEAM education program for students and teacher training, and research on early childhood science education.

A comparison of the Delphi research reliability and the size of the Delphi panel group shows that a group of 10 to 15 people can obtain useful results (Cochran & Delbecq, 1975).
2. Data collection

In this study, the items were composed based on the results of analyzing the literatures related to STEM and STEAM education. Based on this, the preliminary questionnaire was completed and the open questionnaire was completed by one doctoral student who had experience in STEAM education for young children and two doctoral students who had experience in making Delphi research and questionnaire for survey.

In Delphi 1st Survey, Delphi panel was used to explain the purpose of the study and the procedure of the study, and related contents and the first questionnaire were distributed and retrieved by e-mail. The data collected in the Delphi 1st Survey were categorized through content analysis.

The second questionnaire of Delphi was revised and supplemented to two researchers in the field of early childhood education who have experience of Delphi survey or have experience in making questionnaire. Panelists were asked to rate the level of consent of the 5-step Likert scale (1: totally disagree, 2: almost disagree, 3: moderate, 4: largely agree, 5: very agree). In the second phase of the Delphi survey, the questionnaire was distributed via e-mail, and the questionnaire was collected from 11 panelists except two who were absent due to personal circumstances.

The third questionnaire was based on the results of the second survey and presented the mean, median, quartile. In the questionnaire, the results of the Delphi 2 are shown as M, the median as Md, the range between the quadrants as shaded, and the opinion of the second opinion of Delphi as ×. Based on the comments of the other panels, 3rd round of Delphi was asked to display their final opinion. The questionnaires were distributed by e-mail and the questionnaires were collected from the final 11 panelists.

![Delphi study process](image-url)
3. Data analysis

The data collected in the Delphi 1st Survey were categorized through content analysis. In Delphi 2nd survey, the frequency of opinions, mean, standard deviation, median, and quadrant statistical values of the panel were used. In the third survey, CVR(Content validity ratio) and the consensus, the variance of coefficient of the panels. The formula for deriving CVR, consensus, and convergence is shown in Figure 1 (Lee, 2001).

The CVR standard is more then 0.59(Lawshe, 1975; Oh, cited again in 2008). The consensus must be over then 0.75 and the convergence must be less than 0.5. The degree of consensus and convergence is indicating experts opinion is converged(Choi, et al., 2012). Stability was analyzed by the coefficient of variation obtained by dividing the standard deviation of each item by the arithmetic mean. When the coefficient of variation is less than 0.5, additional questionnaires are not required and when the coefficient of variation is 0.5 ~ 0.8, it is relatively stable (Hong, Choi, Yeol, & Lee, 2015).

\[
\text{CVR} = \frac{N_e - N}{N} \\
\text{convergence} = \frac{Q_3 - Q_1}{2} \\
\text{consensus} = 1 - \frac{Q_3 - Q_1}{M \text{d}} \\
\text{variance of coefficient} = \frac{SD}{M}
\]

N: total cases, Ne: positive answer cases
Md: median, Q1: 1st quartile Q3: 3rd quartile

Figure 2. Formula of CVR, convergence, consensus, variance of coefficient

III. Findings

1. Necessities and goals of STEAM education for young children

1) Necessities of STEAM education for young children

The stability of all items was less than 0.5, the consensus was more than 0.75, and the convergence was less than 0.50. Since the content validity (CVR) is over than the standard 0.59, the contents of the items except item3, are statistically valid. Table 1 shows experts' opinion as follow.
Table 1. Necessities of STEAM education for young children

<table>
<thead>
<tr>
<th>items</th>
<th>opinions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>We need convergent thinking in the future.</td>
</tr>
<tr>
<td>2</td>
<td>We need competent people having creativity and proper personality for the future.</td>
</tr>
<tr>
<td>3</td>
<td>It is important in early childhood to learn by experience using their senses (hands-on) and with interest.</td>
</tr>
<tr>
<td>4</td>
<td>Children can have a sense of accomplishment that outcomes from support and that leads to the process with interest.</td>
</tr>
<tr>
<td>5</td>
<td>STEAM is suitable for achieving the goals of ‘Artistic experience’ and ‘Natural inquiry’ of the Nuri Curriculum.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>items</th>
<th>$M$</th>
<th>$SD$</th>
<th>CVR</th>
<th>stability</th>
<th>consensus</th>
<th>convergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.45</td>
<td>0.52</td>
<td>1.00</td>
<td>0.12</td>
<td>0.75</td>
<td>0.50</td>
</tr>
<tr>
<td>2</td>
<td>4.64</td>
<td>0.51</td>
<td>1.00</td>
<td>0.11</td>
<td>0.80</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>4.18</td>
<td>0.87</td>
<td>0.45</td>
<td>0.21</td>
<td>0.50</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>4.27</td>
<td>0.65</td>
<td>0.81</td>
<td>0.15</td>
<td>0.75</td>
<td>0.50</td>
</tr>
<tr>
<td>5</td>
<td>4.36</td>
<td>0.65</td>
<td>0.81</td>
<td>0.15</td>
<td>0.75</td>
<td>0.50</td>
</tr>
</tbody>
</table>

2) Goals of STEAM education

The stability, the consensus, and the convergence of all items met the standards. Since the content validity (CVR) is over than the standard 0.59, the contents of the items are statistically valid. Table 2 shows experts’ opinion as follow.

Table 2. Goals of STEAM education

<table>
<thead>
<tr>
<th>items</th>
<th>opinions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improve practical problem-solving ability with convergent thinking skill.</td>
</tr>
<tr>
<td>2</td>
<td>Develop the ability to associate unrelated, that it, a flexible thinking.</td>
</tr>
<tr>
<td>3</td>
<td>Based on a variety of humanities and literatures, develop children’s the literacy about science and mathematics.</td>
</tr>
<tr>
<td>4</td>
<td>Acquire convergent thinking skills based on science and technology.</td>
</tr>
</tbody>
</table>
5 Be interested in daily situations related in math and science and exploring these situations actively

6 Raise creativity-personality.

<table>
<thead>
<tr>
<th>items</th>
<th>$M$</th>
<th>$SD$</th>
<th>CVR</th>
<th>stability</th>
<th>consensus</th>
<th>convergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.55</td>
<td>0.52</td>
<td>1.00</td>
<td>0.11</td>
<td>0.80</td>
<td>0.50</td>
</tr>
<tr>
<td>2</td>
<td>4.27</td>
<td>0.65</td>
<td>0.81</td>
<td>0.15</td>
<td>0.75</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>4.00</td>
<td>0.63</td>
<td>0.64</td>
<td>0.16</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>4</td>
<td>4.09</td>
<td>0.70</td>
<td>0.64</td>
<td>0.17</td>
<td>0.75</td>
<td>0.50</td>
</tr>
<tr>
<td>5</td>
<td>4.55</td>
<td>0.52</td>
<td>1.00</td>
<td>0.11</td>
<td>0.80</td>
<td>0.50</td>
</tr>
<tr>
<td>6</td>
<td>4.27</td>
<td>0.47</td>
<td>1.00</td>
<td>0.11</td>
<td>0.75</td>
<td>0.50</td>
</tr>
</tbody>
</table>

2. Features of STEAM education for young children

1) Application of T & E in STEAM

The stability, the consensus, and the convergence of all items met the standards. Since the content validity (CVR) is over than the standard 0.59, the contents of the items except item1, 5, 6 are statistically valid. Table 3 shows experts’ opinion as follow.

Table 3. Application of T & E in STEAM

<table>
<thead>
<tr>
<th>items</th>
<th>Opinions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Expanding early childhood science education is appropriate to deal with technology and engineering.</td>
</tr>
<tr>
<td>2</td>
<td>Don’t need to separate T and E in ECE</td>
</tr>
<tr>
<td>3</td>
<td>It targets the technology and engineering that children experience in their daily life.</td>
</tr>
<tr>
<td>4</td>
<td>Have experiences T and E as play related in children’s daily life</td>
</tr>
<tr>
<td>5</td>
<td>Through reverse engineering, utilize the activities of hand to disassemble and assemble toys.</td>
</tr>
<tr>
<td>6</td>
<td>It makes it possible to use principles or systems of technology or engineering.</td>
</tr>
<tr>
<td>7</td>
<td>Utilize T and E as the way to apply children’s creativity to solve problems</td>
</tr>
</tbody>
</table>
Focus on the design process to solve real-life problems.

<table>
<thead>
<tr>
<th>items</th>
<th>$M$</th>
<th>$SD$</th>
<th>CVR</th>
<th>stability</th>
<th>consensus</th>
<th>convergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline features of T and E</td>
<td>1</td>
<td>3.91</td>
<td>0.83</td>
<td>0.27</td>
<td>0.21</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4.45</td>
<td>0.52</td>
<td>1.00</td>
<td>0.12</td>
<td>0.75</td>
</tr>
<tr>
<td>Having experiences related in T and E</td>
<td>3</td>
<td>4.64</td>
<td>0.51</td>
<td>1.00</td>
<td>0.11</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4.82</td>
<td>0.41</td>
<td>1.00</td>
<td>0.08</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3.82</td>
<td>0.98</td>
<td>0.27</td>
<td>0.26</td>
<td>0.75</td>
</tr>
<tr>
<td>Utilizing T and E</td>
<td>6</td>
<td>3.91</td>
<td>0.70</td>
<td>0.45</td>
<td>0.18</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>4.27</td>
<td>0.65</td>
<td>0.81</td>
<td>0.15</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>4.18</td>
<td>0.87</td>
<td>0.81</td>
<td>0.21</td>
<td>0.75</td>
</tr>
</tbody>
</table>

* shade items means 'Not agreed opinion'.

2) Establishing the role of A

The stability, the consensus, and the convergence of all items met the standards except item 2. Since the content validity (CVR) is over than the standard 0.59, the contents of the items except item 2 are statistically valid. Table 5 shows experts’ opinion as follow.

<table>
<thead>
<tr>
<th>items</th>
<th>Opinions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arts is used as a means of expressing children’s opinions and creative thinking of problem solving.</td>
</tr>
<tr>
<td>2</td>
<td>Arts is used as a practical problem solving tool.</td>
</tr>
<tr>
<td>3</td>
<td>Arts provides the teacher with information about children’s thoughts and perceptions during the problem-solving process.</td>
</tr>
<tr>
<td>4</td>
<td>Arts is an effective way to present scientific principles and human arts subjects as concrete activities.</td>
</tr>
<tr>
<td>5</td>
<td>Arts helps children to participate actively in activities with interest.</td>
</tr>
<tr>
<td>6</td>
<td>Arts serve to converge other components of STEAM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>items</th>
<th>$M$</th>
<th>$SD$</th>
<th>CVR</th>
<th>stability</th>
<th>consensus</th>
<th>Convergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.64</td>
<td>0.51</td>
<td>1.00</td>
<td>0.11</td>
<td>0.80</td>
<td>0.50</td>
</tr>
<tr>
<td>2</td>
<td>4.09</td>
<td>0.83</td>
<td>0.45</td>
<td>0.20</td>
<td>0.50</td>
<td>1.00</td>
</tr>
</tbody>
</table>
3) Guidelines of applying instructional design

The stability, the consensus, and the convergence of all items met the standards. Since the content validity (CVR) is over than the standard 0.59, the contents of the items are statistically valid. Table 6 shows experts’ opinion as follow.

Table 6. Guidelines of applying instructional design

<table>
<thead>
<tr>
<th>items</th>
<th>Opinions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the case of creative design, it is not the process of systematic engineering design such as design-production, but the teacher's assistance is needed to induce and realize the expression of creative idea.</td>
</tr>
<tr>
<td>2</td>
<td>It is more effective if a family engagement give in STEAM when utilizing the learning criteria.</td>
</tr>
<tr>
<td>3</td>
<td>This guideline can be used after adjusting for children's developmental features.</td>
</tr>
<tr>
<td>4</td>
<td>Young children will be interested in STEAM when contexts for learning are related their daily life or composed with actual and specific situations</td>
</tr>
<tr>
<td>5</td>
<td>It is necessary to design a hypothesis that assumes various situations, but it should be designed as an objective inquiry process, not a process of imagination, assimilation, and magic.</td>
</tr>
<tr>
<td>6</td>
<td>The emotional touch should be able to have the motivation and raise the willing to solve challenging problems through the experience of success of problem solving, concrete praise, and to be able to have challenging spirit</td>
</tr>
<tr>
<td>7</td>
<td>It is not appropriate to emphasize only the experience of success in terms of the importance of error experience in science and constructivism.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>items</th>
<th>M</th>
<th>SD</th>
<th>CVR</th>
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<th>consensus</th>
<th>convergence</th>
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</thead>
<tbody>
<tr>
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<td>0.50</td>
</tr>
<tr>
<td>2</td>
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<td>1.00</td>
<td>0.11</td>
<td>0.80</td>
<td>0.50</td>
</tr>
</tbody>
</table>

* shade items means 'Not agreed opinion'.

Table 5. Stability, consensus, and convergence

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<table>
<thead>
<tr>
<th></th>
<th>Stability</th>
<th>Consensus</th>
<th>Convergence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.10</td>
<td>0.80</td>
<td>0.50</td>
</tr>
<tr>
<td>2</td>
<td>0.11</td>
<td>0.80</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
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*shade items means 'Not agreed opinion'.

Table 5. Stability, consensus, and convergence

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3. Recommendations of STEAM education for young children

The stability, the consensus, and the convergence of all items met the standards. Since the content validity (CVR) is over than the standard 0.59, the contents of the items are statistically valid. Table 7 shows experts’ opinion as follow.

Table 7. Guidelines of applying instructional design

<table>
<thead>
<tr>
<th>items</th>
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<tr>
<td>1</td>
<td>Activity designed with content and concepts</td>
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<tr>
<td>2</td>
<td>Design that can converge various disciplines and elements</td>
</tr>
<tr>
<td>3</td>
<td>Utilizing various methods of activity development</td>
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<td>4</td>
<td>Age-appropriate design</td>
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<td>5</td>
<td>Deriving educational contents around the daily life of young children should be ensured to follow problem-solving process.</td>
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<tr>
<td>6</td>
<td>Direct experience required</td>
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<td>7</td>
<td>Design to integrate into the daily activities of early childhood institutions</td>
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<tr>
<td>8</td>
<td>Because of teachers’ work reduction, utilize teaching material that currently being used for STEAM activity.</td>
</tr>
<tr>
<td>9</td>
<td>Develop and provide activities and materials that adapt current curriculum themes of preK-K (e.g. Nuri curriculum and Life Theme)</td>
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<tr>
<td>10</td>
<td>Collaboration with members involved in STEAM education</td>
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<tr>
<th>Professional development programs for ECE teachers</th>
<th>Teachers need prior knowledge and experience of STEAM education</th>
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<tr>
<td>Teachers need to understand technology and engineering.</td>
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<td>STEAM requires professional knowledge in topics for education</td>
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<td>Develop teacher’s ability to promote children to express their opinions</td>
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‘Effective STEAM instruction design’ was derived from experts’ opinions as follows.

‘Activity designed with content and concepts’ was derived from opinions “When STEAM is actually executed, it can be continued similar to the existing class in the form associated with creative art activities. Therefore, it is necessary to plan that the contents and concepts of education that should be provided to children are included in STEAM activities”. ‘Design that can converge various disciplines and elements’ was from “It focuses on integrating diverse disciplines through the process of solving problems in various ways”, “In addition to integrating science and art, it is necessary to develop a STEAM program for young children who experience M (mathematics) and S (science) principles and artistic expression (A) around T (technology) and E (engineering)”, and “It is necessary to integrate
various elements as well as science and arts”. ‘Utilizing various methods of activity development’ means “It is important to avoid a way in which simple activities are listed and to use various methods such as deepening and expanding themes according to age and purpose of activities”. ‘Age-appropriate design’ means “Teachers should have a class that be suitable to child's age or developmental stage. For example, 2 ~ 3 years old can be set as theme - centered, 4 years old as concept - centered, and 5 - year - old as problem - solving center”. ‘Deriving educational contents around the daily life of young children should be ensured to follow problem-solving process’ was from “We must find various elements of science and art that children can experience in everyday life. And when we think that the contents of education in basic concepts of mathematics and science related to real life are starting, we should find enough education contents for infants. Otherwise, it can be a process of expression rather than a process of inquiry for resolution”. ‘Direct experience required’ came from “We encourage creative ideas to be displayed through the processes that children touch and experience(hands-on)”. ‘Design to integrate into the daily activities of early childhood institutions’ meant “It should be an integrated educational and daily activity, not a special activity separated by a scientific activity or a mathematical activity”.

The experts gave the opinions of part ‘Collaboration with members involved in STEAM education’. That was “Because the teachers involved in STEAM differ in their abilities, they are encouraged to participate in the STEAM class through consultation between teachers and to approach them in various ways”.

Last part of recommendation was ‘Professional development programs for ECE teachers’. Specific opinions of experts were as follow. ‘Teachers need prior knowledge and experience of STEAM education’ was derived from “STEAM, It is necessary to educate young children after teacher's prior knowledge and experience about STEAM education is fully achieved”. ‘Teachers need to understand technology and engineering’ meant “Teachers must reach a certain level of engineering and technology in order to solve problems using the principles and systems of engineering and technology”. ‘STEAM requires professional knowledge in topics for education’ came from “Teachers must have a certain level of expertise in the field, such as the academic meaning and basic definition of the topic, to be able to converge”. And ‘Develop teacher's ability to promote children to express their opinions’ was derived from “Because the expressive power of the infant is different from that of the adult, it is necessary to have the capacity of the teacher as a facilitator to clearly understand and guide young children’s intention”
IV. Conclusion

The survey showed making developmentally appropriate STEAM education for young children based on ‘effective lesson design’, ‘supporting teaching materials’, ‘collaborating’, and ‘teacher professional development’. Finally, developmentally appropriate STEAM education for young children can bring to children ‘being interested in science and math’, ‘convergence thinking skill (interdisciplinary understanding)’, ‘creative problem solving ability’, and ‘good personality’ as showed figure 2.

Therefore, when conducting STEAM education for young children, we’re supposed to consider the children’s developmental features and be integrated early childhood education with enough preparation to conduct STEAM education.

<Reference>


Integrating Creativity Training into Cross-disciplinary Courses to Stimulate Engagement and Promote Higher Level Learning

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Abstract
Teaching cross-disciplinary courses in higher education often requires more effort to successfully foster genuine engagement that promotes higher order learning. Drawing from the author’s experience teaching the cross-disciplinary topic of disaster risk reduction, this paper proposes purposeful integration of creativity training into course content in order to stimulate engagement by tending to the interests of a wide range of students without compromising on the learning objectives.

Keywords:
Cross-disciplinary Education, Creativity Training, Higher Education, Disaster Risk Reduction

1. Introduction
Student disengagement from learning is an issue that many teachers have to face. With access to the vast resource of increasingly well-curated information online, students can at little or no cost acquire knowledge on any topic of their interest including content similar to what is offered in most of the conventional college courses. In addition, the ubiquitous access to this information is making memorization of such information seem frivolous. Furthermore, manifest socio-economic impacts brought about by rapid advances in science and engineering technologies (such as the loss of traditionally attractive jobs to robots and artificial intelligence systems), is exacerbating concerns among students on the cost benefit of higher education or the value of any learning outcomes that do not explicitly cater for these changes or the student’s perceived future needs.

Educators have to contend with the demands of this new teaching environment and the need to adapt teaching styles to create more engaging learning experiences and
make the value of learning evident to the students is becoming stronger. This can be daunting for many educators in higher education, especially those in charge of cross-disciplinary courses which often require more effort to achieve genuine engagement and promote higher order learning. Drawing from the author's experience teaching the cross-disciplinary topic of disaster risk reduction, this paper proposes purposeful integration of creativity training into course content in order to stimulate engagement by tending to the interests of a wide range of students without compromising on the learning objectives.

2. Cross-disciplinary Teaching and Engagement

The many research papers and articles on the topic of engagement (or involvement) underscore both its significance as well as its elusiveness. A major distinguish characteristic of engaged learning is that students are not only able to retain what they learn, but they can also flexibly use it or transfer it to a different context. Being able to gauge students' engagement level is an important first step towards improving teaching for meaningful learning. Thinking of student engagement from the 5 levels of student involvement (Rebellion, Retreatism, Ritual Compliance, Strategic Compliance, and Authentic Engagement) suggested by Phil Schlechty (Schlechty 2002) gives this concept a perspective that's easy to understand. To achieve engagement, most researchers of this topic agree that stimulating and maintaining the learner’s intrinsic interest or motivation is key. For example, the ARCS Model (Keller 1983) which gives Attention, Relevance, Confidence, and Satisfaction (ARCS) as the 4 key components for motivating learners, emphasizes the importance of designing instruction based on an understanding of the learner’s motivation and connecting the teaching with that learner’s needs.

Therefore, a shortcut to student engagement would be to focus on teaching that which catches a student’s intrinsic interest (for example something that satisfies their curiosity), and can be easily transferred to different contexts. The challenge then lies in finding a way to integrate such “interesting” content without dilution of the course content knowledge. But it is also important to note that engagement is not just a student-side issue. Teacher engagement and student engagement are two sides of the same coin because engaged students often affect teacher engagement and fulfillment, and vice versa. Lack of engagement on one side can result in a vicious cycle that undermines the learning process. Teachers too can use Schlechty's categorization, mentioned above, to judge their own level of engagement. And, when redesigning their courses, they should remember that the teacher’s interest in addition to the student's interest increases the chances of achieving real and sustained engagement.
3. Disaster Preparedness Class

3.1 Overview

The example used here is taken from a class on Disaster Preparedness taught and coordinated by the author. The class is open to international undergraduate students in their first and second year. The students typically have varied motivations for taking this module and diverse backgrounds in terms of disaster related experiences or knowledge, fields of study and home country. The objectives of the course are (1) Content Knowledge: introducing students to the Disaster Risk Reduction (DRR) concept and an understanding of the related science and technology, and (2) Problem Solving Skills: nurture students who can flexibly and effectively apply the knowledge gained in this class to different contexts of DRR or other diverse contexts. For a natural hazard prone country like Japan, such education on DRR is of great importance. However, DRR education is only well established up to the secondary level curriculum but not in higher education. While this means that there is more freedom on the choice of content and method of teaching, the lack of a textbook means that the DRR teacher in higher education has to take on the challenge of designing the content as well as finding an effective strategy to promote engagement in a class that covers a lot of information spread out over a wide range of topics that essentially requires cross-disciplinary collaboration.

A number of educators have shared methods they use to overcome some of the challenges arising from cross-disciplinary teaching. For example, Dr. M. Avraham suggests the use of systems theory to “help teachers and students control, manage and understand a large amount of information better” (Avraham 2006). Dr. Rajesh R. Parwani discusses some common problems from having a class with students from diverse disciplines and the need to “sustain interest of all students over long periods” (Parwani 2006). He solves some of the issues by providing the right balance of content that is “neither too easy nor too advanced”, using non-standard examples, constantly relating abstract concepts with real life examples and showing the connections between different disciplines. In the sections below, the author explains some of the teaching strategies adopted in the DRR class and how integrating creativity training has enhanced engagement and greatly helped with keeping the class content manageable.

3.2 Teaching Strategies Adopted in the Class

(1) Omnibus lectures: A number of speakers (university professors as well as from the public and private sector) with deep knowledge in a particular DRR related topic are invited to give a lecture on their field of expertise. Lecturers who physically cannot be in class have the option of delivering the lecture via online videoconference system
(Leleito, et al. 2015). The main reason this style of teaching was adopted was to enable the class access a wide variety of experts in the field of DRR. There are also a number of other merits of collaborative teaching discussed in literature (Letterman and Kimberly B. Dugan 2004). Focusing only on student engagement, the author found that the omnibus style teaching was better at sustaining student interest mainly because: (1) the lecturers had condensed all the interesting bits of information from their field of expertise into the one lecture, and (2) just by having a different lecturer each time tackling the DRR topic from a different perspective brought a sense of change and newness to each class which in turn kindled the students' interest. Some drawbacks were that each lecturer had a lot of content to fit into the one lecture, meaning the time for discussion was limited which impacts on student engagement. The author also had to coordinate the lectures to ensure continuity and avoid overlaps between the different lecturers and their content. A useful feedback from the students was that the lectures should be recorded on video and made available online for viewing outside class, and that way the class time could be dedicated to in-depth discussions between the lecturers and the students.

(2) Onsite studies and Workshops: The class also includes a number of field study tours to disaster affected areas such as Tohoku region which is still struggling with effects of the Great Tohoku Earthquake/Tsunami/ Nuclear Plant Meltdown disaster of 2011. In addition to witnessing for themselves the impact of the disaster, the students have the opportunity to meet with a local citizen group formed by disaster evacuees (currently living in temporary housing) whose aim is share their personal experience during and after the 2011 Tohoku disaster in the hope that such activity will promote future DRR efforts. Another onsite study activity is a visit to Kobe City, which has officially recovered from the devastation of the Great Hanshin Earthquake in 1995. In Kobe, students visit a museum dedicated to the Earthquake where they learn about the disaster management process from the preparedness phase, the immediate aftermath, the recovery process and the post recovery phase. In addition, students get firsthand information from the museum guides, usually local citizens who experienced and survived the Great Hanshin Earthquake.

Apart from the above, the class conducts visits to critical facilities that have high impact in case of disruption (e.g. Power Plants), and workshops with local citizens aimed understanding the actual preparations being made to safeguard human life as well as property in case of highly destructive disasters such as the imminent Nankai Trough Earthquake in Nagoya area where the university is located. At each of these field studies, the students participate in workshops or free discussions with the local residents or company employees. For example, the author recently organized a workshop with a citizen group representing a busy shopping street at one of the most
visited tourist spots in Japan (Great Ise Shrine) where students from the class joined by several other international students from over 20 different countries tackled the topic of disaster evacuation plans for foreign tourists. The feedback provided useful reference material for improving DRR targeting foreign tourists because international students bear very similar characteristics with typical foreign tourists (e.g. little or no Japanese language ability). I must emphasize here that these site studies and workshops are open to any international student at the university in an attempt to promote university-wide disaster awareness. During the site studies, the DRR class students participate as a core team of organizers and facilitators and thus gain extra experience on DRR and the required leadership skills.

4. Integrating Creativity Training

4.1 Creativity's Charm

For a person in the Science and Technology field, the word creativity brings to mind famous inventors such as Da Vinci, Edison, Tesla, Jobs, etc. These are people who consistently used their remarkable problem solving skills to come up with original ideas that brought immense benefit to society. It is not just fun (intrinsic motivation) to come up with creative solutions to existing problems, but success in modern society is increasingly being attributed to creativity and innovation (extrinsic motivation). This means that creativity is an important keyword that can be used to elicit a positive response to learning among a majority people. It has the potential to stimulate engagement in class if students can make meaningful link to the learning outcomes.

Creativity features prominently in the so-called “Transferrable Skills”. These are the skills recognized as essential for individuals to flexibly meet the dynamic demands of modern society. A majority of experts on creativity (e.g. (Robinson 1999)) concur that people’s creative capacities can be enhanced. In Japan, an increasing number of universities are providing courses on themes such as “Creativity and Innovation”, “Critical Thinking”, “Entrepreneurship and Innovation”, and “Leadership”. As an addition to these course modules focusing on teaching Transferable Skills, the author sees an opportunity for educators to increase engagement through deliberate integration of transferable skills such as creativity training into conventional disciplinary or cross-disciplinary courses.

Deliberate integration of creativity training means that the courses should be designed with such training (e.g. effective problem solving skills), forming the core part of the course. In the DRR class, the author focuses on teaching systematic problem solving with applications to DRR related topics. From the outset, students are aware that the focus of the course is on creativity training and that while the class deals with DRR, the knowledge they gain can be applied to any other topic of their interest.
4.2 Systematic Problem Solving and Brainstorming

Effective problem solving follows a systematic process. Although there are slight variations, the generic process involves the following sequential steps: (1) Definition of the Problem, (2) Determination of the Root Cause, (3) Generation of Solutions, (4) Selection of best solution, (5) Implementing the Solution, and (6) Evaluation of Outcomes. It has been shown that systematic problem solving outperforms intuitive or ad hoc problem solving (Tyre, Eppinger and Csizinszky. 1993). Therefore, helping students understanding this process and encouraging them to deliberately apply the knowledge will greatly improve their problem solving.

Brainstorming is one of the most commonly used methods for supporting several steps in the problem solving process. Brainstorming does not only stimulate active participation, but it can also play a central role in nurturing skills such as critical thinking, teamwork and communication. In addition, brainstorming sessions are often enjoyable, can be flexibly fit into any teaching scenario, and gives the participants a feeling of achievement. On the other hand, bringing a highly interactive technique such as brainstorming into the core of class instruction can be intimidating even for skilled facilitators. Among many other challenges, the facilitator has to skillfully ensure productivity by stimulating idea generation in stagnating groups while at the same time help those that are engaged in enthusiastic but out of topic discussion to get back on track without affecting their zeal. In addition, while some of the ideas gained can provide solutions that are highly creative and practical, brainstorming can easily lose its appeal and the initial feeling of achievement can turn into dissatisfaction if care is not taken to ensure that appreciable learning is achieved from the brainstorming process.

4.3 Utilizing Established Problem Solving Tools

To enhance the problem solving process and avoid some of the shortcomings of the conventional brainstorming technique, the author suggests the introduction and utilization of established structured problem solving techniques, frameworks or tools that support creative thinking such as TRIZ, SCAMPER, SIT, and et cetera. In the DRR class, the author uses TRIZ (Theory of Inventive Problem Solving /TIPS) as an example, but noting that the other techniques can be used as well.

TRIZ was developed by a Russian inventor (Genrich Altshuller) based on a study of the patterns and trends of invention in thousands of patents. From these studies, Asthuller established that regardless of industry inventive solutions try to solve a contradiction, that they share generic problem and solution patterns, and that the evolution of technological systems also follow recognizable patterns. These insights have resulted in the powerful tools and concepts that apply these generic patterns to
find innovative solutions. The TRIZ toolkit is being used successfully in industry to enhance problem solving and promote innovation. Some of these tools and concepts which can easily be introduced and use in class include:

(1) **The Contradiction Matrix and the 40 Inventive Principles:** The core of TRIZ problem solving is in finding solutions for conflicting features in a system. Contradiction Matrix presents 39 common features that can be tweaked to improve a system. These are presented in the form of a matrix table, which, based on the conflicting features being examined, points to generic solutions in the 40 inventive principles, which is a list of known solutions to technical contradictions.

(2) **Ideal Final Result (IFR):** this concept is used in defining the ideal (Perfect) solution for a problem as opposed to compromise solutions. The solution delivers all the required functionality, all the benefits without any harmful effects and no costs. The IFR is a powerful thinking strategy that promotes breakthrough solutions by leading individuals to think of solutions free of any constraints inherent in the problem space.

(3) **Laws of Technological Systems Evolution:** these are trends that show how technological systems are improved over time. Knowing about this concept helps one understand current technology and even predict the likely future advancement, which greatly improves an individual's inventiveness.

In class, TRIZ is easy to associate with intellectually stimulating keywords (such as creativity, patents, invention, innovation, problem solving) that elicit a positive response to learning. The author has successfully used this to stimulate and maintain the interest of students in the DRR class. At the beginning of the module, students are given a short introduction of the TRIZ as one of the most useful inventive problem solving tools and for understanding technological trends including the DRR content knowledge that will be taught in the subsequent classes. Students are shown examples of how TRIZ is being used successfully in industry to enhance problem solving and promote innovation. At subsequent classes, knowledge of TRIZ is deepened through application during brainstorming and other interactive sessions. Each class of 90 minutes has at least 30 minutes set aside for discussions and brainstorming on the topic introduced in that particular class.

For example, to deepen understanding of the Great Tohoku Earthquake, students are first asked to watch a documentary on the disaster before coming to class. Then in class, students use TRIZ is in discussions aimed at first defining the problem(s) that the class is trying to understand, and then analyzing or determining the root cause of the problem. In subsequent class sessions, TRIZ is used in the generation of solutions to address the root causes as well as in selection of the best solution. Usually, to define the problem and analyze the root cause using TRIZ, the class focuses on finding a contradiction that needs to be solved. This is an important technique that accelerates
the problem definition step. Students also learn to use Root Conflict Analysis or Cause-Effect Analysis.

Another useful technique the students learn is how to convert the specific problem they have identified into a generic or abstract form which can then be easily solved using knowledge or prior inventions borrowed from across disciplines. To assist in finding solutions to the problem during the idea generation stage, the 40 Inventive Principles and the Contradiction Matrix is used as triggers for ideas. The IFR is also a very useful and fun tool which gets the class to set a high standard and encourages outside the box thinking.

The idea generation sessions are conducted similar in format to conventional brainstorming, but different in that the TRIZ guided brainstorming process greatly reduces the work load of the facilitator and the ideas generated are usually of very high quality with the output solutions mostly innovative and practical. This is due to the inherent quality of the TRIZ method to focus on correct problem definition, finding the root cause, and using abstraction to point problem solvers at examples of existing solutions and advanced knowledge that directly relate to the problem at hand. Some key advantages gained from introducing creativity training in the DRR class using TRIZ include: (1) TRIZ in itself provides a topic all students can relate to and apply to other areas regardless of their fields of study, (2) TRIZ helped in the clarification of the context and content of the class, (3) TRIZ successfully changed the class from teacher centric delivery model to a learner-centered model with active engagement by the students, (4) Following the structured problem solving process using the TRIZ tools lessened the burden of facilitation compared to conventional brainstorming, and finally, (5) focusing on creativity training using provided an anchor point that bound the widely varied topics into coherent and manageable content.

5. Conclusion

Purposely integrating creativity training should be considered by educators not only as a method for stimulating genuine engagement in class, but for fostering individuals with the skills to cope with today's and tomorrow's challenges. While there might be courses fully dedicated to teaching about creativity, this paper suggests that in addition to these, integrating creativity training especially to cross-disciplinary courses will enhance the learning of both the specific course content as well as the other important transferable skills. This paper shares an example of integrating creativity training into course content based on the author's experience with a cross-disciplinary DRR course. This serves as a good example of often taxing cross-disciplinary classes that involves a group of people with varied interests (multidisciplinary group of students, a collaborative teaching team, etc.) that need to be taken into consideration.
At the end of the course, students had not only acquired adequate content knowledge, but they also greatly appreciated their newly acquired creative problem solving skills which they strongly felt offered them a new and interesting perspective on how to approach immediate issues related with their current academic challenges and even their future careers.

In the modern class, teachers need to be always aware that their students have instant access to online information, information that most often is presented well enough to render the need for the conventional classes obsolete. Educators in higher education might find integration of creativity training into their classes will help them adapt and transition to meet the challenges of educating the modern student.

References


Clark, Donald R. Concepts of leadership. 7 2016.


An Examination of the Priming Effect

Abstract

This paper presents the findings from a quantitative study that examined the priming effect, which is the phenomenon whereby an individual’s behavior is unconsciously influenced by exposure to a stimulus. To examine the priming effect, a survey was given to 98 non-Japanese English teachers at universities in Japan. The survey results suggest that the priming effect may have influenced the participants in an unexpected way.

Introduction

One definition of the priming effect is: “The process by which recent experiences increase the accessibility of a schema, trait, or concept” (Aronson, Wilson, Akert, & Sommers, 2016). Daniel Kahneman illustrates the priming effect with the following example: If asked to complete the word fragment $SO_P$, a person who has recently heard or seen the word eat is more likely to complete the word as soup rather than soap. And the opposite would be true if the person had recently heard or seen the word wash (2011). An influential study on priming was an experiment (Higgins, Rholes, & Jones, 1977) in which the participants read a passage that ambiguously described a character named Donald and were asked to characterize him with adjectives. In a prior activity before the reading, the participants were exposed to trait terms with either positive desirability or negative desirability. The study found that the subjects who were exposed to positive trait terms were more likely to characterize Donald with positive traits and participants who were exposed to negative trait terms were more likely to characterize with negative traits.

Another well-known study on priming was conducted by psychologist John Bargh (1996). In the experiment participants had to unscramble the order of words to make short sentences. In the experimental group, the participants’ sentences included words associated with the elderly, such as wrinkle, forgetful, and bald. The control group received words not associated with the elderly. At the conclusion of the task, participants had to walk down the hallway to a
different room and their walking speed was secretly timed. The results revealed that the experimental group walked down the hallway more slowly than the control group. Other studies have also demonstrated the priming effect. However, the priming effect is controversial, as the results of some studies have proven difficult to replicate, including Bargh's study (Bartlett, 2013).

Methods of Research

To carry out our research, a ten question survey was created via SurveyMonkey. The primary purpose of the survey was to examine self-inflation effects, which is the subject of our other paper. The secondary purpose was to examine the priming effect by running various statistical tests on the data we received from the surveys. The survey included two versions, one given to the control group, the other the experimental group. To study the priming effect, the order in which one question appears in the survey was altered. In the survey, participants were asked to rate their own teaching ability on a scale of 1 to 10 (1 being extremely poor and 10 being superb). In the experimental group, directly preceding this question the participants were asked to think of a great teacher they had as a student and answer if said teacher was at elementary, junior high, high school, or university. The purpose of this was to examine if having participants first think of a great teacher would influence their answers to the subsequent question in which they had to self-rate their own teaching ability. For the control group, the question about a great teacher they had in their past was moved to the end of the survey and immediately preceding the self-rating question the participants were asked how many years they have taught at the post-secondary level.

To collect the opinions of non-Japanese teachers at the tertiary level in Japan the survey was distributed through email and announcements on social media such as Facebook. The participants were directed to the control or experimental survey version depending on the month of their birthday. 102 teachers participated in the study and of these, 4 were thrown out due to incomplete answers.

Demographic Data on the Participants

The survey participants were non-Japanese instructors at Japanese universities, mostly male, and represented a wide range in age. Of the 98 participants, 73 were male and 25 were female (see figure 1). The youngest age range represented was 25 to 34 years old and the oldest was
75 years old or over (see figure 2). There were no participants under 25 years old.

![Figure 1: Male and Female Distribution](image)

![Figure 2: Age of the Participants](image)

**Results**

The descriptive statistics of the two groups’ answers to the self-rating question are given in table 1. The average self-rating score for the experimental group was approximately 7.82 and for the control group
approximately 7.62. Thus, there was no statistically significant difference between the self-rating scores of the two groups. It is also notable that there is a significant difference in deviation of the self-rating scores between the two groups. This will be further demonstrated below with other statistical tests.

<table>
<thead>
<tr>
<th>Experimental</th>
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<td>Standard Error</td>
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<tr>
<td>Median</td>
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<tr>
<td>Mode</td>
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<tr>
<td>Standard Deviation</td>
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<tr>
<td>Sample Variance</td>
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<td>Kurtosis</td>
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<tr>
<td>Count</td>
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</tbody>
</table>

Table 1: Descriptive Statistics for Experimental and Control Groups

Table 2 shows the degree of correlation between number of years the participants had taught at the university level and their self-rating scores. The Pearson correlation coefficient for the control group was .519, which signifies a significant correlation, and the experimental group was .178, which signifies no significant correlation between the number of years taught at university and the self-rating scores.

### Experimental Group Data

<table>
<thead>
<tr>
<th>Years taught at university</th>
<th>Self-rating</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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### Control Group Data

<table>
<thead>
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<th>Years taught at university</th>
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</thead>
<tbody>
<tr>
<td>Open-Ended</td>
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</table>
A t-test assuming unequal variances was conducted (see table 3), and there was no statistical significance involving the means of the two groups since the t-stat is between the negative and positive value for the t critical two-tail value. Therefore, the null hypothesis was confirmed for this test, meaning that there was no statistical difference between the means of the two groups.

To test whether or not there was a statistical difference of variance between the control group and experimental group, an F-Test was conducted. Table 4 shows that the F value is greater than the F critical value, and thus we reject the null hypothesis. Therefore, the variances of the two samples are unequal.
Table 4: *f*-Test: Two-Sample for Variances

<table>
<thead>
<tr>
<th></th>
<th>Control Group</th>
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</thead>
<tbody>
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<tr>
<td>Degrees of Freedom (N-1)</td>
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<tr>
<td>F</td>
<td>1.840088938</td>
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<tr>
<td>P(F&lt;=f) one-tail</td>
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<tr>
<td>F Critical one-tail</td>
<td>1.617846498</td>
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</tbody>
</table>

Conclusion

We came to several conclusions from the statistical data. First, there is no statistically significant difference between the average self-rating scores of the control group and experimental group (this will be discussed further in the final section). Second, there is statistically significant correlation between years of teaching experience and self-rating scores for the control group but not the experimental group. Thus, it is possible that the priming effect caused participants to anchor their scores more closely than in the control group. Second, the variances of the two groups are unequal as shown by the data from the F-test. More specifically, the responses from the participants in the experimental group were more clustered around the average than in the control group. It is possible that with the schema of their favorite teacher activated, participants in the experimental group were more likely to cluster their answers in a narrower range. Further research with larger sample sizes will be needed to confirm this result.

In sum, a statistical correlation was established for participants in the control group between years of teaching experience and self-rating scores, but this effect was not found in the experimental group. Furthermore, there was a statistical difference between the variances of the control and experimental groups. Therefore, based on our statistical results, we can tentatively conclude that there may have been a priming effect in these two areas.

Ideas for Improvement

Upon completion of this study, we have doubts regarding our methods of examining the priming effect. Initially, we supposed that by having the experimental group participants first think of a great teacher, that it may result in lower self-ratings if it would cause them to consciously or
unconsciously compare themselves to the great teacher rather than their colleagues or other less impressive teachers. However, this may have been an erroneous assumption. Perhaps it is possible that having the participants think of a great teacher could also have had the opposite effect and cause participants to self-rate themselves higher instead of lower. If participants have the thought of a great teacher activated in their minds, perhaps it could lead them to consciously or unconsciously associate themselves with the great teacher, or great teaching in general, and hence result in a higher self-rating. Or, it is even possible that the question could influence participants differently, some towards a higher self-rating and others towards a lower self-rating. Thus, the predicted influence from the priming question was not as straightforward as we initially supposed.

As one possible solution, instead of having participants think of a great teacher they had in their past, we could have asked them to identify the perceived strengths of their own teaching. If this question influenced the participants’ self-ratings, it would be expected to influence the self-ratings to be higher. Whereas for the question about a greater teacher they had in their past, for the reasons stated above, it is unclear to us whether this would potentially influence the self-ratings to be higher, lower, or both depending on the individual participants.

References


An Examination of Self-inflation in Teachers

Abstract

This paper presents the findings of a quantitative study that examined the following main research questions: 1) Do EFL teachers generally believe they are better teachers than most of their colleagues? 2) Do EFL teachers, when comparing themselves to their colleagues, rate their teaching skills more highly than skills that are not directly related to teaching? 3) Do EFL teachers think they are less likely than other teachers are to overrate their own teaching ability? This study sought to expand on the research of Jonathan D. Brown, whose findings support the claim that people tend to believe they are more competent than others, especially for characteristics and skills that are important to them. Based upon the survey responses of 98 EFL university teachers in Japan, the answers to the above research questions appear to be yes.

1. Introduction

Teachers are faced with difficult judgments: Are my current teaching practices preferable to alternative approaches? Could modifications to my lessons and teaching style result in higher student motivation and a more efficient learning environment? Are my lessons providing students with the knowledge and skills that they most need? The complexity of the classroom, among other factors, can make it difficult to answer such questions. Furthermore, teachers may be prone to overvalue the effectiveness of their teaching. If so, could self-bias lead to undue complacency in one’s teaching? Could it even contribute to poor teaching decisions? We strongly believe that these questions merit consideration.
2. Theoretical Background

Traditional views in psychology held that it was beneficial for individuals to possess accurate self-perceptions, yet subsequent research has suggested that overly-positive self-evaluations are normal and may be advantageous (Taylor and Brown, 1988). Most people tend to view themselves as unique rather than common and believe themselves to be more talented, capable, competent, honorable, moral, compassionate and sympathetic than others (Brown, 2011). Moreover, the tendency to self-inflate is heightened for characteristics and abilities that the individual regards as important (Brown, 2011).

There are various explanations to account for self-inflation. It may derive mainly from self-enhancement needs – the desire to feel good about oneself – and may at times be solely produced by cognitive factors, such as an asymmetry of knowledge and the tendency to focus on oneself when making comparative judgments (Brown, 2011). Moreover, its origin may be traced to natural selection. When competing for resources and mates, there is a selection advantage in inflating one’s worth (Varki & Brower, 2013), and evolutionary psychologist Robert Trivers (2011) argues that self-deception evolved in the service of deception of others, since a self-deceived liar can more easily escape detection. Furthermore, Trivers believes there is a “systematic deformation of the truth at each stage of the psychological process.” He adds, “from its biased arrival, to its biased encoding…to misremembering and then misrepresenting it to others, the mind continually acts to distort information flow in favor of the usual good goal of appearing better than one really is” (p. 139).

3. Methods of Research

A ten question survey was created via SurveyMonkey. The survey included two versions, A and B, with the only difference between them being the order in which one of the questions appears. Having two versions allowed us to study the priming effect, which will be discussed in our other paper. To collect the opinions of non-Japanese teachers at the tertiary level in Japan the survey was distributed through email and announcements on social media such as Facebook. 102 teachers participated in the study and of these, 4 were thrown out due to incomplete answers. The participants were directed to version A or B depending on the month of their birthday. The data from the two versions was combined to present the findings below.
4. Demographic Data of the Participants

The survey participants were non-Japanese, mostly male, and represented a wide range in age. Of the 98 participants, 73 were male and 25 were female (figure 1). The youngest age range represented was 25 to 34 years old and the oldest was 75 years old or over (figure 2). There were no participants under 25 years old.

![Figure 1: Male and Female Distribution](image1)

![Figure 2: Age of the Participants](image2)

5. Results

Three main findings will be discussed. Firstly, the vast majority of participants rated their own teaching skills highly and better than average. Secondly, participants rated their teaching skills compared to their present and former colleagues more highly than they rated their computer literacy skills compared to present and former colleagues. Thirdly, the
majority of participants answered that they are less likely than other teachers are to overrate their own teaching ability.

5.1) Participants were asked to rate their own teaching ability on a scale of 1 to 10 (1 being extremely poor and 10 being superb). Almost all participants rated themselves highly. The average self-rating was approximately 7.7 (figure 3). Four participants rated themselves as a 10. Only one participant rated himself as less than a 5, and notably this participant was still in his first year of university teaching in Japan.

![Figure 3: How the Survey Participants Rated Their Teaching Ability on a Scale of 1 to 10](image)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<td>Sum</td>
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</tbody>
</table>
Next, participants were asked to compare their teaching ability to present and former non-Japanese colleagues. Only 2 of the 98 participants rated themselves as below average. Furthermore, one of them had only been teaching at a Japanese university for two-and-a-half years and the other only for one year. In theory there should have be an even distribution of answers above average and below average, yet the distribution is highly skewed towards a positive self-rating (figure 4). These results seem to confirm Brown’s (2011) claim that most people tend to view themselves as above average.

![Table 1: Descriptive Statistics of Self-Rating Score](image)

5.2) Participants were asked to rate their computer literacy skills in comparison to present and former non-Japanese colleagues. The purpose of this question was to test Brown’s (2011) claim that the self-inflation effect is heightened for skills and characteristics that the individual views as important. It would seem likely that teachers would regard their teaching skills as more important to them than their computer literacy skills, and thus a higher self-rating may be expected. The results seem to confirm Brown’s claim as the average score for computer literacy skills is comparatively lower and there is a higher number of teachers who rated their computer literacy skills as being below average (figure 5).
5.3) Participants were asked if they think they are most likely to overrate, accurately rate, or underrate their own teaching ability (figure 6). Of the 98 participants, 60 answered that they are most likely to accurately rate, 20 answered that they are most likely to underrate, and only 18 answered that they are most likely to overrate their own teaching ability. Next, participants were asked if they think other teachers are most likely to overrate, accurately rate, or underrate their own teaching ability (figure 7). Of the 98 participants, 51 answered that other teachers are most likely to overrate, 31 answered that other teachers are most likely to accurately rate, and only 16 answered that other teachers are most likely to underrate their own teaching ability. There is a significant contrast between the answers for these two questions. Most participants believe that they would be most likely to accurately rate their own teaching ability, yet they believe other teachers are most likely to overrate their own teaching ability. These results seem to suggest that teachers are more skeptical of other teachers than they are of themselves when it comes to self-evaluation.
6. Conclusion

The main motivation for conducting this survey was born out of a curiosity to find out if and to what degree teachers exhibit self-inflation, as well as a concern that being unaware of this tendency could have negative repercussions for teachers. Overall, the results of the survey seem to suggest a bias towards one’s teaching. Having a high opinion of one’s own teaching is often justified and may even benefit teachers in
some ways. However, in some cases perhaps an overly-high opinion of one’s teaching could lead to complacency and thereby undercut motivation to improve. Additionally, perhaps self-bias could result in teachers being less willing to try alternative teaching approaches if they have undue confidence in their current ones. It is our hope that raising awareness regarding the pervasiveness of self-inflation may encourage teachers to do more self-reflection and obtain more feedback on one’s teaching practices from colleagues and students.

7. Room for Improvement

A few ideas occurred to the authors after the study was completed. First, it may have been useful to have participants rate the teaching abilities of others on a scale from 1 to 10 in the same way they were asked to rate themselves, which would have allowed for more quantification of results and greater ability to analyze the data more efficiently. Secondly, for the question that asked participants to rate their own teaching ability on a scale of 1 to 10, some participants chose non-discrete answers such as 7.5, which proved slightly problematic when graphing the data. Thirdly, having the participants explain the reasons for their answers may have been informative, such as the reasons for thinking that other teachers are more likely than they are to overrate their own teaching ability. Lastly, a larger sample size would provide for a more accurate statistical result.

8. Further Analysis and Research

This paper focused on only three main aspects of the data. However, there were other aspects that may have merited analysis. First, there may have been a correlation between the years of teaching experience and self-rating scores. Secondly, there may have been a distinction between male and female participants’ answers to some of the questions. Thirdly, it would be interesting to expand this study to different levels of education, rather than limited to university teachers, to see if the results would hold. Lastly, this survey could be altered to do a cross-cultural study to find out to what degree self-inflation may be a culturally based phenomenon.

References


1. [Title of the submission]
Development of Healthy Menu Recipes for Diabetes Prevention Using Local Ingredients of Mishima City, Japan

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6. [Abstract]
Development of Healthy Menu Recipes for Diabetes Prevention Using Local Ingredients of Mishima City, Japan

[Aim]
For the purpose of subjective involvement of the students, this seminar
deploys active learning. This report describes the joint activities with the Health Promotion Division, Health Promotion Department of Mishima City to develop the menu recipes using local ingredients of Mishima for diabetes prevention.

[Subject and Methodology]
The subjects were a wide variety of citizens. Mishima City specified the requirement to use local products of Mishima within the range of 500 to 600 kcal of energy, 50% of glucide, 40 to 50 g of Food Exchange List 1 foods (carbohydrate), about 1.5 to 2 units of List 3 foods (protein), at least 100 g of List 6 foods (vegetables, mushrooms and seaweeds) and up to 3 g of salt equivalent. The menus were created with rice as the staple diet according to these specifications so that they were suitable for boxed lunches.

[Results]
The menus were considered first with reference to “Food Exchange Lists - Dietary Guidance for Persons with Diabetes” and then Excel Eiyo-kun Version 6.0 (Kenpakusha) was used for nutrition calculation. The information about local ingredients of Mishima in season was obtained from JA Mishima Kannami Fresh Calendar.

The menus for spring and summer were devised. The spring menu is shown in Picture 1. It was composed of “rice boiled with barley” as a staple diet, “steam roasted salmon and cauliflower” as a main dish, “simmered Japanese mustard spinach and atsuage deep fried tofu” as a side dish and “vegetable miso soup.” One of our ideas was the use of spring cabbage and cauliflower to represent the sense of the season. No oil was used for the main dish but it was steam roasted, leading to reduction in energy. The nutritional values were 541 kcal of energy, 28.1 g of protein, 77.7 g of carbohydrate, 2.9 g of salt equivalent and 170 g of vegetable weight. The local ingredients used were cauliflower, cabbage, Japanese mustard spinach, carrot, daikon radish, lemon, shimeji mushroom and shiitake mushroom.
The summer menu is shown in Picture 2. The recipes created were “rice with green soybeans cooked with green tea” for the staple diet, “tofu steaks” for the main dish, “boiled spinach dressed in sesame sauce” for the side dish and “eggplant miso soup.”

The dish of spinach dressed in sesame sauce was featured by the use of mentsuyu noodle soup base instead of soy sauce to decrease the salt equivalent.

The nutritional values were 431kcal of energy, 19.0 g of protein, 60.9 g of carbohydrate, 3.0 g of salt equivalent and 240 g of vegetable weight.

The Health Promotion Division, Health Promotion Department of Mishima City then added the idea to modify the menu into the one shown in Picture 3 that consisted of “zakkokumai rice,” “boiled tofu and mushrooms topped with thick ankake sauce,” “boiled spinach and canned tuna dressed in sesame sauce,” and “miso soup with eggplant and onion.” This menu was introduced to a health promotion cooking class for diabetes prevention.

[Conclusion]
The healthy menus for diabetes prevention have been developed by devising the cooking methods so that they are satisfactory to the persons who take the meals with much intake of vegetables despite the low energy level.
Learning Technology through Collaboration

Paper Presentation Proposal

Teacher Education

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Learning Technology through Collaboration

Over the past twelve years, the authors/university colleagues collaborated becoming partners in learning of technology tools as applied to online teaching. The online environment at their university became, in the same period of time, 90% of its instructional delivery systems for university teacher certification programs. This paper and its presentation will trace and analyze the authors’ collaboration within the context of instructional delivery development within the university’s teacher education programs.

If you really want to do something and you meet someone who also wants to, you can learn together! You both bring very different things to the collaboration…different skills, perspectives and experience. Ken Blanchard is an advocate of collaboration whose mantra is “no one of us is
as smart as all of us.” Working together and collaboration are and were solid practices of Blanchard. How did he collaborate with so many people over the years? He reached out to people to learn from them and to learn together. He has written over sixty books with only two books by himself. His “One Minute Manager” is his most popular book. Ken Blanchard was affiliated with Ohio University and the University of San Diego and by 1980, he formed his own company, Ken Blanchard Companies where he is considered an expert in leadership and specifically spiritual leadership. He maintained that leadership was a process of influence. At 77 years of age he is still active in leadership studies and resides in the San Diego area. (Wikipedia, Ken Blanchard, October 17, 2016)

Stating that "no one of us is as smart as all of us," Ken Blanchard (2012) proposed that there are three aspects of successful collaboration.

1. If a person meets another who wants to accomplish something and decide to work together to do so, the collaborative experience is meant to be dynamic.
2. Collaboration relies on the different skills and experience each person brings to the table.
3. Further, Blanchard described "essence" and "form" as the two characteristics of a solid collaboration.
   
   Essence is heart to heart: values to value
   
   Form: who does what; who gets what (Blanchard)

The authors, Anderson and Weegar, had essence: both loved teaching and had both experienced administrative ups and downs and a whole lot of teaching success. They intended to make a difference in the world…both came from strong history of collaboration with other peers. Anderson was in an administrative position and had witnessed Weegar, a Program Lead Faculty, organize the student teaching supervisors, lead the initiation and completion of a first student teaching handbook, teach successfully, and submit well written dossiers. Weegar was very thorough…almost exacting in her performance as a faculty member.

After exposing sexual harassment incident within the department (having been sexually harassed on the job and at a university), Anderson was considered the problem and returned to faculty. Searching for a meaningful place within the department, she was approached by an empathetic Weegar who provided an opportunity to teach online with assistance. Ergo, Anderson and Weegar began their collaboration in 2005 teaching online. Side by side, they taught for the month, a single course, co-teaching, meeting two days a week at Weegar’s home. Anderson built on Weegar’s good practice—mostly impressed with the amount, the quality, and the timeliness of feedback. With a few stylistic features that were closer to her background and experience, Anderson learned to bring her own good practice into online delivery of instruction. Subsequently, the authors sat again side by side each with their own class, kind of like team teaching. Pacing and feedback and communication were important skills practiced…plus calibrating the evaluation of student work. Both preferred high quality performance and used face-to-face teaching skills to bring students to a high level of performance.

Then, came another golden opportunity…Weegar was named new program lead lending had a whole list of online courses to design. Weegar was a digger of resources with her tech skills.
Anderson’s strength was in innovative lessons that became better through collaboration. Courses that were designed have stood the test of time over nearly ten years…with few and minor upgrades. Online teaching and course design interest and skills were off and running. They worked off their personalities and what they are inclined to do. Weegar began and completed her online doctoral degree with Anderson assisting on the dissertation. Suggested she honor her mother on her birthday and get her doctorate like her mother did…and become a full professor as her mom had been…and, away she went. She was very good and independent on her coursework. And she graduated…proudly.

Understanding personalities, people, and their individual needs is essential to collaboration and good teamwork. Indeed, Emily Eldridge (2012) shows us that there is an "I" in "Team," and that the individual has a lot of power in an over-connected world. Eldridge’s personality piece entered the authors’ collaboration. Myers/Briggs was Eldridge’s framework. Weegar is INTJ (also Jefferson, Newton, Eldridge). Anderson is ENTP (also Obama, Ben Franklin, Chris Rock). Notice, the NT portion is the same in both of the authors. Weegar is a perfectionist…Anderson wants to get it done. Anderson moves out to the person first…Weegar studies first. Anderson is guided by principles and Weegar tends to be guided by experience/judgment. They worked together as “I”s” enjoying their similarities and complementing their differences.

In the past few years, Weegar’s illness became a barrier to her work at the university. She had to resign and use her lessened energy to stay alive. The authors had an agreement to co-present at HICE as done earlier…so this year, that history of their collaboration is being honored.

References

Blanchard, K. (2012) Collaboration - Affect/Possibility: Ken Blanchard at TEDx SanDiego, Published on Dec 27, 2012 https://www.youtube.com/watch?v=HKGkBRk1kSo

Let’s Share about 21st Century Teaching and Learning

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College and university faculty sharing favorite tech tools and apps heightens interaction whether at a conference workshop or in other formal/informal sessions. Faculty become motivated to try tech tools that work for their enthusiastic peers. Experience of university faculty and of faculty with their university students provides real time, sophisticated use of tech tools. Such use of tech tools in teaching provide information for action research projects as well as added teaching and learning development.

In just one quick Google search, two tech tool sources are shared in references, fresh and new articles by Katrina Schwartz (2016). Faculty can Google to find many new tools and apps. What is your favorite tech tool? What is your favorite tech tool used in teaching? The author asked her students and colleagues those questions over the last year. To begin students were queried in Live Chat sessions of an online class. The popularity of the question led to a follow up question, what is your favorite tech tool and why? The popularity and generosity of responses led to a more permanent discussion forum for methods classes in a teacher licensure program. Another question was what is your favorite tech tool in teaching? The sharing was rich as students learned best practices in teaching with technology…they seemed hungry for real time sharing of teaching with technology. Favorites helps the learner prioritize and think about usage and importance. The ratio of responses for favorite tech tool fell into three groups in this ratio, 8:1:1, eight smart phones, one MacBook, and one other. Teaching tech tools was a broader assortment of programs, apps, and tools (or devices). Students became more specific about their teaching programs, apps, and tools/devices. Each person seemed to want to brag a little

The 21st century with booming technological advances has provided teachers and learners new tools to make teaching and learning more exciting and fun! Inquiry and projects solve problems in ways that teachers and learners find more in sychn with the world around them. Technology has brought us closer together and has created anew at record speed. Budhai and Taddei (2015) in a very small, easily read and processed book, Teaching the 4Cs with Technology, spoke to the development of critical thinking, communication, collaboration and creativity through learning activities using tech tools

Finland has led the pack in international test scores, becoming a source of fascination for education policymakers and experts. Going forward, Finnish schools will be placing less emphasis on individual subjects like math and history, and will instead focus on broader, more interdisciplinary topics. The goal, according to Finnish leaders, is to provide students with the necessary skills for a more technological, global society. (Klein)

A joy of learning is what Finns want for their children as an end product of schooling. Schools, states, and countries are shaping education of the future with tech experience and are being revitalized.

As an example, Flatley (2012) found blogging increased student interactivity, extended classroom discussions, and increased equity of student voice. Those findings affirmed an earlier study of Flatley’s with collaborators Dyrud and Worley (2005) in which blogging enhanced student collaboration, interactivity and creativity. The New York Times reporter, Matt Richtel, told of a Stanford Professor who had studied over a six year period, 2001-2007, 16,000 student writings by blogging. Stanford Professor Lunsford related students were impassioned and more expressive in when blogging. She replaced a term paper with student blogs in her research class.

At the author’s tech teaching tools of blogs, presentations of learning in videos, movies, digital storytelling, blogging, website construction have been employed in her courses of her responsibility, that is, single subject methods and Master’s degree best practices online courses. Required was the training of key adjunct faculty, who also teach those courses, to use designated tech tools, largely new to them and occasionally quite new to the world. For over six consecutive years, those tech tools have been in place and upgraded regularly and often within those courses. Adjunct faculty reported their students had more
personal expressiveness, greater creativity, more interactivity, and an increased relatedness with other students. Adjunct faculty have picked up those tools for their own personal and professional use. Adjunct faculty have contributed to increased use of technological tools for their learners to express findings and feedback. In revising and updating online courses adjunct faculty have actively engaged.

Connectivism proposes a perspective similar to Vygotsky's 'zone of proximal development' (ZPD) implying the influence of social and cultural context in learning as a result of teaching and learning with technology. Connectivism is somewhat similar to Bandura's Social Learning Theory that proposes that people learn through contact with each other. Setting connectivism apart from theories such as constructivism are the view that learning can reside outside of oneself (within an organization or a database as focused upon connecting specialized information sets) and the view that the connections enabling learning are more important than one’s current state of knowing. A learning theory for the digital age indicates an emphasis that connectivism gives to technology's effect on how people live, work, and communicate and learn. In the 21st century technology strongly impacts how people learn, with and from others within the virtual world. People develop relationships with technology and sharing what they learn in real time.

This year’s workshop is a real time event of sharing teaching with technology. Merriam-Webster (October 3, 2016) defined real time as the actual time during which something takes place. In this workshop, in real time, college and university faculty can share favorite personal and teaching tech tools and learn from their peers within the Hawaiian International Conference on Education, January 2-6, 2017 workshop.

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Abstract

Excellence in Elementary Education: The challenge of partnering for reform and sustainability

Barbara R. Ridener, Valerie J. Bristor, and Gracie Diaz

EXCEED: Excellence In Elementary Preparation is a multi-faceted initiative to redesign elementary teacher preparation and improve pre-service teacher training in core subject areas (math, science, social studies, English language arts/reading) as well as align clinical experiences with district practices to better prepare candidates for classroom success and transition to becoming successful professionals. The partnership between Florida Atlantic University, the School Districts of Broward and Palm Beach Counties (two high-needs LEAs), Learning Sciences International (LSI), and New Teacher Center (NTC) links content, teaching, and assessment strategies in university coursework with clinical experiences and measurable outcomes.

EXCEED will improve pre-service candidates’ preparation and impact on K-5 student achievement through a comprehensive program redesign with specific goals that will:

- Improve candidate content knowledge of the increasingly rigorous requirements for K-5 students and prepare candidates for graduate coursework;
- Identify and train highly effective teachers to serve as cooperating teachers in accordance with FL Statutes
- Use districts’ Marzano Teacher Evaluation Model© to document pre-service candidates’ instructional effectiveness after extensive professional development for supervisors, cooperating teachers, faculty and pre-service candidates;
• Develop data-driven performance feedback systems to provide continuous program improvement.

The project design includes a quasi-experimental time series using learning gains of K-5 students taught by FAU teacher candidates as primary outcome measures. EXCEED personnel also created objective candidate performance feedback systems for use during practicum and internships to measure effectiveness of methods and content strategies in field experiences through comparison of actual to predicted student learning gains (short duration value-added growth measures). EXCEED personnel also identified and measured the success of interventions and support of student teachers in instructional practices identified during practicum and internship experiences.

The significance of the project is the development and implementation of a strengthened, replicable, sustainable teacher preparation program that equips novice teachers with individualized instructional competency profiles, showing strengths and growth areas that will lead them to sustained and supported self-improvement.

While the project is in its final, funded year, this discussion focuses on the detailed planning that has led to course and program redesign and the extensive coordination and training of all personnel for aligned and reliable practice as well as the data collected that documents continuous improvement. Plans for program sustainability are also presented.
Piloting a Year-long Field Experience in PDS Schools

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Abstract

This paper describes the advantages and disadvantages of a year-long field experience as contrasted with the traditional one-semester field experience. Public school and university faculty members implemented a new Urban Education Model in five local elementary schools, one middle school and one high school. The authors interviewed groups of stakeholders in the five elementary schools about the efficacy of the longer field experience. In this Teacher Quality Grant Program, another model we followed was the professional school development [PDS] model. This paper will describe how this model worked in the schools (five elementary schools and one middle school), explaining the reactions to the program that we received from stakeholders. The findings of this study (and of other studies conducted for this grant) were overwhelmingly positive in favor of the year-long field experience. Additionally, the schools’ principals and district school boards requested that the year-long internship remain in place after grant funding was exhausted. As a result of this grant*, the local school districts have made lasting changes in the field experiences they offer to preservice teachers.

Key words
Teacher Preparation, Yearlong Field Experience, Professional Development Schools (PDS), Early Childhood and Elementary Education

*Acknowledgement – the US Department of Education provided generous funding through the Teacher Quality Grant Program
How students problem solve after completing a DNA replication modeling activity – a pilot study

**Topic:** STEM Education

**Paper Presentation**

**Abstract:** The Next Generation Science Standards (NGSS) has stipulated an increase in the use of scientific models and modeling in biology classes. The goal of this research is to discover how students problem solve about DNA replication after a DNA replication modeling activity. Students solved a DNA replication activity out loud and the findings of how they think through the problem will be discussed.

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How students problem solve after completing a DNA replication modeling activity – a pilot study (in progress)

Introduction:
As more countries are stressing the use of more authentic classroom experiences that focus on science models and modeling, it falls on teachers to develop these type of activities since few exist, especially in the area of biology. However, it has been shown in studies that teachers do not have a solid understanding of science models and modeling (Moritz & Kruger, 2016; Ware, Malone, Irving, & Mollohan, 2016). Both of these studies, one set in Germany and one in the United States, determined that teachers mostly understood models to be copies or physical models. Teachers rarely use models in the classroom nor evaluated them against other models, tested, modified or used them in a predictive sense. Thus, teacher understanding hampers the development of true modeling activities if their understanding is limited.

To alleviate limited understanding, there have been some science model-based and modeling curriculum units that have been developed for classroom use (Dukerich, 2015; Jackson, Dukerich, & Hestenes, 2008; Malone, Schuchardt, & Schunn, 2015; Passmore and Stewart, 2002; Posthuma-Adams, 2014; Schuchardt, & Schunn, 2016). However, many of these are in areas other than biology. In addition, the studies usually focus on student content gains between treatment and comparison groups (Hestenes, Wells, & Swackhamer, 1992; Malone, Schuchardt, & Schunn, 2015; Schuchardt, & Schunn, 2016), understanding of scientific models (Passmore and Stewart, 2002) or gains in scientific reasoning (Coletta, Phillips, & Steinert, 2007). There are not many studies that focus on the benefits of model based and modeling focused activities on students’ problem solving abilities in biology. This pilot study is an attempt to fill this gap.

Research Question: How do students solve replication problems after a modeling based activity focused on DNA replication?

Meselson-Stahl Classroom Modeling Activity: Prior to the Meselson-Stahl activity the students had completed an activity that allowed them to come to the consensus that daughter cells had identical copies of chromosomes. At the start of the modeling activity students are asked how they think the DNA replicates. After the students have time to develop different ideas about how DNA might replicate the instructor introduces them to the historical figures of Meselson and Stahl and explains that they had puzzled over that same question. The students are then introduced to the experiment developed by Meselson and Stahl. They are told that the experiment developed insured that cells replicated their DNA in a condition that only allowed the cells access to heavy isotopes. Therefore, they created cells with “heavy” DNA. The students are then introduced to the second phase of the experiment when Meselson and Stahl took the cells with the heavy DNA and allowed them to replicate
in a condition where they only had normal or “light” isotopes available during the replication process.

The instructor then explains to the students that they will be using chenille sticks and pony beads to model this experiment and determine how DNA replicates. Each pair of students gets a DNA strand (chenille stick with “heavy” isotopes represented by blue pony beads) – see figure 1.

At this point the instructor can ask the students what would happen if they put heavy and light isotope strands in a solution. The majority realize it will produce a density gradient. If necessary due to the background of the students’ density gradients can be explored. Next, the students are asked to predict and justify what banding pattern they would expect to see if the heave isotope labeled DNA they initially have was centrifuged and a density gradient was developed. The students write down their predictions and then the instructor passes out to each group the lab result strips (see figure 2).

The next step in the modeling activity is to allow the students to replicate their “heavy” DNA using the normal or light isotope/pony beads. The student groups are given a few minutes to reach consensus about how they believe the DNA might replicate. They are given two chenille stick strands and light beads represented by a different color (see figure 3). The students replicate the DNA per their consensus model. The students use a mixture of replication methods with usually dispersive, conservative or semi-conservative being represented. See figure 4 to see a semi-conservative replication, figure 5 for conservative replication and figure 6 for dispersive replication results.

After the replication the students are asked to predict where the bands would be located if a density gradient experiment were run. Finally the second strip is handed
out to the students to compare with their model’s results (see Figure 7). The instructor at this points can tell the students that the lab sent them the results of their first replication and hands out copy of Meselson-Stahl’s chart 2 strip to each group. At this point most students predictions match the chart strip in Figure 5. If their model results do not match the actual results of the density gradient the student have to reinvent their model of DNA replication and attempt the experiment again.

Once the group’s model predictions matches the data as shown on strip 2 the group can move onto the next or second replication. During the second replication the students will end up with four replicated strands of DNA. The students again predict what the density gradient would look like based on their modeling results. Then the instructor can give them the lab results or Strip 3 (see Figure 8).

These strips are copies of the actual data recorded by Meselson and Stahl. Students will need to analyze the results and determine if it matches the possible outcome of their model. If it does not they will need to change their model so that its results meet the data shown on the third chart strip. By this point students should have developed the semiconservative model of DNA replication.

Participants: Seven high school biology students were interviewed after participating in a modeling based activity focused on the Meselson-Stahl experiment. The students were from a rural school in the Midwest of the United States and had been taught using a newly designed Modeling Instruction™ course in biology. The students’ had taken part in the Meselson-Stahl modeling activity [X weeks] prior to the interviews.

Study Design: The students were asked to talk aloud as they solved a biology problem based on DNA replication. The problem designed for the talk aloud it listed below:

I 1: A single E. coli has a DNA strand that looks like this;

When one new strand is being made a mutation occurs at one point. This caused a bacteria with a mismatched base pair in its sequence, resulting in a G-G pair. (see the figure below).
During replication phase of one single E. coli a nucleotide substitution occurred on one strand of its DNA.

E.coli that have the point mutation are resistant to penicillin.

For the next two generations produced from this bacteria,
   a. Draw circles to show how many bacteria will be produced.
   b. Place a star in each of the bacteria that will contain the mutation.
   c. Place an R in each of the bacteria that are resistant to penicillin
   d. Under each offspring bacteria draw the DNA sequence that it contains.
   e. Show which first generation bacteria produced each second-generation bacteria by connecting them with arrows.

The audio of the videos was transcribed then linked back to the videos. A coding scheme will be developed to analysis the talk aloud using grounded theory (Glaser & Strauss, 1967). The coding will be checked via inter-rater reliability.

**Analysis and Results:** The findings will be discussed at the presentation. Examples of the students’ responses will be shown as well as how those responses were coded using the developed coding scheme.

**Conclusions and Ramifications:** During the presentation we will discuss our findings and how they impact on suggested changes to the modeling based curricula.

**Limitations:** This is a pilot study and has a limited number of students. Plus, there are only treatment students and no comparison group of students. Finally, there was only one problem used. The final study will contain a comparison group as well as a minimum of two problems to solve during the talk aloud.

**Acknowledgments:** This research was funded by the Ohio Department of Education thought a Math Science Partnership Grant.

**References:**


Ware, Malone & Mollohan (2016). Models and modeling: An evaluation of teacher knowledge Hawai’i International Conference on Education, Honolulu, HI.
Models and Modeling: An evaluation of teacher knowledge

Topic area: STEM Education

Presentation Format: Research Paper for paper session (but will also present it as a poster session if necessary)

Abstract
The Next Generation Science Standards (NGSS)) have stipulated an increase in the use of scientific models and modeling at all grade levels as well as within all science disciplines. The goal of the research question is to discover current beliefs about models and modeling held by in-service K-12 STEM instructors. Teachers were interviewed and preliminary results about their views will be discussed.

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Models and Modeling: An evaluation of teacher knowledge

Introduction:

In order to promote deep understanding of concepts, the recent NRC Framework for K-12 Science Education (2012) recommended a move away from memorization of routine facts towards a focus on learning via scientific practices such as the construction of scientific models and the use of science modeling. According to the Next Generation Science Standards (NGSS) scientific modeling requires students to develop, refine and use models to explain and predict scientific phenomena (Next Generation Science Standards, 2013).

A model of a natural phenomena can include a number of representations. For example, it can include a physical object, virtual image, or even a mental theory internalized completely in the mind. A model ranges from natural science diagraming to mathematical graphing and physical applications (Raghavan, Sartoris, Schunn, and Scott, 2005). No model representation provides a complete picture of the student’s ultimate mental model, but as a coherent, interacting set, the different representations provide a more complete description both of the phenomenon that it represents as well as the student’s mental model (Giere, 2004; Hestenes, 2010). A model is useful because it provides an insight on the world and allows students to be predictive about their environment (Shwarz, Reiser, Davis, Kenyon, Acher, Fortus, Shwartz, Hug, Krajick, 2009). Thus, models are used to simplify otherwise complex abstract ideas in a fashion that helps students internalize scientific concepts (Raghavan, K., Satoris, M., & Zimmerman, C., 2002). Therefore, models can be considered idealized representations of the real world that can be used by students to describe, explain, explore, communicate, and predict (Giere, 2004; Svoboda & Passmore, 2013).

The use of models and modeling have been shown to help students to connect their understanding in the classroom with real life examples. However, modeling will be new to most educators and is rarely found in education, particularly in the elementary and middle school classrooms (Schwarz, Reiser, Davis, Kenyon, Acher, Fortus, Shwartz, Huh and Krajicik, 2009; Malone, Schuchardt, & Schunn, 2015). According to Jackson, Dukerich & Hestenes (2008), when a physics teacher named McDowell began using modeling instruction in his classroom students would bring up applications of the topics themselves, most based on real life experience. For example, McDowell was told by a student while attending a baseball game all they could think about were all the physics problems involved. The use of Modeling Instruction in physics was shown to be quite successful in the 1990’s through the use of the Force Concept Inventory (FCI). In classes where students were taught using Modeling Instruction there was a 56% increase in conceptual understanding, this is nearly triple the gain that occurs in traditional classes (Hestenes, Wells, & Swackhamer, 2008). The use of models and modeling in physics seems to allow for the development of coherent expert-like models (Malone, 2008). It has been found that students taught using models and modeling in multiple subject areas have demonstrated not only greater conceptual gains but also improved scientific reasoning skills (Coletta, Phillips & Steinert, 2007, Malone & Reiland, 1993; Malone, Schuchardt & Schunn, 2015, O’Brien & Thompson, 2009, Schuchardt, Malone, Diehl, Harless, McGinnis & Parr, 2008 and Schuchardt & Schunn, 2016). Teachers who consider themselves modelers rate themselves as better prepared to implement NGSS conventions (Haag & Megowan, 2015). Since the use of
models and modeling seems to promote improvement in conceptual gains as well as scientific reasoning it is important that we make sure that our in-service and pre-service teachers conceptual knowledge of scientific models and modeling in science is quality, in order to support the learning of their students.

**Research Question:** What are K12 in-service teacher’s perception of science models and scientific modeling?

**Participants and setting:**
Six elementary, five middle school and nineteen high school teachers were interviewed to investigate our research question. The teachers in this study taught in school districts in and surrounding a major mid-western urban area. The majority of the teachers were from inner city as well as high needs schools districts.

**Study Design:**
All teachers participated in individual semi-structured interviews where they were asked three questions to determine their current notions regarding models and modeling.

The main interview questions were:

- Have you ever used models with your students?
- When we say the word model what does that mean to you?
- What does modeling in biology/science mean to you?

The elementary and middle school teacher’s audio files were transcribed by the researcher while the other teachers were transcribed by an external party. All transcriptions were checked for accuracy by the researcher. All transcripts of interviews were coded by the researcher using grounded theory (Glasser & Strauss, 1967). The coding of the transcripts were checked for interrater reliability by two parties. Prior to discussion the interrater reliability score was 84% based on the number of codes agreed upon, but after discussion the score was 100%.

**Methodology**

*Definitions of models and modeling for this study:*

For this study we define models in science as the NGSS has that they are constructions that help simplify real world complex phenomena, by providing an understandable representation (Next Generation Science Standards, 2013). These representations can include a mathematical equation, physical object, mental theory, diagram, written statements or graphical depictions.

Our definition of modeling in science follows the guidelines of the NGSS. Modeling in science is to application of models to the world around us through inquiry based learning. Modeling in science necessitates that a K-12 instructor allows their students to use science models to predict the outcome of an activity and, will then allow students to investigate the ability of the model to be predictive using inquiry methods. The model could either be developed by the students via inquiry activities or presented to them as a finished product produced by a scientist or someone else.
Thirty K12 teachers attending STEM education summer workshops in the Midwest of the United States were interviewed for this study. 30 teachers consisted of six elementary (K-5), five middle (6-8), and nineteen school (9-12) teachers. The majority of the teachers were from inner city as well as high needs schools districts.

Codes that emerged from the transcripts during data analysis:

- Models:
  - Physical model- physical representation of a process or natural phenomena such as a model of DNA structure
  - Mathematical model- mathematical representation of idea or natural phenomena such as F=ma.
  - Virtual model- simulated representation of a process or natural phenomena such as a weather computer model.
  - Theoretical model- theory or image that is implicitly represented in the mind such as Murphy’s law.
  - Experimental model- use of an experiment to enact a process or natural phenomena, such as biological lab experiment.
  - Diagram model- representation of an idea in written/drawn form, such as Punnet squares.
  - Modeling a process- Applying the use of models to the world around us through instruction.

- Teachers reported some of the same answers for modeling, answers that were repeated are also posted in conjunction with modeling specific answers.

- Modeling:
  - Modeling a process- applying the use of models to the world around us through instruction such as using a physical model to model a process such the crossing of materials across the cell membrane.
  - Modeling in science- applying the use of models to inquiry based learning, such as showing students a scientist generated model and having them recreate it by drafting and collecting experimental data
  - Physical model- physical representation of a process or natural phenomena such as a model of DNA structure
  - Diagram model- representation of an idea in written/drawn form, such as Punnet squares.
  - Experimental model- use of an experiment to enact a process or natural phenomena, such as biological lab experiment.

Analysis and findings:

When asked about the use of models in the science classroom twenty-five of the thirty K12 instructors interviewed responded that they had used models. The majority of the teachers described models in science as the use of physical models to teach students science, such as a plastic model of a cell and its organelles. There were other ideas about what a science
model could consist of but these were used much less frequently (see Table 1). 12 teachers thought a model in science was modeling a process.

When teachers were asked “What does modeling in science mean to you” thirteen of thirty teachers continued to mention the use of physical models, while ten of thirty described “modeling a process.” Only one participant described modeling in science to be the use of models to predict the outcome of a physical situation while then testing whether the outcome matched the prediction.

In order to compare beliefs across grade levels we divided the data into three grade level distinctions: elementary (K-5), middle school (6-8) and high school (9-12). The graphs located in figure 2 and 3 display what teachers at multiple grade levels think about models and modeling.

Figure 1 Raw proportion of teachers beliefs about Models (the proportion adds up to greater than 100% since multiple teachers mentioned more than one example of a model)
When asked what a model is, the elementary teachers were the only category to report modeling a process at a higher rate than physical models. None of the middle school teachers described “modeling a process” as a model. Both middle and high school teachers reported physical models as their definition of a model.
Across all grade levels teachers believed modeling in science/biology was the creation of physical model, or modeling a process. Physical models were the highest reported answer used to define both models and modeling.

**Conclusions:**

Eighty-four percent of all the teachers interviewed mentioned that they had used models in their classrooms. Seventy-four percent of the K-12 STEM instructors interviewed believed a model to be physical in nature. These in-service teachers may be limited in their implementation of modeling practices since the majority solely take advantage of physical models. While this might be one representation of a scientific model it limits student understanding as well as their ability to learn to make connections between multiple representations. On of the two teachers included mathematical models in conjunction with physical models also taught mathematics. However, this allows their students to consider at least two model representations during their study of science.

While many may think that high school science teachers (teaching students age 14-19) may have a stronger grasp on models and modeling, Figure 2 shows that this is not necessarily the case. Overwhelmingly these science teachers reported an answer that classified a model as physical. High school science teachers were the only ones to report theoretical models, however this was only one teacher out of 19. These are surprising findings because the expectation is higher level science teachers will have a more profound understanding of models, as they are teaching at a higher, more rigorous level. Figure 2 suggests middle school teachers may have a
better understanding of what models are. Although high school instructors had the most variety in answers, the middle school teachers were the only class that did not confuse “modeling a process” for a model.

This study has increased our knowledge of current teacher’s beliefs on models and modeling. Our new understandings will help inform upcoming professional development workshops focused on creating a better teaching environment through models and modeling. It is obvious that our in-service teachers need to be trained in models and modeling in order to appropriately incorporate college ready standards in their classrooms. Future professional development workshops need to start with physical models and show teachers how the other multiple model representations can be developed in the classrooms. In addition, how the representations are linked coherently to each other needs to be implicit as well as explicit in future professional development.

**Limitations:**

The small number of teachers’ interviewed, especially elementary and middle level teachers, limits this study. In addition, these teachers were located in only one area of the United States. The ability to extrapolate this to other areas of the world might be limited.

**Acknowledgments:** This research was funded by the Ohio Department of Education thought a Math Science Partnership Grant.

**References:**


1) title of the submission

The Relationship between Classroom Activity and Competency in Japanese Elementary School

2) topic area of the submission

Elementary Education

3) presentation format

Paper Session

4) Description

The purpose of this research is to clarify the relationship between classroom activity and competency, based on analyzing survey data about Japanese elementary school life. Based on the results of the analysis, we discuss the possibility of Japanese classroom activity, which is a characteristic of educational activities as compared to the school education in other countries.

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Abstract

The Relationship between Classroom Activity and Competency in Japanese Elementary School

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The purpose of this research is to clarify the relationship between classroom activity and competency, based on analyzing survey data about Japanese elementary school life.

In recent years, many countries have attracted a strong interest in the development of students' competencies. It is progressing curriculum reform based on competencies in Japan. In elementary education, it has become a major research issue to analyze the relationship between the educational activities in school and the competencies.

This research aims at the classroom activity in elementary schools. In Japanese classroom, the self-government by students is carried out in addition to the classroom management by teachers. Classroom activity (Gakkyuu Katsudo) works on the self-government by students. The following activity is carried out in classroom activity. For example, meeting to create the better classroom (Gakkyuukai), duty of the students in the classroom, fun event for students which is planned and executed by themselves. Features of the classroom activity have two points. The first one is activities which is carried out with the students' initiative. The second one is creative and cultural activities. Classroom activity is one worthy of attention in a unique educational activity that shows the characteristics of the Japanese education model. Classroom activity is especially actively practiced in elementary schools.

It's thought that classroom activity has the fixed effect on developing of the competency in Japanese elementary schools. In recent years, the importance of non-cognitive ability is pointed out in elementary school education. As an important activity to develop non-cognitive ability, there is a classroom activity in Japan. However, there are few preceding researches which a positive analysis about the relationship between classroom activity and competency.

Using survey data about Japanese elementary school life, we analyze the relationship between classroom activity and competency. Questionnaire survey for fifth grade elementary students has been carried out in February and March, 2016. The number of valid response is 487 (19 classes). Questionnaire items include efforts related to classroom activities, competency (ability related to morality, psychological and social ability), state of classroom life, and items related to family. More important findings, even if the control variables related to family, classroom activity and competency is related.

Based on the results of the analysis, we discuss the possibility of Japanese classroom activity, which is a characteristic of educational activities as compared to the school education in other countries.
Transforming Climate Change Attitudes for Middle School Students Participating in Energy Monitoring Activities

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Abstract: The Going Green! Middle Schoolers Out to Save the World (MSOSW) project aims to direct middle school students’ enthusiasm for hands-on activities toward long-term interest in STEM while guiding them to solve real-world problems. The MSOSW project is funded by the U.S. National Science Foundation Innovative Experiences for Students and Teachers Program. In the MSOSW project, treatment classroom teachers attend a two-day institute to learn about the energy/climate curriculum and how to implement the hands-on activities with their students. MSOSW teachers are also provided with classroom sets of energy monitors, web enhanced teaching resources, the curriculum itself and ongoing support from the project personnel. Students in this project are taught by their teachers to use energy monitoring equipment to audit standby power consumed by electronic devices in their homes and communities. The focus of the curriculum and activities is standby power – electricity that is being used by appliances when they are plugged in but serving no useful function, and how this waste contributes to greenhouse gas emissions and global climate change. The meters used for the monitoring activities can be adjusted for local electricity costs and have single button calculations of the connected appliances for kilowatt hours, cost per month and CO2 released into the atmosphere while generating the electricity consumed in standby mode.

The Climate Change Attitude Survey (CCAS) assesses two constructs – beliefs in climate change and intent to take action based on those beliefs – regarding climate change. For the 792 students in the treatment classrooms across all grade levels, there were significant \((p < .05)\) positive changes in both their beliefs \((p < .0005)\) (ES = .43) and intentions \((p < .05)\) (ES = .20) to make changes to help address climate change issues. For the 508 students in the comparison classrooms, there were also significant increases in positive beliefs \((p = .02)\) (ES = .15) from pre to post test time periods, and for intentions the comparison group gains were significant \((p < .05)\) as well \((p = .046)\) (ES = .21). The gains for the treatment group in Climate Change beliefs (ES = .43) were much larger than for the comparison group (ES = .15), with the treatment group gaining significantly \((p < .05)\) more than the comparison group regarding Climate Change beliefs. Because of the focus of the project, an item analysis of the Climate Change Attitude Survey was conducted. For the treatment group all of the individual items increased with 13 of 18 items having a significant \((p > .05)\) increase. For the comparison group, 10 of the 18 items increased significantly \((p > .05)\). For the item, “Environmental problems can be solved without big changes to our way of life”, there was a large difference between treatment students and comparison students. Students who participated in the standby power monitoring activities increased significantly \((p = .03)\) while the comparison students actually decreased (although NS). Additional items that had significant \((p < .05)\) increases pre to post for treatment students but not for comparison students included: “I
am concerned about global climate change”; “The actions of individuals can make a positive difference in global climate change”; and “I think most of the concerns about environmental problems have been exaggerated (reversed).”

Findings result from year 3 of a four-year scale up project supported the U.S. National Science Foundation Innovative Technology Experiences for Students and Teachers (ITEST) Grant #1312168.
Stepping Into the Role of Teacher:

A Case Study of a Secondary Teacher Expanded Practice (STEP) Internship

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Abstract

Research demonstrates that providing teacher candidates with more field experience opportunities is essential to their preparation as future teachers (Baeten & Simons, 2016; Kyndt, Donche, Gijbels, & Van Petegem, 2014). While these field experiences (also known as clinical experiences) have long been a part of teacher education programs, these opportunities may lack variety in the types, settings, and duration of these placements. The purpose of this qualitative research is to review the benefits of a pilot program aiming to expand the clinical experience—called the Secondary Teacher Expanded Practice, or STEP, internship—with over forty-five undergraduate secondary-level pre-service teachers at one university in the Midwest United States during the course of one sixteen week fall semester. Through a case study approach, researchers will utilize observations, semi-structured interviews, and questionnaires to develop an understanding of the impact these diverse experiences may have on contributing to a well-rounded and effective future educator. Data from this pilot semester will be analyzed through the "Research on Teacher Preparation as Historically Situated Social Practice" theoretical framework (Cochran-Smith & Villegas, 2015; Cochran-Smith, Villegas, Abrams, Chavez- Moreno, Mills, & Stern, 2015). We anticipate that pre-service teachers in the study will report that this expanded clinical experience enriched their training and expanded their repertoire of instructional skills. Further studies might consider investigating the specific attributes of field experiences that cultivate skilled and versatile secondary-level educators.

Keywords: teacher education, field experiences, clinical experiences, internships, pre-service teachers, secondary education, STEP
References


**Workshop Title:** Teaching While White: White Identity Development & Antiracism for Educators

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**Workshop Abstract**

The purpose of this workshop is to create a safe space for White educators to discuss and confront our own racist conditioning in order to move toward antiracism in our schools. This workshop will focus on the inner personal work of White educators to cultivate awareness of racial injustice. We will work to build an understanding of the structural realities of race in the American educational system (Ladson-Billings, G. 2006). We will explore conceptual frameworks for racism and Whiteness (Helms, J. 1990) – including white privilege, White fragility (DiAngelo, R. 2011) and our notions of the “good” white self (DiAngelo, R. 2011). We will discuss White Identity development (Helms, J. 1990) and build awareness of our racial conditioning. We will explore the impacts of our own White racial conditioning on our awareness of and role in addressing racism in our classrooms. We will consider various forms of racism including active racism, passive racism, and antiracism (Tatum, B. 2001). Throughout the workshop we will practice mindfulness and explore ways of working with the challenging emotions that arise as we address racism - our own internalized racism, that of our colleagues, and the institutional racism we encounter in our daily lives as educators. Finally, we will consider possibilities for moving forward in this work, through mindfulness (Berila, B. 2016), community building, and activism. We approach this work as a practice and believe that there are no experts, we hope that you will partner with us in this work today.

**Teaching While White: Workshop Agenda**

**Our Intention, Our Perspective & Community Norms**
- Our Intentions and Perspective
- EBMC Agreements - Suggestions, Requests

**Race in our Schools, Being with the Discomfort & Building Capacity**
- History & Context
  - Opening Quote & Statistics
  - Racism is Normal in Our Society - Critical Race Theory
  - Structural, Institutional & Cultural
  - Racism in Education - Structural Inequities & Educational Debt
Being with the Discomfort and Building Capacity

Activity: The Power Flower

Racial Conditioning & Whiteness as Normal
- Racial Conditioning and Whiteness
  - White Identity Development
  - Protecting the “Good White Self” - Privilege, Shame, Guilt
- White Fragility / Cognitive Dissonance
- Avoiding Race
- Silencing, Racially Coded Language, Color Blindness / Muteness

Activity: Opting Out vs. Learning In - Dyads

Active Racism, Passive Racism, Anti Racism & Skillful Means
- “The Moving Sidewalk”
- Skillful Means

Activity: The Whiteness Project (Video) & Role Play

Reflective Practice
- Silent Meditation
- Reflection – Write or Draw
- Dialogue & Commitments
- Evaluations
- Resources Request & Resource List

Dialogue & Debriefing
Abstract: DESCRIPTION (provided by applicant)

School dropout rates for Hispanic students continue to be higher than any other population (NCES, 2016). Particularly difficult is retaining SLIFE (Students with Limited or Interrupted Formal Education) including immigrants, refugees and unaccompanied minors new to the country needing to be admitted to public school in an age appropriate grade level.

To date, little is shared about schooling for the underserved, refugees or the mobile population of developing countries of Latin America and the United States. Through a research award provided by Fulbright (Distinguished Awards in Teaching 2015), the researcher was able to observe three types of schooling that address underserved students in Mexico.

The research was completed in Merida Mexico - a mid-sized city located in the state of Yucatan which is home to the largest indigenous population in the country. The three types of education programs observed are applicable to any education programming in the United States and several components have already been successfully implemented in programs in the researcher’s school district.
Expanding notions for teaching ELs: Revelations on ESL teacher professional development eight years post-training

The paper presents comparative findings of an in-progress study on teaching and learning of previous cohort participants relative to language, culture and advocacy. The original study and post review is of secondary mainstream teachers of English learners (ELs) in one urban school district completing training from 2008 through 2013. Teacher participants completed an ESL based professional development (PD) program as a means to become dually certified in ESL and their current area of content instruction.

This university district partnership project supported teachers from one urban school district schools, with high numbers of English learners (ELs) largely in response to drastic changes in state policy relative to instruction of English learners statewide. The project was in response to implementation of Structured English Immersion (SEI) (A.R.S § 15-756.01) and Prop 203, requiring all instruction in Arizona schools to be provided in English-only. All teacher participants had already met the Arizona minimum state requirement for instruction of ELs, a 45 credit hours of Sheltered English Immersion (SEI) training, as a baseline requirement prior to starting this specialized, long term ESL program. Participating teachers taught in urban areas and were mainstream teachers with less than 10 years of teaching experiencing. As it pertains to content area instruction, the majority of teachers participating instructed mathematics, English/Reading, social studies and science. The majority of participating teachers were English monolingual with Spanish as the second language most reported, and few self-reported as bilingual.
This project, like other university-district partnership sponsored projects intended to support teacher capacity (Garcia, Arias, Harris-Murri, & Serna, 2009) by providing a quality professional development program, intended to reform teaching practices of teachers of English learners. The program would be completed by university faculty at various district school sites. The project, while serving one entire urban school district of 12 schools, had the majority of EL students within seven schools. Teachers and administrators participating in the program were from these school sites. Moreover, the entire district’s student demographics indicate lowered social economic status and first language speakers of a language other than English (LOTE). These demographics are reflected in higher numbers of student eligibility for free and reduced lunch, as well as having a majority of students classified as non-native speakers of English through the primary home language other than English (PHLOTE) assessment completed by parents, and predominantly Spanish first language speakers. Other salient student demographics include lowered graduation rates of ELs in comparison to mainstreamed students as well as higher incidence of early school exit (drop-out) while students were classified as limited English proficient and receiving services for English language development (Author, 2010).

The success of the project’s teacher participation is unfortunately a result an overall lack of multicultural and multilingual emphasis in teacher preparation. Often pre-service teachers lack requisite knowledge, skills and dispositions (Arias, 2012; de Jong, Arias, & Sanchez, 2010) for effectiveness. Additionally state policies relative to professional development instructional emphasis may not necessarily have convergence with foundational and practical knowledge relative to the instructional needs of EL classrooms (Marcos & Arias, 2015). The result is teachers experiencing a skills gap relative to instruction as EL students are underserved. District leaders and teachers’ voiced concerns became the impetus for establishing and finding funding for this project.

**Theoretical Perspectives and Previous Findings**

Previously completed special research project surveyed four cohorts of participants of the ESL endorsement (n=88) of which (n=70) completed the entire 18 credit endorsement program from January 2008 through July 2011. Of those completers, (n=40) responded to an extensive
survey on post teacher learning. This current study seeks to contact all previous cohort members of the original study who are currently within the district (n=66) as well as well review the program evaluation for all five cohorts who completed the ESL program, (n=68).

Upon completion of any cohort, teachers in their final day of the program would complete their post evaluation survey in compliance with their participation in a federally funded program. At the time of the specialized study, completed in 2011, participants completed an in-depth survey three months to three years after their initial cohort participation. Researchers, Garret, Porter, Desimone & Yoon (2001), posit that there are specific factors underscoring PD program effectiveness such as PD program coherence and relativity to teachers’ classroom experience in addition to program duration and instructional methods that activate learning. The 2016 survey will touch upon broad conceptual understanding on culture, language, and sociocultural awareness for teaching English learners as well as some pedagogical aspects (i.e. sheltered instruction, student interaction, comprehensible input). These questions will attempt to align to the original study.

The revised study, proposed in this paper, commenced in August 2016, will utilize knowledge-for-practice, Cochran-Smith & Lytle (1999) as its theoretical perspective. This is in alignment with a special research project of selected cohorts in 2012 (Author, 2012). The overall findings from the in-depth special research project revealed themes in participants’ understanding of sheltered instruction, second language acquisition, scaffolding, and a number of both affirming, neutral and non-affirming dispositions as it pertains to EL students’ culture, language, instruction, and teachers as advocates. Overall, teachers’ reported understanding of ESL teachings, instructional techniques and sociocultural perspective reflecting cultural and linguistic sensitivity to their instructional approaches (Villegas & Lucas, 2002; Lucas & Villegas, 2010).

The specialized project revealed the complex nature of teacher understanding in developing affirming dispositions towards ELs (Walker, Shaffer & Liams, 2004) including an empathetic disposition (Mcallister & Irvine, 2002) and understanding the sociolinguistic nature of language development (de Jong & Harper, 2005; Lucas & Greenberg, 2008, Zentella, 2005). Findings also demonstrated an understanding of the need for students’ native language as part of the instruction and recognition of language needs (Walqui, 2008; Walqui & Van Lier, 2010).
The broader notions of language development included recognizing how language needs can be utilized in the classroom (Faltis & Coulter, 2008; Lucas, Villegas, & Freedson-Gonzalez, 2008). The advocacy role was reported by teachers as including both advocating on behalf of ELs as well as taking on leadership roles. However, participants also presented conflicted views relative to English-only and to the extent the policy was either supportive or detrimental to ELs. The advocacy role was reported by teachers as including both advocating on behalf of ELs as well as taking on leadership roles.

Previous findings from the special project and the program evaluation support this completion study of participants. The research question presented for this paper considers the notion of perceived teacher efficacy and related sociocultural notions for instructing ELs after an extensive period following post-program participation. The proposed study considers the following guiding research question: What to do cohort teachers report relative to their ESL related knowledge, skills and sociocultural notions within five to eight years after completing their initial ESL program?

Data & Method

The paper will present preliminary findings of the new study comparing survey data findings from the in-depth study and program evaluation surveys. The triangulated data collected will be analyzed using constant comparative method (Strauss & Corbin, 1994) as a means to compare themes.

The new study uses a 25 question electronic survey sent to completers of the ESL professional development program from 2008 through 2011 and participated in the previous study.

Delays in the research study were not anticipated as many of the previous participants (n=88) are no longer available to participate in the study due to the tremendous retention issues facing many of school districts in Arizona.

Findings and Significance
Currently, the researcher has no specific findings but will present findings at the HIC presentation in 2017.

Fundamentally, instruction for multilingual and multicultural learners requires preparation beyond initial preparation (Banks et al, 2005; Gandara & Maxwell-Jolly, 2006; Hollins & Guzman, 2005). This follow-up study is significant relative to understanding teacher learning post professional development. While long term professional development is considered beneficial to participants (Boyle, While & Boyle, 2004) and effectiveness is enhanced with certain PD constraint (Desimone, Porter, Garret & Yoon, 2002), teacher learning is impacted without follow-up of learned content and an opportunity to actually implement practice changes (Authors, 2015).

References Cited In Proposal:

Author (2012)

Authors (2015)


Arizona Revised Statutes, Title 15, Article 3.1, § 15-756.01 (2000).


1. **Title:** Re-thinking the Models and Practices of Distance Higher Education: Can We Truly Connect and Engage?

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6. **Abstract:**

For the past seven years, I have been teaching advanced doctoral qualitative research courses in blended and online modalities and supervising doctoral students pursuing degrees in various fields of higher education. Changing trends in higher education within a highly competitive and technology-driven global economy necessitate the choices of online and blended instruction often in favor of traditional modalities. The “digital revolution” has been affecting ways in which we perceive the goals of higher education and its advancement. What are the models and practices of distance education that can re-enact authentic teaching and learning environments in an accelerated doctoral program? How can we *engage* and *connect* when teaching and learning in virtual classrooms?
1. Title of the submission:
Using Authentic Materials from Media to Enhance Cultural Understanding in Japanese EFL Classrooms in Universities

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6. Abstract:
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Using Authentic Materials from Media to Enhance Cultural Understanding in Japanese EFL Classrooms in Universities

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Abstract
The use of authentic materials in foreign language learning has been widely discussed (summarized in Gilmore 2007, for example). Although it could be hard for students with low proficiency, authentic materials are claimed to be a motivating force for learners, and more effective in developing communicative competencies than textbook materials (Gilmore 2011). It is generally considered to be desirable for English learners to use authentic English materials at some point especially in university level English classes.

Authentic materials typically discussed in literature are those from media sources such as news stories, films, television shows, YouTube videos. The use of media complements traditional teaching materials such as textbooks and course readers. By using media sources, students can: a.) learn useful phrases; and b.) improve their knowledge of accurate collocation by analyzing which definitions best fit the context of the news media they are studying. Students furthermore can enter discourses not available in their own country and learn new things not taught at their home universities. We are interested in what type of materials can and should be developed for Japanese classrooms. This paper provides two case studies of using authentic materials in Japanese university English class. The first case analyzes students with relatively low proficiency (TOEIC score 300-500) and the second case analyzes students with relatively high proficiency (TOEIC score 450-650). In reporting, the cultural aspect is discussed with special attention since authenticity relates to cultural understanding of a target language group and how cultural and political differences shape the choice of and student reactions to authentic materials.

1. Introduction
The use of authentic materials in foreign language learning has been widely discussed (summarized in Gilmore (2007), for example) in the field of English language teaching (ELT). Although potentially hard for students with low proficiency, authentic materials are claimed to be a motivating force for learners, and more effective in developing communicative competencies
than textbook materials (Gilmore 2011). It is generally considered to be desirable for English learners to use authentic English materials at some point especially in university level English classes.

**The importance of using authentic materials at university level English classes**

In most Japanese high schools, it is required to use textbooks approved by the Japanese Ministry of Education, Culture, Sports, Science and Technology. Most of Japanese high school students study English so they can get admission to a “better” university. Some of the problems of learning English with textbooks in Japanese high schools are that the textbooks they use in high school tend to be designed to train the students to get a high score on university entrance exams rather than to obtain higher proficiency of English (Kudo 117-118). These textbooks often focus on students getting the right answers when they study English.

After students are finally freed from the overwhelming pressure of Juken Eigo (English for entrance exams), university level English classes should provide them with more thought provoking materials to learn English. Students can directly experience the target language use in context. Students can learn more about the content provided in English.

Another reason that it is essential for students to be exposed to authentic materials at the university level is that in some ways, English in textbooks is not the same as English used in the ‘real’ world. According to Carter & McCarthy’s (2003) analysis (cited in Gilmore 2007) with spoken corpus data from CANCODE (Cambridge and Nottingham Corpus of Discourse in English), textbook English and ‘Real’ English are different. The ‘external’ language of real-world communication consistently differs from the language of introspection. Carter & McCarthy (2003) states that in spoken language, question tags, relative clauses and subject-verb concord often fail to conform to prescriptive descriptions. More specifically, the frequent use of words such as LIKE, the morpheme -ISH, and response tokens such as RIGHT, which all play an important affective role in discourse but are rarely taught in ELT (Carter & McCarthy 2003, cited in Gilmore 2007). Because of this overall lack of real-life English words and expressions, potential counter-arguments that textbooks will help students learn essential grammar that will help them to speak English may miss some things that authentic materials can help with.

**The type of authentic materials focused in this paper: Defining ‘Authentic text’ in EFL contexts**

‘Authenticity’ could be a concept with multiple meanings (for example, (Gilmore 2007: 3-4) listed at least eight possible meanings of “authenticity” from the literature). We consider ‘authenticity’ the following way: ‘An authentic text is a stretch of real language, produced by a real speaker or writer for a real audience and designed to convey a real message of some sort.’ (Morrow (1977: 13), cited in Gilmore (2007)). The purpose of an authentic text within its own
language could be multiple, ranging from advertising, to poetic communication, to political discussion. The texts could thus follow multiple formats and uses of grammar. The texts could be a one-way communication or a conversation. They could be at multiple-levels of difficulty for both native-speakers and EFL students. Nonetheless, a detailed discussion of how to define authentic text outside of English as a Foreign Language (EFL) classrooms is beyond the purpose of this study, and perhaps merit other detailed studies not possible here. We instead focus on authentic materials that we have used in real-life Japanese college classrooms in order to chart out some initial benefits, challenges, and limitations of using authentic materials in EFL classrooms in Japan.

Authentic materials typically discussed in previous literature are from media sources such as news stories, films, television shows, YouTube videos. The use of media complements traditional teaching materials such as textbooks and course readers. The concept of media is expanding recently including social networking services. In this paper, we focus on the authentic materials from media, which excludes recordings of natural speech recorded by the teacher for purposes of instruction, for example.

Kobayashi (2006) provides four reasons for individual teachers to obtain and reprocess their own authentic materials to use it in his/her classrooms. 1) The types of authentic teaching materials in textbooks are limited to those broadcasted from the major broadcasting networks such as BBC, CNN, VOA, and NHK. 2) It takes at least a couple of months to publish teaching materials which means that the content to be dated by the time it is published. 3) Teachers can adjust and customize the materials for his or her own students. 4) Teachers can also develop their own English skills. We are interested in what type of materials can and should be developed for Japanese classrooms.

Some difficulties in typical Japanese EFL classrooms in using authentic materials

A factor that may impact the use of authentic materials the most in Japanese EFL classrooms is class size. Having to teach 40 or even 50 students in one class is not rare. This presents challenges for teachers because, with a large number of students, introducing any type of group works or active learning activities is not easy without well-planned logistics and students’ cooperation. Such logistics are time consuming. Students’ cooperation varies from between different universities and even within the same universities. Different majors may have different levels of skill and motivation leading to more, or less cooperation. There are other factors class size and attitude that may enable or hamper the success of using authentic materials. We discuss these next.

Different ways of thinking and reacting can lead to variation in interpretation of authentic materials. Cultural differences can lead to unexpected challenges. Differences in non-language
based knowledge, such as major or knowledge of the subject from the mass media change how students will react and analyze authentic materials. An economics major may react differently than a drama major. Political and cultural tensions also influence students’ reactions. Students may have different political outlooks and subsequent ideas of right and wrong than teachers and creators of authentic materials. Students from different cultures come to class with different moral and ethical frameworks that may influence their analysis of authentic materials.

Japanese classroom dynamics also may influence discussion of authentic materials. Many Japanese students have not been exposed to controversial issues often discussed in authentic materials. This entails uncomfortable discussion. Also, there is an unwillingness to discuss things considered personal (Japanese students consider far more things personal than do Western students.) For Japanese students, a personal view may include political or social issues. To some degree there are solutions such as pair-work and group work. However, these are partial solutions to a desire to synchronize consensus before speaking and a related unwillingness to differ from the teacher’s opinion. In classrooms where the abovementioned things are dominant, use of authentic materials provide an opportunity for students to learn about foreign culture but not so much to express their own points of view.

2. The two case studies of using authentic materials

This section consists of two case studies about using authentic materials in Japanese university English classes. The first case analyzes students with relatively low proficiency (TOEIC score 300-500). The second case analyzes students with relatively high proficiency (TOEIC score 450-650). This paper focuses on culture because authenticity is impacted by cultural understanding(s) of a target language group.

2.1 Case study 1

The first case study focuses on students with relatively low proficiency (TOEIC score 300-500) at a women’s university. The size of the class analyzed was 10-15 students. The major of the students analyzed was Media and Global Studies. The study focuses on materials from the 2013-2014 academic years covering both the Spring and Fall semesters). The courses studied here focused on introductory level media English. In these courses, an average of 45 minutes used textbook for pre-intermediate level. The textbooks used were *Welcome to BBC on DVD*, by Morita et al., Seibido). On average, the remaining 45 minutes of the class were used for authentic materials outside of the textbook.

*Craigslist activity*

In this activity, students read the Housing and Apartments section of *Craigslist Oahu*. In class,
the instructor went over a real estate ad with class and the class discussed the following questions; 1) What kind of apartments are there? 2) What is the price range? 3) What type of ads look more attractive? After the class, for homework, students chose a city that they would like to visit as an exchange student, checked the Craigslist of that city, and tried to find an apartment to stay for a month. In the next class, students discussed pros and cons of using such a website in Japanese.

Activity using Super bowl TV commercials

The students watched the video titled ‘TOP 10 FUNNIEST SUPER BOWL ADS - Best Ten Super Bowl XLVIII 2014 Commercials’. This approximately 6-minute video uploaded in YouTube was chosen because it was relatively short and therefore convenient to watch several times in class. This activity was the most challenging one for the students because at their English proficiency level, to understand the contents of the commercials as well as the cultural contexts and the well-known celebrities acting in the commercials were considerably difficult and unfamiliar. However, contrary to expectations, this activity attracted students’ attention more than any other activity conducted in the class.

After watching the video a few times, many of the students were not sure whether they understood the contents well. The class discussed what each ad was about. Then students decided which ad they like most, provided reasons why, and presented to the class briefly. After the presentation, the class discussed what the frequently used characters were (children? animals? beautiful / sexy women?) and why they were chosen for the advertisement.

There is another report about using English advertisements for the class activity (Yoshida 2016). In that class, students not only watched advertisements video, but made their own advertisement in group work. If the students’ English proficiency level in our papers’ first case study was higher, Yoshida’s activity would enhance students’ active learning process. Therefore, differing levels of English proficiency our important for designing authentic materials assignments even when using the same type of authentic materials.

Students’ presentation about an article of their choice

In this activity, each student chose an article of her choice. Some of the articles they chose include articles from Student Times, The Japan Times, or an article about idol group from a magazine. They were told to underline unfamiliar vocabulary and provide meanings in Japanese written directly on a print-out of the article, and submit a copy to the instructor so the instructor could make copies for everyone in class. The handout and presentation was to be evaluated as part of the grade. In the following week, using a copy of an article as a handout, each student provided approximately 5 minute presentations about the article, explaining why she chose the
article, and what was the new information for the presenter among other topics.

2.2 Case study 2

The first authentic material assignment was done in three communicative English classes at a coed national university in Japan. These classes had on average 20 students each. One of the class majors was economics. The two others were engineering, with the first a standard engineering class and the next mostly design-based engineering including architecture. The classes used a mix of authentic materials and teacher-designed conversations. Some of the conversations were about real life situations, others were to practice grammar and phrases. Prior to the class meeting times where this activity was done, all three classes had engaged in both authentic material use—watching clips from Michael Moore’s film, *Capitalism: a Love Story*, about the decline of the blue collar middle class and had done teacher designed conversations on serious topics such as political economics. The students had experience discussing authentic materials and serious topics. However, there is always a subtle expectation that Japanese people will shy away from discussing their views on social or political topics. The department these courses are taught at is usually supportive of teaching serious topics, though teachers I have discussed using political topics for EFL classes outside this university are not always so positive.

*A Documentary about Undocumented Immigration*

Students watched a film about undocumented immigration, *Crossing Arizona*. This film dealt with undocumented immigrants, their allies, and anti-immigrant nativists in Arizona and Northern Mexico. The film looked at the dangers, hardships, and hopes of undocumented immigrants. We watched short sections from this movie showing undocumented immigrants crossing deserts, which can be fatal, and working in fields. The voice-overs provided historical context explaining the United States’ troubled, inconsistent, and often contradictory relationship to immigrants.

For a class of economics majors, students were asked fairly-easy questions. These students had background training to understand the overall economic issues, whereas the other two classes did not. The questions were: 1) What are peoples’ personalities like; and 2) Do you think everyone has the same freedom to make good choices? The students answered these questions in writing while watching the movie. Instead of collecting the answers and doing sentence-level grading or factual correction, the teacher asked the students to write a paragraph or two about their answers to these questions.

The students did not answer these questions out of the blue, but rather did so in the context of having watched another documentary on economic problems in the United States, Michael Moore’s *Capitalism: a Love Story*. This showed people with serious economic problems: often
times Caucasians or African Americans. This also showed America’s idea of the middle class in the post-World War II Keynesian economy and its destruction by the Reagan administration. The students also in a previous class discussed a worksheet designed by the teacher called “Economic Reality” which has students respond, based on their experience and opinions, about ethical issues related to political economy.

Simple background information about the causes of undocumented immigration to the United States from Mexico and Central America was given. This included a map of the Western hemisphere drawn on the classroom white board explaining the U.S.-Mexico border fence and how it causes undocumented immigrants to migrate through the harsh desert in Arizona causing fatalities. The teacher then explained that in Mexico and Central America significant loss of land and subsistence agriculture caused undocumented immigration (subsistence agriculture was explained in simpler terms). The teacher also mentioned that the civil wars in Central America which the United States and Soviet Union supported have caused persistent problems to peoples’ safety which has caused them to become undocumented immigrants.

To some extent, it is expected that the Michael Moore documentary and the worksheet may have influenced some of the students’ response to Crossing Arizona. It is not uncommon for Japanese college students to frame their response to perceived viewpoints of the teacher. While this probable framing prevents me from saying that the students were sharing their own viewpoints, compared with discussions about immigration that the teacher had in a private university classroom, the teacher noticed an overall awareness and knowledge of immigrant issues which I will explain next.

There was an overall understanding of causes and effects, but perhaps not so much that undocumented immigration is a dangerous process for immigrants or the associated legal problems they may face in the United States. As per the causes of undocumented immigration, students understood why immigrants are immigrating and this was occasionally explained in terms of political economy. As per effects, students understood that immigrants had less choice, i.e. diminished agency, when compared to Americans. Some students understood that immigration does not always create success.

Overall, students understood that undocumented immigrants come to the United States out of necessity rather than pure choice, greed, or other desire to take advantage of Americans. Largely, these ideas were expressed through an understanding of political economy rather than culture. It remains to be seen whether or not students of engineering have the same grounding. If engineering students come to this conclusion, it might be safe to say that some aspect of higher quality national universities equips students to grasp the issue of undocumented immigrants, rather than their different knowledge received because of being from a different major.

A few students mentioned more abstract terms of political economy. For example, the term
“Mother country” was mentioned by one student and “developed country” by two students. These terms suggest an awareness that undocumented immigrants are coming from Mexico (the “mother country” to the “United States” a developed country for economic reasons. This echoes generic immigration debates about “push and pull.” Another student, from a communist country mentioned that the undocumented immigrants were in the United States because of “reasons of capitalism.” This suggest Marxist critiques of both immigration and the racialized political economy of immigration suggested by scholars such as Ettaine Balibar (albeit in far more simplistic and economically determinist forms).

Students also could pick up on the fact that undocumented immigrants have less choice about immigrating to the United States and hence are not regular law-breakers. This contrasts with many situations teaching in private universities and occasionally national universities where students have a “the law is the law” point-of-view which prevents them from seeing the complexities of undocumented immigration, which is not (yet) a regular breech in U.S. law (Plascencia 2014). To a certain extant this echoes the above paragraph about political economy (political economy often focuses on structure rather than agency). Therefore, the political economy arguments mentioned above will not be restated though they belong in this category too. Some grey area between the lack of choice and the political-economy arguments already mentioned occur in the realm of micro-economic explanations. One student for example mentioned the immigrants as a group: “They barely make their ends meet.” Hence, people will conduct undocumented immigration for money. Another student compared undocumented immigrants to “people with assets” suggesting an understanding that wealthy Americans would never feel compelled to do undocumented immigration.

As per the consequences of undocumented immigration, one student understood that problems of immigration follow immigrants across the U.S.-Mexico border. One student mentioned thinking that “immigrants will be successful when [they] leave their own country” but was surprised to learn that things were difficult in their new country. In other words, the student could tell by watching scenes of undocumented people walking through deserts and working in a field, that immigrants do not have it easy.

While many of these students understood various aspects of immigration, there were some limitations to their understanding. In contrast to other students who focused on the illegality of undocumented immigration, these students completely ignored the legal aspects altogether. For example, no one considered the legal consequences of undocumented immigration. I did not play the scenes with anti-immigration activists. In part this was due to time constraints. In part, it is due to the fact that the majority of Japanese peoples’ focus on immigrants—especially undocumented immigrants—comes in terms of negatively biased media reports (Shipper 2008). Thus, the teacher expected that Japanese students would latch on to nativist attitudes and ignore
some of the arguments in favor of immigrants. Another reason the teacher avoided the nativist scenes was due to the current far-right anti-immigrant climate in the United States and Europe. That said, given the overall nativism in Japan, the teacher was somewhat surprised to hear empathetic evaluations of undocumented immigrants.

Even though students were empathetic, they did not make distinctions between undocumented Mexican immigrants and documented Mexican immigrants. In part, the scenes did not focus on documented Mexican immigrants, so this may be chalked up to some bias introduced by Crossing Arizona. Yet, it also shows some limitations in using films about undocumented immigrants. After the lectures, the teacher corrected this lack of distinction by saying that not all Mexican immigrants are undocumented.

Music Lyrics to Discuss Counter Culture and Male Gender

In another general English class at a national university, students learned about gender using lyrics from music. The overall focus was on countercultures. The class discussed hippies, early glam rock, punk music, and heavy metal. Two classes discussed this: a science class and a political science class. In addition to reading lyrics and listening to the music, the students also did a 3-minute presentation on subculture based on research (usually reading an article or finding a musical example of a subculture, i.e. a song by the Clash to discuss punk).

Two songs that I would like to focus on are “The Man Who Sold the World” by David Bowie, an example of early 1970s glam rock and “No Remorse” by Metallica, an example of heavy metal. The songs were chosen based on their ability to comment on gender and relative lack of obscenities or insensitive languages (the latter is a time-consuming aspect of using music as an authentic materials). “The Man Who Sold the World” contained ambiguously male-female references, an obsessive, dream-like memory of a male friend which signaled some aspect of homosexual relations. “No Remorse” expressed an opposite notion of male gender; the American love of war with lyrics that at face value promote a willingness to take part in brutal warfare. These are two sides to Western male culture.

Perhaps as can be expected, students in both classes did not really pick up on any deep meaning in the David Bowie song. They saw it more as just lyrics and were overall confused by the explanation that it might be a love song written by a man for another man. This is despite having seen artwork in the liner notes for the CD that I brought to class, Aladdin Sane, which shows David Bowie wearing a dress. (The only mainstream depictions of gay men in Japan are of transgender men.) Therefore, it seems that the visual cues in the CD artwork might help students understand the subtle LGBT theme in the song, but this was not the case.

The reactions to the Metallica song were somewhat different than expected too. In a country with a traumatic experience of being invaded during World War II, the teacher wondered if the
song would be offensive. The science students did not quite understand the lyrics. Perhaps this was due to time constraint or level differences. However, the political science students seemed to understand it better. Some did not see it as belligerent masculinity per se, but saw the lyrics more as an expression of the horrors of war.

A good point of this activity is that it helps students fairly quickly understand the concept of gender to include not just female issues or differences between men and women, but to include issues that affect men as well. The use of music that was not contemporary presented students with something that they were not able to quickly look up on their smart phones and thus had to think about on their own merits. The use of non-standard music also caught students’ attention, being different from typical ESL activities.

The presentations on subcultures present some knowledge about the students’ attitudes toward studying music and subcultures, even if it is not a direct evaluation of the activities. A student in the science major class presented on punk subculture by bringing in his smartphone, playing a song by the Clash, and explaining why it was a musical and political example of punk subculture. Another student in the science major class discussed J-Pop and said it is perfect for Japanese people whereas Western subcultures are not, based on the type of beat used. He said Punk is probably the teachers’ favorite music, though Japanese people have other tastes. This suggests that the student did not quite understand the political implications of the punk subculture and filled in the gaps with his own personal experiences and viewpoints. A student in the political science majors class presented on punk music, correctly emphasizing the left-wing political aspect of the subculture. However, the student over-generalized punk as always standing for good things. This statement was not true. In more recent classes where the teacher mentioned subcultures s/he has been more careful to use qualifiers to characterize intent and points-of-views, though in EFL teaching there is often pressure to present things in easier to understand ways, lest the students do not understand.

For future classes, the music lyric activities need to be further developed. One potential limitation of these activities is that song lyrics generally are more complex than they seem. The David Bowie lyrics contained subtle allusions of staring someone’s eyes which would be both obvious in meaning to a native speaker—love, attraction—but also easy to ignore in the overall mix of surreal lyrics and music. Thus, it would be somewhat easy for students not to understand, especially since it is not considered normal male behavior in Japan. Moreover, the Metallica lyrics for “No Remorse” were rather long and open to interpretation as to what the meaning was. This forces a choice between focusing on authentic materials only to create English-language discussion, whatever the content may be about, or finding less ambiguous songs that are about the subject matter.

Another limitation is the time spent on studying subcultures. This was done as a three-week
section of a class (including one week of presentations). I would like to include more background reading and explanation, though students’ willingness to do extensive reading when they are required to research presentations and that the classes are already fairly short limit the amount of reading or lecture that can be completed. Some other improvements might be to include gender as a separate three-week unit taught before musical subcultures, thus giving students an example to understand gender more before applying it to musical lyrics. Another limitation is that the songs must be relatively free of obscenities and disturbing content. This means that the choice of songs is limited and imperfections such as over-complexity or slightly too-long lyrics may be something that have to be endured when using song lyrics.

3. Discussions

This section will first discuss the merits and shortcomings of using authentic materials in each case study. The section will then explore some of the limitations of using authentic materials and how they can be addressed by instructors.

In Case Study 1, the benefit of using authentic materials is that in many cases students show more enthusiasm about the activities. They appear to be more focused on the activities, and the materials trigger good discussion on cultural differences and intercultural communication skills. At the end of the semesters, the instructor received good comments about the materials in students’ evaluation of the class, some of which are as follows;

“The instructor of this class used interesting type of materials that other classes don’t usually have. (the original comment was in Japanese, presenters’ translation)”

“It was a very fun class. (the original comment was in Japanese, presenters’ translation)”

Another good impact on the class, from the viewpoint of the students, is that by using authentic materials, it was possible to accomplish a good balance of input (using textbook) and output (activities employing active learning with authentic materials). Also, the instructor was able to adjust the level of activities as the semester proceeded and got to know the students’ English level and interests more.

As for some challenges in using authentic materials, coming up with and preparing (obtaining and reprocessing) the materials that fit students’ interest was very time consuming. Also, sometimes it required more time than the teacher expected to complete the activities in the classroom. When we had class discussion on any aspect of the materials, facilitation by the instructor was necessary because the students were not very active initiating discussions at the beginning; however, once the instructor start facilitating and leading the discussions, students tended to volunteer their own opinions actively.
As per the merits and shortcomings of using authentic materials in case of the Case Study 2, a positive aspect of English language documentary films and music with song lyrics is exposure to cultural and historical differences. The film *Crossing Arizona* provides quite different views on undocumented immigration and the legal methods for helping them than students encounter in Japan. In America, there have been flexible legal and moral responses to undocumented immigration, and other issues, where many Japanese students I have worked with tend to see the law on this—and other subjects—as universally applicable and morally universal. The musical subcultures studied in the class exist in Japan and the area where the university is located. Thus, they are not totally foreign. Yet, they provide some opportunity to discuss issues in America and The United Kingdom as well as different cultural responses to the problem. For example, David Bowie’s song “The Man Who Sold the World” provided a more masculine example of LGBT culture than present in Japan and Metallica’s song “No Remorse” discussed an aspect of masculine militarism which has not been popular in Japan since the end of World War II.

A general issue for both using documentary films and song lyrics is the issue of the amount of authentic materials which can be used. While it is optimal to use short clips of films, even for classes of native-speakers, the short clips limit the amount of different viewpoints that can be used. They also can be taken either out of context or with too little explanation. When using short clips outside of EFL there is usually five minutes of movie watching and the rest of the class can be used for explanation and/or discussion. In EFL classes the clips need to be repeated three times for students to absorb the English language conversations and sufficiently answer questions. This means that at least fifteen minutes will be used for movie watching (excluding time for set-up, students to write answers to questions, and for the teacher to deal with technical difficulties in showing the movie). A similar problem exists for song lyrics. The students need to hear the songs at least twice to both understand the lyrics and integrate meaning with abstract emotional qualities of music. Introducing lengthy homework reading assignments to offset lost class time is not usually a realistic option for EFL classes. In another more recent class, the teacher had a section on subcultures which was studied to understand subcultures only and another where the students studied gender as a separate subject. Perhaps as mentioned earlier de-compressing and simplifying the amount of material and then reintegrating it cumulatively would help, though it would also lead to slightly different assignments.

One other option which would be helpful but is not available for English teachers at my university would be to select the majors we teach. As previously mentioned economics students had a fairly-good background to understand undocumented immigrants, political science students seemed to understand the political aspects of subcultures, and science students were mixed in their understanding. The assignments were neither targeted to the type of work that undergraduate economics, political science students, or science students would normally do. In
all three classes, there was success with the assignments. Thus, it is not a matter of tailoring
assignments to what could be expected from majors. Yet, the assignments overall may have been
more appropriate to the pre-existing analytical skill sets of social science students. But, it cannot
be said that they were undoable or unrewarding for all engineering or science students.

Aside from increased motivation and opportunities for analysis, authentic materials also aid
students in skills promised by textbook learning. But, authentic materials often may be more
efficient and effective in this regard. As per the effects on students’ skills to learn vocabulary
embedded in appropriate contexts and in correct collocations, were among many benefits. We
believe that the impact on students’ skills to learn vocabulary is significant. Rather than
memorizing the meaning of each vocabulary dictionary definition, they can learn appropriate
contexts for each vocabulary to be used in. Also, they can learn appropriate collocations that
each vocabulary is used with. They also can get used to multiple and subtly different definitions
for each word.

Finally, regarding how to expand teaching ideas using authentic materials, good authentic
materials are the ones that are always changing and updated to follow current issues in the world.
The contemporary, constantly updated aspect of authentic materials is a merit, though issues of
preparation call for the expansion of networks of teachers that are using authentic materials.
Regular textbook teaching and other types of EFL teaching, for example grammar-based or
translation activity based teaching, may have networks of scholars and publishers. There is no
shortage of conference panels or textbooks on these subjects to assist ELT teachers in teaching
these subject. This seems natural and could easily be taken for granted, but many teachers of
authentic materials may be working on their own with neither support nor examples of what an
effective activity is, how it works, or how to evaluate student responses. This is not just
important to raise the inconsistent support for using authentic materials, but also to make the use
of authentic materials more practical and effective for busy teachers. Networks where people can
share advice would be helpful for a few reasons. Creating authentic materials takes a lot of
preparation times for each teacher. Teachers who use authentic materials could help others to
streamline this process so teachers could more efficiently prepare and choose authentic materials.
Also, knowing what types of authentic materials work best at different types of universities—i.e.
community college, municipal, private, prefectural, or national—would make it possible for the
creation of effective authentic materials and classes to be less a matter of trial and error, hence a
risk for teachers, and more effective in a shorter timeframe. Authentic material assignments
could also be more helpful and rewarding for students from the beginning of their use.

Since authentic materials often reflect current affairs and issues that students face in the
short-term, there needs to be relatively quick dissemination of information about techniques and
issues. It would be ideal if there was a website or place to share and exchange the ideas to use
authentic materials. Due to issues concerning copyrights, it is not desirable to exchange the materials themselves. (dealing with copyrights is another time-consuming process) Rather, sharing classroom activity ideas and links to each authentic material suffice.

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Exploring Cultural Identity and Language with First and Second Generation Latino Youth

Conference Proceedings
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**Topic Area.** Other Areas of Education – Multiculturalism within Education

**Presentation format.** Paper Session

**Description.** The purpose of this study was to collect qualitative data on the lived connections between cultural identity and language for five first and second generation Latino youth in the Southwest region of the United States, specifically Arizona and California. It describes the personal struggles, realizations, and experiences revolving around cultural identity and language both in and out of the classroom. The insights gleaned from these interviews contribute to scholarship by highlighting the complexities and cogent recommendations that address the increasing Latino population within the education system.

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Abstract

Identity is comprised of the multiple group memberships in which one belongs (Tajfel & Turner, 1985). One of the most significant means of proving and attaining membership into certain groups is through language. Language is a symbol of group membership that displays multiple facets of identity, such as membership to types of social groups, and social role (Crystal, 2004, 2010). Accordingly, language is a significant indicator of both permanent and transient identities (Ghafournia, 2015). Studies exploring the connection between Latino identity and language have demonstrated increasing complexity due to shifting linguistic demands (Hernandez, 2010; Weisskirch, 2005; Ramsdell, 2005). The purpose of this research is to further tease out these complexities to identify transient themes, implications, and recommendations for Latin@ students currently within the education system.

Keywords: cultural identity, language, language loss, Latino education
The diversification of the U.S. is not only reflected in census findings and projections (Colby & Ortman, 2015), but also in the increasingly complex spaces in which cultural identity and language are frequently negotiated (Bhabha, 1994). To address these cultural and linguistic complexities within the physical and socialized space of the classroom, many states have mandated very linguistically restrictive and culturally subtractive instructional models for the education of English Language Learners (ELLs) in an attempt to standardize instruction (Cummins, 1997; Mahoney, MacSwan, Haladyna & Garcia, 2010). Furthermore, states, such as Arizona and California, have implemented English-only laws that require public schools to only provide instruction in English, under the misconception that, namely Latinos, “are resistant to surrendering their native language usage following immigration to the United States, and that only a national language policy can ensure language shift to English” (Padilla, Lindholm, Chen, Duran, Hakuta, Wallace, Tucker, 1991, p. 121). Consequently, the cumulative effects of the linguistically restrictive and culturally subtractive instructional models and the English-only laws are most often implicated in the high dropout rates and overrepresentation of Latino students special education programs (Fernandez & Inserra, 2013; Watt & Roessingh, 2001).

However, various studies demonstrate that Latinos typically adopt English as their primary language within one to two generations of living in the U.S. (Lopez, 1982; Veltman, 1988). While developing proficiency in English is pivotal for participation in U.S. society, ultimately, it is proficiency in one’s first language that serves as a “critical marker of one’s identity and connection to one’s cultural heritage (Mercuri, 2012, p. 14; Smoliez, Hudson, Secombe, 1998). As cultural identity and language are inextricably connected, the loss of language results in the loss of cultural identity (Baker, 2001). Therefore, the legal mandates that require the implementation of the restrictive linguistic and English-only instructional models not
only result in the loss of Latino youth’s first language, but also significantly impacts their cultural identity (Mercuri, 2012)

Identity is comprised of the multiple group memberships in which one belongs (Tajfel & Turner, 1985). One of the most significant means of proving and attaining membership into certain groups is through language. Language is a symbol of group membership that displays multiple facets of identity, such as membership to types of social groups, and social role (Crystal, 2004, 2010). Accordingly, language is a significant indicator of both permanent and transient identities (Ghafournia, 2015). Studies exploring the connection between Latino identity and language have demonstrated increasing complexity due to shifting linguistic demands (Hernandez, 2010; Weisskirch, 2005; Ramsdell, 2005).

**Language Policies within the Arizona Context**

While many states have implemented very restrictive instructional models for the education of English Language Learners (ELLs) in an attempt to standardize instructional approaches and increase access to education, Arizona has mandated the most restrictive referendum and legislation to date (Mahoney et al, 2010). Before the landmark passage of Proposition 203 in 2000, schools were allowed to locally select the instructional programs they determined as most effective for ELLs. However, after this Proposition, all school districts and charter schools were required to solely implement the Structured English Immersion Model (SEI) (Gandara & Hopkins, 2010). The SEI model also requires that ELLs be grouped according to their demonstrated proficiency in English as determined by the Arizona English Language and Literacy Assessment (AZELLA), the state’s English language proficiency test. Additionally, based on the AZELLA scores, the exact number of minutes allocated for each component of
language instruction (reading, writing, listening, and speaking) is also mandated (Arizona Department of Education, 2014; Wiley, Lee, & Rumberger, 2009).

The establishment of the Arizona English Language Learners Task Force resulted in greater restrictive practices by mandating the 4-hour English language development (ELD) block model (Mahoney et al, 2010). The Arizona Revised Statutes (A.R.S.) 15-756 requires that ELLS receive “a minimum of four hours per day of English language development (ELD) for the first year in which a pupil is classified as an English Language Learner” (ADE, 2014, p. 1). Students who are classified as ELLs are expected to achieve proficiency in English within a year when placed in an English-only instructional environment (Garcia, Lawton, Diniz de Figueiredo, 2010; Title 15, Chapter 7, Article 3.1, A.R.S., 1998). Furthermore, the SEI model also requires that ELLs be grouped. However, exiting from the 4-hour block is only possible when the students demonstrate “mastery” of English on the AZELLA (ADE, 2014).

Additionally, in regard to the English-only mandate reaching beyond the classroom, although 18 states have enacted laws designating English as the official state language, a federal district judge in Arizona declared Arizona’s constitutional amendment of English as the language of all government functions and action a violation of federally protected free speech rights (Padilla et al, 1991).

**Method**

The purpose of this study was to collect qualitative data on the lived connections between cultural identity and language for five first and second generation Latino youth in the Southwest region of the United States, specifically Arizona and California. It describes the personal struggles, realizations, and experiences revolving around cultural identity and language both in and out of the classroom.
1. How might language experiences shape proficiency?

2. How might school experiences shape language proficiency?

3. What is the connection between cultural identity and language?

4. In what ways, if any, are the participants re-gaining their language and cultural identity?

For this study, the participants were selected based on their connection to a group of Latina professors who regularly meet to discuss their experiences. The participants were selected based on convenience sampling and satisfying the criteria of being between the ages of 18-21 and first or second generation Latino (Creswell, 2013). This study focused on teasing out the intimate connections between cultural identity and language. All of the individuals who were recommended fit all of the participant requirements and were all suitable candidates for the study.

Four of the five participants were born in Arizona or California while one was born in Mexico. While all of the participants described having family members speak Spanish to them when they were children, four of the five participants indicated that these interactions were mostly with extended family members, such as grandparents and cousins. One participant stated that she only speaks Spanish at home with her parents, but is often positioned as a translator. Although all of the participants indicated that they were not allowed to speak Spanish in school, which negatively impacted their cultural identities and proficiency in Spanish, they have all taken Spanish classes either in high school or college to continue to develop their linguistic proficiencies.

For this study, the qualitative data were collected through semi-structured interview questions revolving around three topics: language background, identity and language, and school experiences. Each participant completed a semi-structured interview that ranged from 45 minutes
to 2.5 hours based on the depth of responses. The interview data were then transcribed and analyzed using grounded theory and constant comparative analysis to identify themes (Creswell, 2013).

**Findings**

The analysis of the qualitative data underscore the clear, but complicated relationship between cultural identity and language. The tension between learning and speaking Spanish and English influence the extent to which Spanish was learned, especially when the participants were younger. One participant stated that “I regret that I don't speak Spanish now, but hearing my mom's experiences growing up trying to learn English in school and speaking Spanish at home. I just know it wouldn't have been a lot harder than I expect. I guess I'm glad that I didn't have that struggle to deal with early on in my educational career” (Interview, 2016).

However, as adults, the participants indicate that their proficiency in Spanish determined how and in what ways they were able to engage with both the White and Latino communities both as youth and adults. One participant stated that he “didn’t speak [Spanish] so the times I would hear it, because I didn’t understand what it was, I felt like it almost distanced me further. I wouldn’t try to interact because I knew that I couldn’t fully engage, and so I wouldn’t take the opportunity to try to learn it at that point. Then next time I hear it, I still don’t know it and I’m a little bit older” (Interview, 2016).

Additionally, all of the participants have already taken steps to develop their proficiency in Spanish and plan on continuing their development. One participant recalled his interest in proactively learning Spanish when “the first time, sophomore year of high school, I had a friend who was using it. She was actually a native Spanish speaker, but she was using it to learn French. That got me interested in it. Then the second time around it’s because it had been a while
before I’d taken a Spanish class, and I was enrolling in one so I kind of wanted to catch up the summer before I started” (Interview, 2016).

These findings have powerful implications and lay fertile grounding for recommendations in reconciling the tensions of between the cultural identity and language of Latino youth within the education system. One such poignant insight given by a participant for the education system is to have “an emphasis [that] there is no one right way of being a certain culture. That’s something if you ask anyone my age to sit and think about, they’re all going to give you that answer. At least the people I know. I mean almost subconsciously there is a right way to be Mexican, there’s a right way to be Black, or there’s a right way to be White…having that as more of an overt message…might help a little bit” (Interview, 2016).

To Be Continued

In the full paper, we will have more in-depth findings as they relate to the lived experiences of cultural identity and language as well as their implications for education.
References


How much is enough? Teachers’ perceptions of literacy instruction and Common Core State Standards.

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Abstract

As public school districts and teachers in states that have adopted the Common Core State Standards (CCSS) seek to understand the standards and what this means for literacy/reading instruction, preservice teachers in universities are also learning about the literacy/reading instruction and standards as well. The International Literacy Association’s (2016) defines literacy as “Literacy is the ability to identify, understand, interpret, create, compute, and communicate using visual, audible, and digital materials across disciplines and in any context.” How is this definition applied to real-life teaching in the classroom? What exactly are the perceptions that practicing teachers have about literacy/reading instruction and the CCSS? What and how are public school teachers teaching? In this study preservice teachers are involved in analyzing interview data in regards to practicing teacher perceptions and attitudes about literacy/reading instruction and the CCSS.
Introduction

Many public school districts and teachers in states that have adopted the Common Core State Standards (CCSS) in the United States have been in the process of realigning their existing curriculum, adopting new curriculum to align with the CCSS, and negotiating the new assessments (Partnership for Readiness for College & Careers/PARCC, 2016; Smarter Balanced Assessment Consortium/SBAC, 2016). Teacher education programs in universities are preparing their teacher candidates to be knowledgeable about the CCSS as well as the many literacy methods and materials.

Teacher candidates in a literacy course at a regional university in the Pacific Northwest have been involved in collecting, discussing and critically analyzing interview data in regards to teacher perceptions and attitudes about literacy instruction and the Common Core State Standards. So what exactly are the perceptions that practicing K-6 teachers have about the CCSS and literacy? What are K-6 public school teachers doing? How have teachers changed their teaching? Are teachers’ perceptions of literacy and the CCSS who teach in rural and urban schools similar? The International Literacy Association, the association for reading/literacy teachers internationally and in the United States, state in their CCSS guidelines,

The Common Core State Standards (CCSS) have the potential to ensure that every child in the United States is prepared for college and careers. It is a worthy goal and one that we must work together to achieve. However, information, policies, and products aimed at helping educators to implement the ELA Common Core State Standards are being produced rapidly, sometimes with conflicting messages
about literacy practices, (International Reading Association Common Core State Standards (CCSS) Committee, 2012).

**CCSS Research**

Research regarding the CCSS and implementation is in the early stages, although there are many websites explaining what the CCSS are and their limitations. For example, the Common Core State Standards Initiative (2012) lists CCSS considerations such as:

1. The Standards define what all students are expected to know and be able to do, not how teachers should teach.
2. While the Standards focus on what is most essential, they do not describe all that can or should be taught.
3. The Standards do not define the nature of advanced work for students who meet the Standards prior to the end of high school.
4. The Standards set grade-specific standards but do not define the intervention methods or materials necessary to support students who are well below or well above grade-level expectations.
5. It is also beyond the scope of the Standards to define the full range of supports appropriate for English language learners and for students with special needs.
6. While the ELA and content area literacy components described herein are critical to college and career readiness, they do not define the whole of such readiness.

Although most school districts and states have already changed from their state standards to the CCSS, studies about K-6 teacher perspectives about teaching literacy and the CCSS are limited. However, studies of high school and K-12 teacher perspectives are
beginning to be included within the literature. In one such study (Lasisi, 2016), twenty-three ELA high school teachers from one California school were surveyed. The findings suggested that teachers wanted to acquire more knowledge about the English Language Arts (ELA) CCSS; their professional development and curricula were inadequate to meet the CCSS; and they perceived they were not ready to teach the ELA CCSS. In another national study, 456 K-12 teachers from the adopted CCSS states responded to an online survey. The findings suggest

Almost all respondents believe that the common core will have an impact on their classroom instruction in the long run. Thirty-six percent report that the new standards will influence their instruction “a great deal.” With another 44 percent indicating their classroom practice will change “somewhat.” Only five percent of respondents feel the common core will not change their teaching practices at all (Education Week, 2014, p. 30).

Other current research on the CCSS has focused on investigating the comparisons between current state standards and the CCSS, policy research and development, and surveys. In one study, differences in the changes between US state standards, international standards in other countries and the CCSS were explored (Porter, McMaken, Hwang, & Yang, 2011). In another CCSS arena, McDonnell and Weatherford (2013) investigated the educational policy making of the CCSS, while another study documented policy groups meeting to establish a research agenda for the CCSS (Center on Education Policy, 2013).

In regards to surveys, one CCSS Math survey of 12,000 teachers stated that 80% of the teachers had read the standards for their grade. 77% of the teachers said the CCSS
were similar to their own state standards and 94% liked and would teach the CCSS (Schmidt & Borroughs, 2013). Teacher unions (American Federation of Teachers/AFT) surveyed 800 members regarding the CCSS resulting in a 75% favorable support for the CCSS, however, 83% supported a moratorium on consequences for students, teachers and schools until the standards and related assessments have been fully in use for one year, (AFT, 2013). Other union (National Education Association) surveys report that teachers are unfavorably impressed with the CCSS (Van Roekel, 2014). Van Roekel goes on to state,

Seven out of ten teachers believe that implementation of the standards is going poorly in their schools. Worse yet, teachers report that there has been little to no attempt to allow educators to share what’s needed to get CCSS implementation right. In fact, two thirds of all teachers report that they have not even been asked how to implement these new standards in their classrooms (2014).

**Method**

**Setting**

This study took place at a small regional university located in the Pacific Northwest. The teacher education program at this university graduates approximately 250-300 elementary education majors (ELED) each year. Literacy education is an important component within the ELED major with four courses (15 credits) focusing on literacy methods K-8. Each elementary education certification candidate also seeks an endorsement in another area such as literacy, bilingual/TESL, Special Education, with Early Childhood Education (ECE) being the most popular. The cumulative practicum experience for the ELED major is the traditional academic quarter of student teaching. If
the candidate minors in a specialist endorsement area (literacy, bilingual/TESL, ECE) he or she has an additional classroom practicum. Practical teaching applications are crucial for candidates to connect theory to practice.

**Participants**

The participants in this study consisted of 75 teacher candidates enrolled in the EDLT 308 Literacy I course during three separate quarters. Candidates were either in their sophomore or junior year in the Teacher Education Program. Literacy I is the initial Literacy course within the ELED major and is an introductory, foundational K-8 literacy teaching course. The participating 75 K-6 teachers were currently teaching in public schools in the state of Washington. Both teacher candidates and practicing teachers are the participants in the study where the teacher candidates are the interviewers and the teachers are the respondents.

As part of the Literacy I course, teacher candidates were introduced to the Common Core State Standards (CCSS), with the English Language Arts (ELA) standards having the main focus. According to the CCSS website of the Washington State Office of Superintendent of Public Instruction

The standards insist that instruction in reading, writing, speaking, listening, and language be a shared responsibility within the school. The K–5 standards include expectations for reading, writing, speaking, listening, and language applicable to a range of subjects, including but not limited to ELA. The grades 6–12 standards are divided into two sections, one for ELA and the other for history/social studies, science, and technical subjects. This interdisciplinary approach to literacy is based on research indicating that students who are college and career ready must be
proficient in reading complex text from many disciplines (Washington State OSPI, 2012).

**Description of Teacher Interview**

In order for teacher candidates to understand and connect to the application of the philosophical principles, literacy methods and materials they were learning about in their class sessions and course text, students interviewed practicing K-6 teachers in Washington State regarding the ‘practical’ aspect of teaching literacy. The teacher interview consisted of twelve open-ended questions developed by faculty with teacher candidate input. The questions ranged from what programs/publishers, materials and strategies do you most often use, to what technology do your students use in the classroom for reading and writing and how do they use it? To concentrate on teachers’ perspectives of literacy and the CCSS, five questions were focused on in this study. The questions were: What are the guiding principles in the teaching of literacy in your classroom, what programs/publishers, materials and strategies do you most often use to help teach/meet the Common Core State Standards, how many hours in a typical school day do you focus on teaching literacy, if you could change something about the way in which literacy is taught, what would it be, and how has the Common Core State Standards changed the teaching of literacy for you in your class?

**Data Collection**

Teacher candidates interviewed 75 elementary teachers in 58 public school districts (26 rural and 32 urban) in Washington State. The teacher candidates had a choice of interviewing their selected teacher in person or over the phone.
All teachers in Washington state had been introduced to the CCSS at a variety of levels. The Office of Superintendent of Public Instruction’s website (OSPI, 2012) listed the timeline for CCSS adoption in the public schools for Washington state.

Table 1
Washington State & the CCSS Adoption Timeline

<table>
<thead>
<tr>
<th>Adopted</th>
<th>July 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1: CCSS exploration</td>
<td>2010-2011</td>
</tr>
<tr>
<td>Phase 2: Build awareness &amp; begin building statewide capacity</td>
<td>2011-2012</td>
</tr>
<tr>
<td>Phase 3: Build state &amp; district capacity and classroom transitions</td>
<td>2012-13</td>
</tr>
<tr>
<td>Phase 4: Statewide application and assessment</td>
<td>2014-2015</td>
</tr>
</tbody>
</table>

The interviews were collected during the academic quarters Fall (2015), Winter (2016) and Spring (2016) and encompassed Phase 4 and beyond of the WA state timeline.

In analyzing the data from the teacher interviews, using the constant comparative method of analysis (Glasser & Strauss, 1967), themes emerged. Spradley (1980) refers to analysis as a search for patterns: “Analysis of any kind involves a way of thinking. It refers to the systematic examination of something to determine its parts, the relationship among parts, and their relationship to the whole” (p. 85).

**Findings**

For each question, findings are organized by question, ranking of the theme, percentage of teacher responses and specific titles of the themes. The themes are presented in a table comparing and ranking teacher responses from the East (25 teachers) and West (50 teachers) side of the state. Washington state is split into the East and West as the East side of the state included the majority of the rural schools while the West side
included the urban schools. Example teacher responses that connect to themes are presented.

**Question #1: What are the guiding principles in the teaching of literacy in your classroom?**

<table>
<thead>
<tr>
<th></th>
<th>East</th>
<th>N-25</th>
<th>West</th>
<th>N-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>41%</td>
<td>The Common Core State Standards</td>
<td>#1</td>
<td>31%</td>
</tr>
<tr>
<td>#2</td>
<td>36%</td>
<td>The Big 5 areas of Reading (phonemic awareness, phonics, fluency, vocabulary, comprehension)</td>
<td>#2</td>
<td>28%</td>
</tr>
<tr>
<td>#3</td>
<td>23%</td>
<td>Engage in daily reading for enjoyment</td>
<td>#3</td>
<td>24%</td>
</tr>
<tr>
<td>#4</td>
<td>N/A</td>
<td>#4</td>
<td>17%</td>
<td>Engage in daily reading for enjoyment</td>
</tr>
</tbody>
</table>

**Example teacher responses:**

**The Common Core State Standards:** They are mandated; I use the CCSS to plan lessons and align student work; Mostly mandated standards dictate the guiding principles.

**The Big 5 Areas of Reading:** I want to teach the 5 basic foundations; I teach decoding and reading that shows comprehension and fluency; We start with the basic phonics and after skills are learned then we apply them.

**Mandated curriculum and methods:** I use the basal curriculum with leveled readers; Lucy Calkin’s Reading Units; Daily Five/CAFÉ, Reader’s Workshop; Walk to Read; Gradual Release Model.
All students are capable and come with different abilities: With guidance and encouragement all children will learn to read given their perseverance; All children can learn to read and write well; Understand how children read and write and they are capable.

Engage in daily reading for enjoyment: Kids should read every day for 20 minutes at least; Teach a love of reading, I try to stress the importance of reading for pleasure.

Question #2: What programs/publishers, materials and strategies do you most often use to help you teach/meet the Common Core State standards?

Table 3

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>N-25</td>
<td>41%</td>
<td>23%</td>
<td>19%</td>
<td>17%</td>
</tr>
</tbody>
</table>

West  N-50

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Variety of Mandated Small &amp; Big Publishers – Reach for Reading (National Geographic), CIA (Read Side by Side), Good Habits, Great Readers (Pearson), Lucy Calkin’s Units of Study (Heinemann)</th>
<th>Mandated Small Publishers – Read Well (Voyager Sopris)</th>
<th>Mandated Big Publishers – Journeys (Houghton Mifflin)</th>
<th>Mandated Big Publishers – Reading Wonders (McGraw-Hill)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>59%</td>
<td>17%</td>
<td>12%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Example teacher responses

Mandated Big Publishers: We use a mandated curriculum that is used district wide, Journeys; Our district has adopted a new curriculum called Wonders.

Mandated Small Publishers: We use Read Well, an intervention program that focuses on phonics; The Read Well curriculum is mandated in our school.
**Variety of Mandated Supplements:** Accelerated Reader (AR) is used to inspire reading and goals are set for achievement, it is highly recommended, but is an addition; CIA, or Collect, Interpret, Analyze, is used to help with chapter books; We use Good habits, Great Readers a phonics program; This year we have started using the Lucy Calkins Reading Units of Study as our main curriculum.

**Question #3: How many hours in a typical school day do you focus on teaching literacy?**

<table>
<thead>
<tr>
<th></th>
<th>East N-25</th>
<th>West N-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>34%</td>
<td>#1</td>
</tr>
<tr>
<td></td>
<td>2-3 hours</td>
<td>#2</td>
</tr>
<tr>
<td>#2</td>
<td>32%</td>
<td>#2</td>
</tr>
<tr>
<td></td>
<td>60-90 minutes</td>
<td>#3</td>
</tr>
<tr>
<td>#3</td>
<td>23%</td>
<td>#3</td>
</tr>
<tr>
<td></td>
<td>All day long</td>
<td>#4</td>
</tr>
<tr>
<td>#4</td>
<td>11%</td>
<td>#4</td>
</tr>
<tr>
<td></td>
<td>Diverse – No set time limit</td>
<td>#4</td>
</tr>
</tbody>
</table>

**Example teacher responses**

**60-90 Minutes:** Distract mandated 90 minutes; Forty-five minutes of core reading guided practice every day and 45 minutes of differentiated instruction during independent time, about 90 minutes.

**2-3 hours:** At least 2 hours a day; 200 hours is the goal, but there is not enough time.

**All day long:** All day, about 5.5 hours excluding lunch and recess. I teach literacy in every content area, writing & reading go hand in hand in all lessons; If students cannot read or comprehend a text, they cannot learn in the other content areas.

**Diverse:** Usually 90 minutes, but if the testing shows low scores, it changes to 120 minutes; Sometimes 60 minutes in reader’s workshop and sometimes 45 minutes with guided reading.
Question #4: If you could change something about the way in which literacy is taught, what would it be?

Table 5

<table>
<thead>
<tr>
<th></th>
<th>East N-25</th>
<th>West N-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>56%</td>
<td>64%</td>
</tr>
<tr>
<td>#1</td>
<td>Freedom: Curriculum &amp; standards too structured with no connections to student lives</td>
<td></td>
</tr>
<tr>
<td>#2</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>#2</td>
<td>Slow down: Too much for abilities; not enough time</td>
<td></td>
</tr>
<tr>
<td>#3</td>
<td>18%</td>
<td>8%</td>
</tr>
<tr>
<td>#3</td>
<td>Too much testing</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>#4</td>
<td>No changes, instruction hasn’t changed</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td>Too much testing</td>
<td></td>
</tr>
</tbody>
</table>

Example teacher responses

**Freedom: Curriculum & standards too structured with no connections to student lives:** The CCSS is too structured with no exploration or creativity; Get rid of the adopted basal reading curriculum, The curriculum has a more forced structure, no freedom to teach for enjoyment.

**Slow down: Too much for abilities; not enough time:** Too much, I have concerns about how developmentally appropriate the CCSS are for young children; The CCSS are not developmentally appropriate for children, especially those in high poverty schools.

**Too much testing:** I think there is too much emphasis on standardized assessments; The testing has gotten out of hand; I have to teach to the test.

**No changes, instruction hasn’t changed:** Not much has changed, it hasn’t affected my teaching; No changes.
Question #5: How has the Common Core State Standards changed the teaching of literacy for you in your class?

Table 6

<table>
<thead>
<tr>
<th></th>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N-25</td>
<td>N-50</td>
</tr>
<tr>
<td>#1</td>
<td>36%</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Specific skills to teach</td>
<td>No change in instruction</td>
</tr>
<tr>
<td>#2</td>
<td>27%</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>No change in instruction</td>
<td>Too structured – More stress</td>
</tr>
<tr>
<td>#3</td>
<td>27%</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>More testing</td>
<td>More testing</td>
</tr>
<tr>
<td>#4</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Raised the bar - rigorous</td>
<td>Raised the bar - rigorous</td>
</tr>
</tbody>
</table>

Example teacher responses

Specific skills to teach: The CCSS has brought awareness to the specifics of what students should know at each grade level; Focused curriculum, more specific skills.

No change in instruction: The CCSS were very similar to what the state standards were before, so there are not many changes; It is not different for me; For my class it hasn’t changed.

More testing: There is more testing; Everything focuses on assessment.

Too structured – More stress: The CCSS overwhelms student and teachers; More pressure, kids have to learn to adapt.

Raised the bar – rigorous: Rigorous, everyone has to teach the same thing; The CCSS has increased the rigor; It has raised the bar and holds teachers more accountable.

Discussion

The purpose of this study was to explore practicing K-6 teachers’ perceptions and attitudes regarding literacy teaching and the Common Core State Standards. The 75 interviews of teacher perceptions of what reading/literacy programs, how reading/literacy is taught, and how much literacy should be taught within the Common Core State
Standards (CCSS) served as a practical moment to help preservice teaching candidates connect theory and current practice in Washington schools.

Teacher candidates interviewed teachers during an introductory literacy course. Five questions were focused on in this study: What are the guiding principles in the teaching of literacy in your classroom, what programs/publishers, materials and strategies do you most often use to help you teach/meet the Common Core State Standards, how many hours in a typical school day do you focus on teaching literacy, if you could change something about the way in which literacy is taught, what would it be, and how has the Common Core State Standards changed the teaching of literacy for you in your class?

The findings were organized by question, ranking of the theme, percentage of teacher responses and specific titles of the themes. The broad themes are presented in tables comparing and ranking teacher responses from the East and West side of the state. Example teacher responses that reflected the themes were presented.

For question #1: What are the guiding principles in the teaching of literacy in your classroom? For the East side of the state the #1 (41%) and #2 (36%) responses from teachers were fairly close. Teachers stated that the CCSS was the guiding factor of the teaching of literacy in their classroom, or they focused on The Big 5 areas of Reading (National Reading Panel, 2000). Twenty-three percent of the teachers from the East side stated that their chief principle of literacy instruction was to make sure that children engaged in daily reading for enjoyment. The teachers from the West side of the state were close in their rankings. Thirty-one percent focused on The Big 5 areas of Reading (NRP, 2000), while 28% of the teachers stated that the mandated curriculum was the driving force behind their instruction. While the East side teachers had the CCSS as the #1
ranking for guiding principles, only 24% of the teachers from the West side indicated that the CCSS were the guiding principles behind their literacy instruction, which was ranked as #3 in terms of responses. Finally, 17% of the West side teachers indicated that daily reading for enjoyment was their guiding principle for literacy instruction in their classrooms.

As the CCSS were adopted in 2011 by Washington state, implemented by 2014-15 on the Washington state timeline, and mandated to be the guiding principles or goals for instruction, teachers from both sides of the state had differing responses. It seems that teachers’ beliefs strongly affect the guiding principles, materials and activities they choose for the classroom (Harste, Woodward & Burke, 1984). While many teachers have ‘bought in’ to the CCSS, other teachers seemed to be focused on the results of the Reading Panel’s report, indicating that phonemic awareness, phonics, fluency, vocabulary and comprehension were the main pillars and guiding principles of literacy instruction. Richardson (1998) states that teacher change may hinge on who is directing the change. Is it a top-down change or does it come from personal teacher research? Teachers often resist change mandated or suggested by others, but they do engage in change that they initiate (Richardson, 1998).

For question #2: What programs/publishers, materials and strategies do you most often use to help you teach/meet the Common Core State Standards? An overwhelming 64% of the East side teachers utilized only two basal reading curriculums (Journeys & Reading Wonders) published by big publishers (Milliot, 2016). Nineteen percent of the East side teachers focused on a basal reading curriculum published by a smaller publisher, and 17% used a variety of mandated supplements in their classrooms. The West side
teachers indicated that they used a much wider variety of mandated curriculums (59%), than the East side teachers. While 24% of the West side teachers used Journeys and Reading Wonders from the big publishers, only 17% focused on a mandated reading curriculum from a small publisher.

As many school districts began to shift to the CCSS, teachers in committees during 2013-2014 were working on realigning existing reading basal curriculums, or schools were adopting new commercial, CCSS aligned basal curriculums (Butterfield & Fennerty, 2014). A commercial basal was ready-made for teachers. For example, McGraw-Hill (2016) touts on its website, “Reading Wonders provides the instructional support and materials you will only find in a program that was created to teach the rigor, intent, and depth of the new Common Core State Standards.” Questions remain however. If the CCSS is mandated for all Washington schools, why do the West side teachers (urban districts) have such a wider variety of curriculum than the East side teachers (rural districts)? Does teacher choice, knowledge and expertise impact the curriculum decisions, or are school districts ‘playing it safe’ by selecting a teacher-proof reading basal curriculum that is “built upon a research-based instructional design with proven efficacy results” (Houghton-Mifflin Harcourt, 2016)?

For question #3: How many hours in a typical school day do you focus on teaching literacy? East side teachers were fairly evenly split between teaching literacy for 2-3 hours a day (34%) or for teaching a 60-90 minute block a day (32%). Twenty-three percent indicated that they teach literacy all day long, while 11% stated that they had no set time limit. In other words, teachers may teach literacy for 2-3 hours for one day, and 90 minutes the next day. West side teachers overwhelming indicated that they teach
literacy for 2-3 hours every day (69%). Twenty-six percent of the responses indicated that
teachers teach literacy for 60-90 minutes a day and 5% of the teachers indicated that they
teach literacy all day long.

A question the preservice teacher candidates asked was why the differing
instruction times? The differences could be connected to how teachers define literacy.
Do they define literacy as The Big 5 areas of Reading (National Reading Panel, 2000),
where literacy is broken down into discrete skills (phonemic awareness, phonics, fluency,
vocabulary, comprehension)? Teaching literacy for a 90-minute block was an ideal
recommendation coming out of the National Reading Panel report. However, in many
classrooms, a 90-minute reading block, or even less time spent teaching literacy produces
only 10-15 minutes of actual reading, or less than 20 percent of the allocated reading time
is spent reading (Allington, 2002). In the effective classrooms that Allington (2002)
studied over ten years, teachers with a much broader definition of literacy had children
reading for over half of the school day. Rather than holding a skill perspective of teaching
literacy, broader definitions may define literacy as what we want all students to know,
learn and do. In other words, literacy encompasses the knowledge and skills students
need to access, understand, analyze and evaluate information, make meaning, express
thoughts and emotions, present ideas and opinions, interact with others and participate in
activities at school and in their lives beyond school (Ewing, 2016). If teachers hold this
perspective, literacy instruction permeates the school day.

For question #4: If you could change something about the way in which literacy is
taught, what would it be? The overwhelming response from both East (56%) and West
(64%) side teachers was freedom. Teachers indicated that the adopted curriculum and
standards were too structured with no connections to student lives. Again, both East (23%) and West (21%) side teachers indicated that the pace of teaching with the CCSS was just too rushed. They responded that the pace needed to slow down. There was too much to teach for abilities and not enough time to teach. East (18%) and West (7%) side teachers stated that there was too much testing, while East (3%) and West (7%) side teachers indicated that there was nothing to change as their instruction hadn’t changed as the result of the CCSS.

It has been known for a long time that changes in teachers’ beliefs precede changes in their teaching practices (Bailey, 1992; Golombek, 1998). Top down sweeping mandates much like the CCSS and mandated new curriculums take time and sustainable conversations with professional development to have a successful impact in the classroom (Darling-Hammond, 1990). Teachers may resist or not see the benefits of change when they feel change is imposed by those who think they know what teachers should be doing in the classroom (commercial basal curriculums), and are in a position to tell them what to do (administrators & state mandates). Morimoto (1973) states

When change is advocated or demanded by another person, we feel threatened, defensive, and perhaps rushed. We are then without the freedom and the time to understand and to affirm the new learning as something desirable, and as something of our own choosing. Pressure to change, without an opportunity for exploration and choice, seldom results in experiences of joy and excitement in learning (p.255).

**For question #5: How has the Common Core State Standards changed the teaching of literacy for you in your class?** It was interesting to note that for the #1 ranking,
East side teachers (36%) stated that there were now specific skills to teach while West side teachers (38%) indicated that the CCSS had no impact on their instruction. For the number #2 ranking, East side teachers (27%) responded that the CCSS had not changed their instruction and 23% of West side teachers indicated that for their instruction the CCSS were too structured. There was more stress in trying to meet all that was expected. Both East (27%) and West (23%) side teachers indicated that with the CCSS there was much more testing involved. Ten percent of the East side teachers and five percent of West side teachers stated that the CCSS has raised the rigor in their teaching.

Some of the results from this last question seem to contradict the responses from question # 4. Preservice teachers were intrigued and wondered why, if a majority of the teachers wanted freedom from mandated curriculum and the CCSS, 27% of East and 38% of West side teachers stated that the CCSS had not change their literacy instruction. What could this mean? Could it mean that teachers were feeling generally dissatisfied with the CCSS and adopted curriculum and chose not to incorporate them in their teaching? Or could it be that teachers did not want to appear overly negative in their responses to the teacher candidates who were interviewing them?

The responses to question #5 also seemed to contradict the responses to a national survey of 500 teachers on their perspectives on the CCSS. Thirty-six percent reported that the new standards will influence their instruction “a great deal,” with another 44 percent indicating their classroom practice will change “somewhat” (Education Week Research Center, 2013).

Both East (27%) and West (23%) side teachers indicated that with the CCSS more testing seemed to have a larger focus than before the CCSS were mandated. As one
teacher stated, “Everything focuses on assessment.”

In a previous study of teacher perceptions of the CCSS (Butterfield & Fennerty, 2014), Washington state teachers seemed more positive about rigor where the CCSS “brings more critical thinking and helps prepare student thinking for what is ahead. Students will be better prepared for college & career, read more informational text, and have deeper knowledge” (p.7). Instead only 10% of East side teachers and 5% of West side teachers expressed positivity in that the CCSS raised the bar for students.

Conclusion

General findings seem to indicate that teachers have moved beyond the WA state timeline and are currently in Phase 4: Statewide application and assessment, and beyond. The CCSS are touted as a major advance not only because of their shared nature, but also because they represent a more rigorous set of goals than most individual states had previously adopted (Shanahan, 2013). It is said that the CCSS will change the climate of literacy instruction in the classroom. They will raise the bar by requiring complex text and close reading practices that will challenge children. The CCSS place the text – not the teacher - at the center of students’ negotiation of text meaning (Shanahan, 2013).

However, the findings from this study do not seem to support the goals of the CCSS as stated above. Teachers seem to have mixed feelings about the CCSS. Some are focusing on the CCSS as teaching goals and as specific skills, some are teaching literacy the way they have always taught literacy, and some are still focusing on the Big 5 Areas of Reading. At this time, for teachers in this study, there does seem to be a general dissatisfaction with the CCSS and literacy instruction as indicated by the responses from question #4. Perhaps the concrete realities of teaching with numerous factors such as
large classes sizes, varieties of student abilities, socio-economic status and languages spoken in the classroom, to name a few, don’t mesh with what looks good on paper policy.

**Further Analysis**

The original intent of this study was to gather the perceptions of practicing teachers to inform and inspire preservice teacher candidates. However, the data collected has been useful in helping preservice candidates connect theory and text-book learning to the practical applications of practicing teachers. Preservice teachers have been able to question, discuss, refine their own teacher beliefs as well as engage in reflective, critical analysis of curriculum, methods and materials for teaching literacy.

To further explore teacher perceptions of the CCSS and literacy teaching, additional questions could be added to the existing interview. The questions below could be added to further investigate teacher perceptions, but would also serve to broaden teacher candidate awareness of the CCSS and literacy teaching.

Such questions include: Where did you receive your information about the CCSS? How has the CCSS impacted the teaching of literacy to English as a Second Language students? If you had the freedom to teach literacy any way in your classroom, what methods and materials would you use?
References


Title: Teachers’ Conceptions of Mathematical Problem Solving: A Path to Teaching Secondary School Math for Understanding.

Topic Area: Secondary Education

Presentation Format: Paper Session

Description of presentation: This paper presents part of a research conducted in Nigeria to determine secondary school mathematics teachers’ conception of mathematical problem solving and how their conception is related to what they teach and how they teach mathematics through problem solving. The purpose was pursued through the following three research questions:

1. What are secondary school teachers’ conceptions of mathematics problem-solving?
2. What are teachers’ believes about how problem solving should be incorporated into mathematics lesson?
3. How do teachers teach mathematics through a problem solving approach and what type of problem do mathematics teachers typically present to their students?

Qualitative and quantitative data were collected by means of a questionnaire instrument and an observation coding sheet. The target population was secondary school mathematics teachers in two major states in Nigeria. A total of 226 mathematics teachers from 61 secondary schools participated in this study by responding to a seven-item open-ended questionnaire, thereby providing the data that were analyzed. Additional data were collected from 21 of those teachers who were selected and their teachings were observed to determine how much of problem solving characteristics they exhibit during their classroom teaching of mathematics.

The result showed that mathematics teachers have varied conception of problem solving with the most dominant ones in their order of magnitude being a process and procedure of solving mathematical problem, practice and working on exercise problems, dealing with unfamiliar situation, an instructional approach, and working on word and /or application problems.

The result showed that teaching mathematics through problem solving will entail teacher and/or students solving problems on the board, teaching students problem solving strategies, having a high involvement of students, Setting a class period aside for problem solving, and
allowing students time to struggle with problems on their own. Also the result showed that the most type of problems teachers assign to students in math classes are end of chapter exercises from textbooks, this is followed by application and word problems with the least type of problems being non-routine problems. The result also indicated that mathematics classrooms are teacher dominated with minimal student/student interactions since according to findings from this study teachers talk for about 85% of the time while students talk for less than 20% of class period. The final analysis is that Nigerian mathematics teachers should rethink about their mathematics classroom practices if they want to be teaching through problem solving.

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Title: Teachers’ Conceptions and Approaches to Problem Solving: A survey of Nigerian Secondary School Teachers

Introduction: Ever since problem solving became topical in mathematics education in the 1980s, it has continued to play a fundamental role to the teaching and learning of mathematics as it has remained the focus of many research activities (Foland & Becker, 1988; Funkhouser, 1993; Buschman, 2003; Cai, 2010; Curcio, Curl, Artzt, & Sultan, 2013; Leatham, Lawrence, & Mewborn 2005; Lester & Charles, 2003; Schwartz & Curcio, 2013) over the last two decades.

Many studies have continued to show that teaching mathematics through problem solving is effective in improving students’ performance. More specifically, it has been documented that the more problem solving students are exposed to, the more confident and willing they are to solving problems and the more they continue to develop methods for solving future problems (Boaler, 1998; Cai, 2003; Lesh & Zawojewski, 2007).

In spite of its widely acclaimed relevance in the teaching and learning of mathematics, problem solving is still viewed and interpreted in different ways. Schroeder and Lister (1989) summarized the different perspectives people have of problem solving as they relate to teaching and learning of mathematics and he came up with three approaches that depict 1) teaching for problem solving which entails teaching a skill so that students can later use it to solve problems; 2) teaching about problem solving, which teaches students how to problem solve; and 3) teaching through problem solving which means that students are presented with real problems and they learn mathematics by identifying and learning the skills that emerge through the process. According to Reys, Lindquist, Lambdin and Smith (2015), problem solving
engages students in a task which the solution method is not eminent, but requires students to draw on their knowledge and by so doing, students will develop new mathematical understanding. This was the vision of problem solving as was outlined by the National Council of Teachers of Mathematics (NCTM, 2000) and echoed in the Common Core State Standards Initiative (CCSSI, 2010). Taplin (2009) outlined six specific actions that are paramount when teaching mathematics through problem solving as: (1) interactions between students/students and teachers/students; (2) mathematical dialogue and consensus between students; (3) teachers providing just enough information to establish background/intent of the problem, students clarifying, interpreting, and attempting to construct one or more solution processes; (4) teachers accepting right or wrong answers in a non-evaluative way; (5) teachers guiding, coaching, asking insightful questions and sharing in the process of solving problems; and (6) teachers knowing when it is appropriate to intervene, and when to step back and let the students make their own way. Taplin’s outline of actions indicate that in a typical problem solving classroom environment, the teacher is mainly a coach who provides guidance and encourages dialogue in the classroom through an appropriate and effective instructional pattern.

It is pertinent to note that teachers may have correct conceptions and perception but fail to communicate effectively to students because of their pattern of interaction in the classroom. This paper focuses on what how teacher view mathematical problem solving and how do they teach mathematics through problem solving. Over the past two decades, many curriculum reforms in mathematics education have centered around paying more attention to basic skills
and/or focusing on problem solving. It became more obvious later on that problem solving continues to gain more attention in many countries and across continents.

Over these years, considerable efforts have been made by Nigerian scholars to make problem solving the center of mathematics teaching and learning. Some studies have documented positive effects of teaching mathematics by following Polya’s (1957, 1962) four-step framework that involves 1) understanding of the problem, 2) devising a plan, 3) carrying out the plan, and 4) checking the reasonableness of the solution in different forms (Agwagah, 1993; Alio, 1997; Adigwe, 1998; Kolawole & Ilugbusi, 2007). In some cases, the studies emphasized teaching of reading and comprehension as a means of understanding the problem (Agwagah, 1993), while others focused on applying the entire Polya’s four stages (Alio, 1997), or teaching specific strategies (Adigwe, 1998; Kolawole & Ilugbusi, 2007). These studies focused primarily on identifying effective pedagogies but did not investigate the extent to which those at the center of the implementation are conversant with the approach. Therefore, the aspect of research that needs investigated in the efforts to improve students’ performance in mathematics through problem solving is the role of classroom teachers, more specifically, their understanding of problem solving. The classroom teacher is an important factor for any meaningful reform and classroom improvement since he or she is the pivot on which classroom activities rest, as he or she has direct contact with students (the learners). This implies that, as Griffiths and Howson (1974) noted, the success or failure of any innovation in education such as problem solving in mathematics ultimately hinges on the receptiveness and flexibility of the classroom teacher. The receptiveness and flexibility of the classroom teacher in relation to
problem solving in mathematics will depend on his/her conceptions and beliefs of problem solving.

It is important to note that students’ performance in mathematics cannot be improved by merely including problem solving in the secondary school mathematics curriculum or simply by recommending that teachers teach mathematics through problem solving. Rather, a significant positive change can be made by ensuring that students are properly engaged in mathematics context, situation, and are challenged through the presentation of non-routine problems. The teachers are there to guide them rather than prescribe what to do. These are the conditions that leverage students’ learning of mathematics successfully through problem solving. Thus, the locus for change resides in the classroom. If any meaningful change is going to take place, the culture of the classroom has to change significantly, and any classroom change must begin with the teachers (Hiebert et al., 1996).

The purpose of the study

This paper focuses on determining secondary school teachers’ conceptions and beliefs about problem solving and how these conceptions are related to how teachers teach mathematics in secondary school. The specific questions that this paper tried to address include:

1. What are secondary school teachers’ conceptions of mathematics problem-solving?
2. What are teachers’ believes about how problem solving should be incorporated into mathematics lesson?
3. How do teachers teach mathematics through a problem solving approach and what type of problem do mathematics teachers typically present to their students?
Methodology:

The study combined survey questionnaire and classroom observations to elicit information on teacher’s conceptions of problem solving and how much of problem solving characteristics teacher incorporate their teaching and learning of mathematics. The study was carried out in Anambra and Enugu states. These two states are considered to be few of the academically privileged states in Nigeria. Anambra state in particular has been ranked the best in secondary school performance according West African Examination Council (WAEC) results. Four education zones (two from each state) from these two states, were selected because they have major cities that are considered to be the most diversely populated cities in the two states; they also have the highest concentration of secondary schools and mathematics teachers and, as such, would have secondary school mathematics teachers who would be a good representation (in terms of academic qualifications, gender, and years of experience) of secondary school teachers in the two states.

The population for the study consisted of secondary school mathematics teachers in Anambra and Enugu states. A sample of 226 teachers was selected from a total of 850 secondary school mathematics teachers from 61 different secondary schools in two states. A multistage random sampling technique was employed for the selection of schools and subsequently the teachers who responded to 11 open-ended questions that elicited information on teachers’ conceptions and beliefs about problem solving. Specifically, these questions required teachers to describe their understanding of problem solving; how they integrate problem solving in mathematics instruction; what they do in mathematics classroom when they teach problem solving; their beliefs about how problem solving should be taught in schools. In addition to eliciting
information from 226 teachers who responded to the survey instrument, 21 of those teachers were selected and their teachings were observed to determine how much of problem solving characteristics they exhibit their classroom practices.

**Data Analysis and Results:**

**Research Question 1:**

What are secondary school teachers’ conceptions of mathematical problem solving?

To answer this research question, respondents were asked to describe their understanding of the phrase “mathematical problem solving”. Table 1 shows a variety of teachers’ conceptions of problem solving. By parsimoniously grouping through open coding of responses five distinct categories of conceptions were derived. Aligning each respondent to one category to identify the relative weight of the categories showed that the teachers identified most with “a process of solving mathematical problem” and the least with “word and/or application problems”. According to this result 73 (32.3%) respondents view problem solving as a process of arriving at a solution to mathematical problems; 54 (23.9%) see it as working on exercises, while 24 (10.6%) of teachers believe that problem solving is a process of getting out of a difficult situation. The remaining three themes that emerged from the analysis are that problem solving is an instructional approach, a way of teaching mathematics 22 (9.7%) respondents; or it is solving word/application problems 11 (4.9%) respondents. There were 42 respondents (16.6%) who provided no answer to this question or whose answers were not useable.

Table 1. Qualitative responses of teachers’ conceptions of mathematical problem solving (n = 226)
<table>
<thead>
<tr>
<th>Theme on Conceptions</th>
<th>Descriptive Responses</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
</table>
| A process of solving mathematical problems | A way of solving math problems  
• A way of understanding mathematical problems  
• Solving mathematical problems using different techniques  
• act of systematically solving mathematical problem to arrive at a logical conclusion  
• methodological approach and strategies of finding a solution to mathematical Problems  
• Processes of seeking answers to mathematical problems through steps or stages  
• Interpretation of questions asked; well articulated procedures methods, processes or steps presented to work out solutions of given mathematical problems.  
• A process of arrive at a solution                                                                                                           | 73 | 32.3|
| Instructional approach                     | The act of teaching students through problem solving  
• An instructional approach  
• Process of teaching and learning mathematics                                                                                   | 22 | 9.7 |
| Dealing with unfamiliar situations         | Finding an answer for a difficult situation  
• Application of mathematical process to a problem situation  
• Finding an appropriate response to a situation that is unique and novel to the problem solver  
• Dealing with an unfamiliar situation.  
• integrated activity beginning with problematic situations  
• Solving problems by first analyzing the problem in several ways  
• The phrase means stripping one from thinking on how to answer questions arising in one’s daily life. | 24 | 10.6|
| Working on exercises                       | Doing exercises on mathematical topics  
• Asking students to solve some exercise problems as a means of checking the desired objective or goal of the lesson  
• Expose students to problem solving exercises  
• Giving students some problems to solve in mathematics after which you mark and write corrections.  
• Exposing the students to problem solving exercises both to enhance and assess their understanding after teaching a concept in mathematics.  
• Involves the solving of problem associated with the topic one have delivered in the class  
• Practicing on the content covered in class  
• One of the methods used to assess the students after teaching a topic  
• Using formula learned in class to solve problems. | 54 | 23.9|
| Word and/or application problems           | This involves mainly solving textbook and application problems.  
• Using mathematics operations to solve application problems  
• Solving word or application problems                                                                                                 | 11 | 4.9 |
Research Question 2:

What are teachers’ beliefs about how problem solving should be incorporated into mathematics lesson?

To answer this research question teachers were asked to respond to the question “What are your beliefs about how problem solving should be taught in secondary schools?” Table 2 below shows that teachers’ responses to the open-ended question showed a wide range of beliefs. By clustering their beliefs into distinct categories, eight classes or categories of beliefs were achieved and by aligning each respondent to one of the eight categories to show the relative attraction of these categories showed the following patterns of beliefs: integration into instruction through appropriate steps and strategies (60 teachers or 26.5%); teach concept first, follow with real life practical examples from simple to complex (27 teachers or 11.9%); active student participation in a friendly environment (23 teachers or 10.2%); use of practice exercises (22 teachers or 9.7%); separate time on the time table (18 teachers or 8.0%); many solved examples (17 teachers or 7.5%); use of instructional materials (13 teachers or 5.8%); use appropriate teaching techniques (12 teachers or 5.3%); and problem solving should not be taught in schools (5 teachers or 2.2%). There were 29 teachers (12.8%) who provided no answer.

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Statements</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>• No Response</td>
<td>42</td>
<td>18.6</td>
</tr>
<tr>
<td></td>
<td>• Uncategorized</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Qualitative responses of teachers’ beliefs about how problem solving should be taught
| Use of practice exercises | • After teaching each topic, allow the students to try the exercises on their own. Collect and mark and emphasize on their mistakes.  
• By use of practical exercises, involvement of students in practice of solving problems.  
• Through the use of analytical process; Relate similar problem; use of practical exercises.  
• Always give exercise to students at each topic taught even the ones to teach.  
• My belief is that it must be taught through exercise solving in the classroom.  
• My belief is that problem solving should be integrated in math instruction and at the end more exercises be given to them.  
• It should be inculcated in the practice exercises. |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------|-------|
| Use of appropriate instructional materials | • You should have enough instructional materials  
• Problem solving should be taught by use of teaching aids by using concrete examples  
• 1) use of specified methods 2) use of available instructional materials 3) allowing the participation of learners  
• Problem solving should be taught in schools using some concrete teaching aids if available or improvise teaching aids.  
• Make use of concrete visual aids involve students while teaching.  
• t should be taught by employing the efforts of the students as well as effective use of teaching aids  
• By using teaching aids and giving the students enough problems  
• They have to provide instructional material which will help in problem solving. |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------|-------|
| Use of appropriate teaching techniques | • Using the appropriate techniques when teaching  
• This should be done using appropriate teaching techniques.  
• Problem solving should be taught in schools using the appropriate techniques in teaching.  
• My belief about how problem solving should be taught in schools is through the use of methods and techniques so that the teaching will be effective.  
• I believe that any problem solving followed with appropriate methods and steps should be learnt very well. |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------|-------|
| Active participation of students in a friendly environment | • It should be taught in groups and thus should allow active participation of the students and complete solution of a problem should not be provided to the students.  
• Explain the strategies and make it participatory.  
• Give students chances to come up with ideas use leading questions to direct them then practical problems on daily use.  
• Students should be involved more in problem solving.  
• To enable students to use their own words in relation to any problem solving in mathematics.  
• The students should be completely involved in problem solving themselves by giving individual assignments and group work.  
• Problem solving should be taught in schools by allowing the students find the best way to tackle a problem  
• Through peer learning; Through team teaching; Group teaching and learning |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| **Integration into mathematics instruction through appropriate steps and strategies** | • Give the students guidelines that would help them in solving problem  
• It should be integrated while teaching and make it part of the instructions  
• Problem solving should be taught in schools by explaining the concept step by step  
• Using problem solving instructional strategies e.g. Polya, Greeno etc. Teaching via problem solving  
• More emphasis on step by step (processes) solving of problems; Practicalising mathematics problems; Encouraging students to always interpret or restate problems the way they understand it using their own words  
• My beliefs are 1. to use the ways these authorities in mathematics tried to solve problems related to math. They include division Earp’s principles, Darhruns and Polya’s principles of problem solving. |
| **Separate time on the time table**                                    | • More time should be introduced into the mathematics school curriculum  
• Problem solving should be given a period of its own in the school timetable  
• Problem solving should be given a period in the time of the school  
• My belief is that more time should be given such as double period or more  
• A lesson should be set aside for problem solving after teaching the concept topic  
• Integrate mathematical problems solving in the time-table |
| **Many solved examples**                                               | • Many solved examples should be done in the class –Classroom platform test should be given to be solved under the supervision of the teacher – Constant take home assignments should be given to students  
• By use of practical examples – by involving students themselves in the problem solving  
• My belief is that problem solving should be taught using as many examples as possible  
• In that as many example the teacher uses to teach students will make it clearer for the students to understand. |
| **Problem solving should not be taught**                               | • I do not believe that problem solving should be taught in school as a topic because teachers have been solving mathematical problems using many strategies.  
• Problem solving should be taught as a general studies because it applies to day to day life of students and even teachers  
• By programming workshops and bringing people that have expertise knowledge in the subject to the teachers as well as students |
| **Teach concept first, followed with real life practical examples**     | • After having taught the students, break up the problems into little units and allow them fund solutions to them. Guide them later during revision or correction.  
• People who teach mathematics should make it interesting by relaying it to known issues of life  
• It should be linked to non-mathematical problems. But maths is easier because one links one topic to the other in order to arrive at the solution  
• Teach the aspect or branch of mathematics; What the question is all about; The |
Research Question 3:

How do Mathematics teachers teach mathematics through a problem solving approach?

To elicit information for this research question, teachers were required to answer two related questions that prompted them to “describe what teachers do in mathematics classroom when teaching problem solving” as well as to “describe how they integrate problem solving approach in their mathematics instruction”. Responses to these two questions constituted how teachers teach mathematics through a problem solving approach.

The result in Table 3 shows five distinct categories of things teachers do when teaching problem solving. Aligning each respondent to one of the five categories showed the following pattern of what they do: applying problem solving strategies (23 teachers or 10.2%), students engage in solving exercise problems (42 teachers or 18.6%), students’ participation in group work (14 teachers or 4.9%), teacher solves problems for students (20 teachers or 8.8%), catching up and solving problems from previous lesson (12 teachers or 5.3%). There were 11(4.9%) responses that could not be classified and 103 teachers or 45.6% did not respond to this question.

Table 3: What teachers do in mathematics classroom when teaching problem solving.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Statement</th>
<th>Number of respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applying problem solving</td>
<td>• Demonstrate guided approach, the modified approach, the free approach, inductive method, deductive procedure&lt;br&gt;• Standard are not confined to specified method (s) or known methods; allowing standards to discover other (their own) ways using proven</td>
<td>23</td>
<td>10.2</td>
</tr>
<tr>
<td>strategies</td>
<td>theories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I solve problems using various approaches. I give students problems to solve as well</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Analysis of the mathematics problem by breaking it down to simpler form. Relate it to similar problem. Make a sketch of diagram (if possible) for the problem. Write an equation and solve and check for the reasonableness of the solution. Apply the same situation to similar problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I enumerate a problem solving strategy and apply it in a particular mathematical problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I apply trial and error method; I try to implement or introduce problems in my own words when teaching problems.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The problem is represented in the words. If in words, a drawing or sketch is made. A good guess; then follows the solution process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Break problems up into simpler problems. Use inductive reasoning. Translate into equation and then solve.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• I provided the necessary instructional materials needed for the problem and guide the students on how to approach the problem in order to arrive at the set objective.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students Solve exercise problems individually</th>
<th>This is the period I assigned some problem to students to solve.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• This period is normally used in doing assignments, and in that period I normally supervised them.</td>
<td></td>
</tr>
<tr>
<td>• The time is for the students to solve the problems in the class and being supervised by the teacher.</td>
<td></td>
</tr>
<tr>
<td>• This is done when I give them assignments to do in order to test their abilities. It is done in the class and I supervise them.</td>
<td></td>
</tr>
<tr>
<td>• I gave some problems on the board and went round from one student to another to see how they solved. I write out a question on the chalk board and appoint students randomly to come out to solve in each case.</td>
<td></td>
</tr>
<tr>
<td>• Solved some mathematical problems, gave similar questions/problems for the students to solve following the same method taught them.</td>
<td></td>
</tr>
<tr>
<td>• The students were given about twenty questions taken from several topics to solve.</td>
<td></td>
</tr>
<tr>
<td>• I used to call students to come solve on the blackboard so that I will be sure they understood it.</td>
<td></td>
</tr>
<tr>
<td>• I allow the students to construct a question on the topic we have and will come to the blackboard and solve it by themselves.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students’ participation and group work</th>
<th>Allow active participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sometimes you divide the students in groups for them to solve the problems</td>
<td></td>
</tr>
<tr>
<td>• Allow students to participate in solving any given problem, allow them to restate the problem, breakdown the problem and then review the solution</td>
<td></td>
</tr>
<tr>
<td>• I allow students to participate in problem solving by giving them some mathematical problems to solve</td>
<td></td>
</tr>
<tr>
<td>• Motivate the students, encourage divergent thinking in students, present the problem as a whole, problem that is too difficult, now too easy and it should arouse students anxiety.</td>
<td></td>
</tr>
<tr>
<td>• I approach math questions from various angles and ask students to...</td>
<td></td>
</tr>
</tbody>
</table>
choose which ever method they deem easier, faster or better

| Unclassified                                      | Word problems on quadratic equations.  
|                                                 | I discussed with them at length and advice them on problem solving.  
|                                                 | To find out from students themselves their ideas about problem solving. |
|                                                 |                           | 11 | 4.9 |

| Teacher solving problems for students  | I do go to the exercises in the students textbooks and sometimes to past questions trying to bring the students along while solving the problems and also making the problems to look familiar to them since everything in mathematics is all about problem solving.  
|                                           | I will bring the past question of one of the past questions paper.  
|                                           | I use solved past questions from WAEC and NECO. N/A |
|                                           |                           | 20 | 8.8 |

| Catching up and solving problems on previous lesson  | I will take them back to what we did last and then set the questions which we mark  
|                                                    | Extra lessons for students so as for cope up with what is being taught in class (during school period).  
|                                                    | I allow the students to construct a question on the topic we have and will come to the blackboard and solve it by themselves.  
|                                                    | After presenting the concepts on the topic, I take two periods for problem-solving after which I give more problems to students for practice.  
|                                                    | Solving previous problems and more other problems on the topics you want them to assimilate clearly.  
|                                                    | I select problems from topic taught and solve them together with the students in the classroom i.e. the students take their turns.  
|                                                    | I solved many problems relating to the topic from various Maths texts.  
|                                                    | I gathered all the mistakes made from the exercises I gave them, we come together and discuss these materials one after the other.  
|                                                    | Compiled questions, gave to students, after solving there was room for discussion on questions that have different answer to student. |
|                                                    |                           | 12 | 5.3 |

| No response                                      | No response |
|                                                  |             | 103 | 45.6 |

Table 4 shows the following categories of responses of how teachers integrate problem solving in their mathematics introductions. Teacher or students solve problem on the board 65 (28.8%), teach problem solving strategies 58 (25.7%), high involvement of students 37(16.4%), set a class period aside for problem solving 12 (5.3%), apply three domains 10 (4.4%), and allow
students time to struggle with problems on their own 6 (2.7%). As many as 38 (16.8%) teachers did not answer this question.

Table 4: How to integrate problem solving in mathematics instruction

<table>
<thead>
<tr>
<th>Theme</th>
<th>Statement</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
</table>
| Teacher and/or students solve problems on the board | • The mathematical concept is first exampled, a sample problem is solved while students watch and copy on their notebooks. One or two students will volunteer to solve similar problems on the board as their fellow students watch.  
• I use some examples given in the textbooks which the students have.  
• I apply problem solving by giving my students exercises in every topic taught by giving students take home assignment.  
• At the end of each math instruction, I give class exercises or home work or test.  
• By solving problems as examples and giving the students similar problems to solve under my guidance. | 65                     | 28.8 |
| Teach problem solving strategies           | • By guiding the students to identify the problem, define the problem, choose method, apply the method, and after that verify the solution to the problem  
• Identify the problem and write it on the chalkboard. As the students to interpret in their own sentence. Asking them why questions that help them to solve using trial and error method.  
• Getting students involved by asking questions related to the problem  
• Get students to interpret problems in their own words  
• Get students to draw picture, tables, and charts. Break problems into simpler forms and restating similar problems  
• Emphasizing processes and methods rather than answers: Allowing students to realize as many as possible strategies or methods of solving mathematical problems | 58                     | 25.7 |
| High involvement of students               | • Individual student’s contribution, grouped work, home assignment  
• I give them questions to solve during the course of teaching a topic  
• I give them at least two questions to solve after teaching a topic and immediately check what they did  
• Group work, asking questions, instructional materials, relating topic with everyday activities, examples.  
• By continuously giving students some problems to solve and solving the problems ultimately with the students at the end.  
• Teach and ask questions, demonstrate on the blackboard. Allow | 37                     | 16.4 |
<table>
<thead>
<tr>
<th>Set a class period aside for problem solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>• After teaching a concept/topic, I usually devote a lesson for solving problems in that particular concept/topic.</td>
</tr>
<tr>
<td>• I give a period out of the five periods in the week for problem solving</td>
</tr>
<tr>
<td>• You teach the concept and then give them problems to solve</td>
</tr>
<tr>
<td>• I set out one period for the math lesson to problem solving. Students are allowed to source other avenues to solve a particular problem.</td>
</tr>
<tr>
<td>• After teaching a topic, problem solving on that topic follows. Get a question from text on treated topic, write on the board and let students attempt to put it on their own language before solving.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Apply the three domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>• In mathematical problem solving one needs to apply the three domains the cognitive i.e. teaching, impacting knowledge; psychomotor i.e. given practical works like projects; affective i.e. checking the ability of the students through behaviors</td>
</tr>
<tr>
<td>• In problem solving concept, use the three domains cognitive, psychomotor, and affective</td>
</tr>
<tr>
<td>• By applying the three domains</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allowing students time to struggle with problems on their own</th>
</tr>
</thead>
<tbody>
<tr>
<td>• I always lead my students into solving problems on their own while I give advice where necessary.</td>
</tr>
<tr>
<td>• Emphasizing processes and methods rather than answers: Allowing students to realize as many as possible strategies or methods of solving mathematical problems</td>
</tr>
<tr>
<td>• Guided discovery approach; the solver must know exactly what the problem is all about, he must relate the problem to a familiar idea or previously solved problems, he must search for a strategy based on the structure he must have discovered, he will then find a complete solution.</td>
</tr>
<tr>
<td>• I set out one period for the math lesson to problem solving. Students are allowed to source other avenues to solve a particular problem.</td>
</tr>
<tr>
<td>• After teaching a topic, problem solving on that topic follows. Get a question from text on treated topic, write on the board and let students attempt to put it on their own language before solving.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No response</td>
</tr>
</tbody>
</table>

| 12 | 5.3 |
| 10 | 4.4 |
| 6  | 2.7 |
| 38 | 16.8 |
Mathematics teachers have considerable latitude in choosing the type of problems to present to their students during mathematics instruction. Teaching mathematics through problem solving takes into consideration the manner of concept presentation and types of problems presented to students in the process. To further determine how teachers teach mathematics through problem solving, teachers were required to indicate the type of mathematical problems teacher typically present to their students. Table 5 below indicates the types of problems teachers presented.

<table>
<thead>
<tr>
<th>Type of problem</th>
<th>Number of respondent</th>
<th>Percent</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>End of chapter exercises/examples from textbooks</td>
<td>143</td>
<td>63.3</td>
<td>First</td>
</tr>
<tr>
<td>Application problems</td>
<td>45</td>
<td>19.9</td>
<td>Second</td>
</tr>
<tr>
<td>Verbal/word problems</td>
<td>20</td>
<td>8.8</td>
<td>Third</td>
</tr>
<tr>
<td>Non-routine problems (problems that require multiple steps and are not usually from textbooks)</td>
<td>18</td>
<td>8.0</td>
<td>Fourth</td>
</tr>
</tbody>
</table>

More investigation of how teachers teach mathematics through problem solving was carried out through classroom observations to determine pattern of interactions. The duration of time interactions occurred was coded for each of the 37 observations. The summary of the results are presented graphically in figures 1 and 2 below.
Figure 1. Pattern of interaction in a typical mathematics classroom

Figure 1 above shows that teachers’ lecturing and solving problem on the board takes more than half of class time period. Specifically, teachers lecture 33% of the class time and they solve problem on the board for 25.6% of the time. Following teachers’ solving problem on the board, for 12.5% of the time, the class time is silent or students are solving problems on their own. Also teacher asks questions 10.5% of class time, this is followed by students solving problems on the board which made up 6.1% of class time. Other interactions in order of magnitude are teacher discusses 3.6%, teacher answers questions 1.1%, students ask questions 0.9%, and teachers’ praises 0.6%. The last in this sequence are discussion among students 0.2% and students suggest idea 0.1%. In addition to providing the general interaction, the actual teacher and students talk time were analyzed and the result is presented in figure 2 below.
Figure 2 above shows that 37 classroom observations were done for a duration of 86699 (97.8%) seconds of class time. During these observations the total talk time was 75839 (87.47%) seconds of the observation time. Of all the total talk time, the teacher talked for 64515 (85.1%) seconds of the time while students talked for 11324 (14.9%) of the time.

Discussion and Conclusion

The major findings that emerged from the analysis of data collected are presented as follows.

Secondary school mathematics teachers have varied conceptions of mathematical problem solving and the most dominant conception is that problem solving is a process by which students work on textbook exercises which can be achieved by extensive practice and drill. Teachers also associated problem solving with working on word and or application problems. Very few teachers conceive of problem solving as an instructional approach and as way of dealing with an unfamiliar situation.
On the status of problem solving instruction in secondary school, close to 50% of respondents could not explain what they do with respect to problem solving indicating that they do not teach or integrate problem solving in their mathematics instructions. Teacher who reported that they teach problem solving said that they involve students in group work; give them ample time to explore, and discuss among themselves; and solve problems for students on the board to copy.

Results of classroom observations showed that secondary school mathematics classrooms in Enugu and Anambra states are teachers dominated. Analysis of interaction pattern showed that teacher lecturing, solving problems on the board, asking questions and silence in class when students worked on problems individually dominated mathematics classroom. The result showed that teachers talk for about 85% of class time while students talked for less than 20% of class period. For classroom instruction pattern, the result showed that teachers did not engage students in group work and classroom instruction was predominantly whole class instruction.

Just as was found in this study, other researchers have documented diverse teachers’ conceptions of problem solving. Whereas teachers conceptions of problem solving in this study fell into five categories, Grouw, Good, and Dougherty (1988) reported four categories, Jones and Jones (2011) and Xenofontos and Andrews (2007), reported three categories respectively, and Meier (1989) reported two categories. The result of this study is in congruent with the literature in categorizing problem solving as a systematic approach to overcome a difficult situation (Montague, 2004; Owen & Fuchs, 2002; Holton et al., 1999); an instructional approach
that teachers can employ in teaching science and mathematics (Dancy and Henderson, 2007; Devlin, 2006; Barak & Shakhman, 2007); a process of solving word or application problem (Grouw, Good, & Dougherty, 1988; Meier, 1989; Xenofontos & Andrew, 2007; Jones & Jones, 2011); and a process of finding solutions to a problem (Grouw, Good, & Dougherty, 1988).

However, conceptions of teachers in this study differed with those reported in the literature by overwhelmingly reporting that problem solving is working, practicing or drilling students on textbook exercises. Also, respondents in this study did not view problem solving as the use of higher level thinking and critical reasoning skills to solve multiple step problems. The big picture here is that many secondary school teachers view problem solving as working on textbook exercises using algorithms and basic skills with numbers. Whereas it is important to expose students to basic computational skills with numbers which they can apply to a variety of everyday use and also use as a foundation for higher level mathematics, today’s mathematics students need more than computational proficiency, they need critical skills and a better understanding of problem solving skill embedded in mathematical ideas and principles to function in today’s work place. Therefore it is bothersome to see the many secondary school mathematics teachers who conceive problem solving as a practice or drill on exercises. This conception needs to be addressed because if teachers view problem solving as merely practice or drill on exercises it then means that students are only exposed to routine type problems which may not help their critical thinking rather it may encourage rote learning and memorization. Having correct conceptions is the beginning of teacher preparation because wrong conception can easily lead to wrong ways of teaching.
As important as correct conceptions are, they can be influenced by teachers’ beliefs about how problem solving should be taught. Teaching methods can affect the results of learning, and teachers’ beliefs about teaching methods can determine how instruction is delivered. Thus, respondents’ beliefs in this study were accorded high significance especially when many teachers as presented in Table 2 expressed their beliefs about how mathematical problem solving should be taught in schools. Teachers believe that problem solving should be integrated into mathematics instruction through appropriate steps and strategies, involve active participation of students, teach concepts first and followed with real life practical examples, devoting a separate time for problem solving, and solving many examples

Results presented in Table 4 indicated that some teachers integrate it into mathematics instruction in several ways such as, having teachers and/or students solve problems on the board, teaching problem solving strategies, and having a high involvement of students in classroom activities. High involvement of students may comprise giving them time to explore, discuss among themselves, think about answers to a problem or even express their ideas in class, which were approaches that many teachers agreed with. Nonetheless, these reported teachers opinions were contradictory to classroom observation results presented in figures and 1 and 2 which did not reflect the fact that students are given time to explore and discuss among themselves. It is then not surprising that this study did find relationship between teachers’ conceptions and beliefs and what they do in the classroom. The overall picture here is that problem solving is not given adequate attention in the schools, starting with many teachers not setting aside time on their class schedules for problem solving and equating teaching mathematics through problem solving to teachers and/or students solving problems on the
board. This study confirms the claims that problem solving is not taught in Nigerian secondary schools (Ogundare 1992; Adeleke 2007; and Kolawole & Ilugbusi 2007). A low status of problem solving in schools would not augur well, as popularity is supposed to accord with better and more effective uses of approved problem solving methods and strategies. It will be commendable to have more teachers set aside specific times on the class schedule for teaching problem solving.

There are many types of problems to use in illustrating the principles and methods of problem solving in the mathematics classroom. The teachers reported end of chapter exercises or examples from their textbooks as the most commonly used problem types, ostensibly reflecting easy availability rather than best choice. Not surprisingly, application problems came next, thereby supporting the view that concrete examples and strategies that use real life examples are preferable to abstract and hypothetical references, lending further credence to the view that real life examples and concrete strategies are better. Generally, teacher reported that they do not present non-routine problems to students. Non-routine problems are the types that help students to develop their critical thinking and analytical skill. The clear picture that emerged showed problem types to come from end of chapter exercises and application problems from the textbook. Teachers should rethink and vary type of problems they present to students in mathematics classes.

The dynamics of teaching plays a critical role on how much students learn in every classroom instruction. Although students’ performance may not have a direct link to teachers’ interaction and instructional patterns, nonetheless, a combination of these patterns determines the level
of students’ classroom participation all of which leads to classroom social environment that may have a direct effect on students’ attitude and achievement. The clear picture that emerged from this study is that mathematics classrooms are teacher dominated. In terms of the number of interaction that takes place in the classroom, the teacher’s activities constitutes about half of the total activities. However, in terms of the amount of talk time exhibited in mathematics classroom, teacher’s talk time takes about 85% of total talk time which is more than two-third rule found in other studies (Flanders, 1967; Inamullah et al., 2008). In terms instructional pattern, whole classroom instruction dominated mathematics classroom with absolute no room for group work and little individualistic (Okebukola, 1984) or individual seat work.

This study has found noteworthy variations among teachers’ conceptions and beliefs of problem solving. Even though many of the conceptions are correct, while some are incorrect; the fact is that what these teachers know and believe in is not reflected in what they do. It is, therefore, unlikely that students are graduating from our secondary schools with the ideal problem solving abilities. For instance, although teachers believe that students should be taught problem solving strategies, it is reported that problem solving is not yet integrated in mathematics instruction in Nigeria. This finding could suggest that either the teachers are not familiar with how to integrate problem solving in mathematics instruction or enough time is not provided in the school time table for them to be able to teach problem solving in mathematics classes. Also, that teachers are not familiar with how to integrate problem solving in mathematics instruction, would imply that their training was deficient in this area.
This study also has some implications for curriculum developers and textbook writers. Teachers believed that problem solving strategies are emphasized in secondary school curriculum, and that if problem solving strategies are included in secondary school mathematics textbooks, many of them (teachers) will teach it. This implies that there are no set standards on how to integrate problem solving in mathematics instructions. This is the work of curriculum developers and textbook writers who should flesh out what it means to teach mathematics through problem solving. It is not enough to mandate teachers to teach children how to solve problems. Curriculum should be very explicit to ensure that all teachers have common conceptions of problem solving.

It is obvious from the result of this study that many teachers did not understand problem solving as a way of thinking, thus those teachers may not likely teach students how to think for themselves. This study has a contribution in the psychological dimension as it helps in the understanding of teachers’ knowledge of problem solving and how their knowledge is related to what they teach and how they teach. The study, therefore, may provide information that can lead to in-service training that will be targeted at modifying teachers’ problem solving behaviors in terms of how they teach mathematics.

Result of this study showed that the secondary school mathematics classroom instruction was teacher-dominated with the teacher talking for about 85% of the total talk time in the class while students’ engagement was only for about 12% of class time. This shows that even the two-third talk rule does not apply in our secondary school mathematics classroom
thereby suggesting that teachers may have not been exposed to how to teach mathematics through problem solving which emphasize child-centered instruction.

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Title Page

A. **Title:** Breaking the Gender Barriers and Minority Involvement in STEM Education through Elementary teaching and learning

B. **Topic Area:** STEM Education

C. **Presentation Format:** Workshop

D. **Presentation Description:** This presentation will expose elementary-aged minority girls to Science, Technology, Engineering and Mathematics (STEM) education.

   Professional development is important for elementary teachers to increase their comfort level and competence in teaching STEM education, as research shows that these teachers typically do not receive enough preparation in teaching mathematics and science.

   Participants will be shown creative ways to integrate STEM lessons/activities into their existing curriculum, and STEM enrichment activities to support classroom instruction in after-school programs.

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The overall purpose of this presentation is to expand STEM education that leads to career opportunities for underrepresented groups, specifically women and minorities. In particular, the focus of this presentation is to increase elementary-aged minority girls’ participation and interest in STEM education and careers, by providing elementary educators and school leaders with innovative ways to integrate STEM into their daily existing curriculum during the school day, as well as STEM enrichment activities to support and enhance classroom instruction in after-school programs and/or activities.

This workshop will focus on three over-arching themes. The first is being able to provide engaging STEM focused lessons/activities that can be incorporated into any kind of elementary curriculum, to support regular day classroom instruction, as well as after-school programs. Second, to provide activities that will increase the comfort level of the teacher to teach mathematics and science within the curriculum that is already established. Last, provide avenues of a more engaged interest among minority and female gendered students to develop a love for STEM, at an early age, with the hopes of providing more minority women into the STEM fields of education careers later in life. Thereby, the true goal of this workshop is to close the achievement and participation gap; a goal that aims to increase women and minority participation and interest in STEM fields, in order to tap into the country’s full potential.

**Workshop Overview**

Participants will engage in a highly interactive presentation including a video presentation and hands-on activities. Audience participation will be essential to the success of the workshop. Participants will leave the workshop with resources and activities that may be implemented immediately into their practice.
Learning Disabilities: Improving the Spelling Skills using Apps on the iPad

Linda Chmiliar
Athabasca University, Canada

Abstract

The iPad is currently being used by students in many North American schools for learning and research data on the effectiveness of this device as a learning tool for students is documented in the literature. However, less data is available that examines the use of the iPad with student with disabilities, particularly with students with learning disabilities. This paper presents findings of a study exploring the use of Simplex Spelling apps on the iPad in two classrooms of middle school students with learning disabilities. The results indicate that the apps were very effective in helping students to develop spelling skills.

Introduction

This paper presents findings of a study exploring the use of Simplex Spelling apps with students with learning disabilities in two middle school classrooms specializing in the instruction of students with learning disabilities. The participants were 23 grade 8 students with learning difficulties in language arts. The students used the Simplex Spelling apps on the iPad for 10 -15 minutes a day, for approximately 1 -2 days a week, for 18 weeks. The student’s spelling skills were assessed at the beginning, and end of the study. The study focused on the use of Simplex Spelling Phonics 1 and Phonics 2 apps however, several students who completed the Simplex Spelling Phonics 2 app were able to move on to the Simplex Spelling Phonics - Advanced app during the study. This short paper provides a brief description of the study and the results.

Background

The use of mobile technologies such as the iPad are becoming increasingly more common, and many schools utilize these technologies in the classroom to facilitate learning. There are several benefits to the use of the iPad. They are smaller, thinner and lighter than a conventional laptop, making them highly portable. The touch screen is naturally intuitive, requiring little training and practice to master, and can be easily viewed from most angles. This device also has a quick start-up time, and extensive battery life, permitting the user greater access to the technology (Pyper, 2011). Additionally, Kukulska-Hulme (2013) indicate that the availability of the iPad makes it “cool” for students to use, promoting higher participation in learning tasks. Learners with learning disabilities may benefit from the use of mobile technologies as a learning tool, by becoming more independent learners, as well as learning academic skills. Due to the possible benefits, it is important to research the use of iPads with students with learning disabilities. This study examine how spelling apps focusing on phonemic awareness on the iPad, can support students with learning disabilities in the classroom.
Method

The central question for this research study was:

What improvement in spelling skills do the students display while using Simplex Spelling apps over an eighteen week period of time?

Twenty-three grade eight students, in two separate classroom groups, and their teacher participated in this research. The Simplex Spelling apps are series of apps that progress from simple to complex phonetically based spelling practice.

This qualitative research study that employed an observational case study design. The study consisted of an in-depth exploration of a specific bounded system of two classes of grade 8 students (23 students total) using the apps on the iPad. The students used the apps for approximately 10 – 15 minutes on one or two days a week over an 18 week period of time. This study used document review and analysis, observation, and interviews as data-gathering techniques. The document review consisted of a spelling test completed by the students at the beginning and conclusion of the research. Observations of the students using the apps occurred on a weekly basis. Informal interviews occurred with the students in the classroom as they were using the apps to see how the students were using the apps, and to ask the students what they thought about their learning as they used the apps. A semi-structured interview was conducted with the teacher at the beginning and conclusion of the study.

The purpose of case study was to gather comprehensive, systematic and in-depth information. The case study consists of all of the interview data, observations of the students, and the spelling assessment of each student before and after the study. The data was organized into a description that includes all of the major information that was then edited, parts fitted together, and organized topically. This short paper only reviews a small portion of the data set, focusing on the major findings.

Results

Overall, the spelling test results indicate that the students evidenced a very strong increase in spelling skills during the research. The average grade level change in the spelling performance of all the students involved in the study over the 18 weeks was 1.9. The spelling performance change ranged from 0 grade levels to a change of 4.4 grade levels. The greatest change in spelling performance was evidenced by the students scoring the lowest scores initially.

The students expressed some concerns about some elements in the apps. Several student had difficulties understanding the verbal cues in the app despite the use of headphones. It was also observed that several of the students had a tendency to skip through the spelling items on the apps. Reminders were provided to help students work through the apps in a consistent fashion. A couple of the students went through the spelling on the app as quickly as possible. They did not use the hints, did not sound out the words, and appeared to be not focusing in on the word patterns that were presented. Even though the students were encouraged to make use of the learning strategies structured into the apps, several students failed to use these strategies for the majority of the study. A few difficulties were experienced with the placement and function of the letters. Some students had difficulties with the letter
placement initially, but indicated that once they learned where the letters were that it got
easier. Others students had continuing difficulties with the touch on the letters.

Student comments regarding the use of the app were very positive. The students reported
that they really liked using the app for their spelling practice and many students expressed a
preference for working on the iPad, indicating that it was fun and easier to learn with
technology. One student even indicated that he would like to work on his spelling for
homework. For most of the students, the navigation through the app appeared to be quite
intuitive. After the first few weeks, the majority of the students worked on the apps
independently. Even the students in the study with significant attention deficits were able to
sustain attention while working on the apps in the classroom. Observations in class, showed
that many of the students used the hints provided and listened to the sentences to understand
the words. One student said, “The sentence is really helpful because sometimes words sound
the same but aren’t spelled the same.” Other students commented that they were picking up
the patterns in the words as they practiced and they found that the number of boxes provided
made it easier to know how to spell a word. Several students also commented that they relied
on the color change of the letters that showed when the word was incorrect. This provided
them with instant feedback and the opportunity to change their response immediately.

The teacher in this study indicated that she liked the apps as they allowed all of the
students to progress through the apps at their own level and pace. The teacher also indicated
that she liked the organization of the apps and the emphasis on phonemic awareness. At the
conclusion of this research study the teacher was very surprised at the spelling achievement
of both her classes of students and reported that the results were “well above” what she would
normally expect.

Discussion and Conclusion

The Simplex Spelling apps are series of apps that progress from simple to complex
phonetically based spelling practice. This range of spelling words at different levels from
grade 1 to middle school level, makes this app series very attractive to teachers who are
working to meet a diverse range of student needs in the classroom. The apps could help
teachers provide individualized spelling practice to students spelling at different levels in
their classrooms. The apps also allow students to work independently at their own pace.

Students enjoyed using the apps and found them “cool” and “fun” to use. They were
motivated to use the apps and engage in their weekly spelling practice. Students expressed
interest in using the apps more, and several students indicated that they would be willing to
practice their spelling at home for homework. The students worked independently on the app
in the classroom and students with significant attention difficulties were able to work on the
app with minimal direction. Students reported that they liked the built in features in the apps
and found that they supported learning. These features would not be available with traditional
spelling practice. In addition, the results were obtained in busy classroom, not a clinical
setting. Although the teacher had some initial support to set up the research project, the
monitoring and supervision of app use was primarily done by the teacher. This would seem to
indicate that the applicability and usefulness of this series of Simplex Spelling apps in the
average inclusive classroom to support students is very good.
References


Acknowledgements

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1. **Title of the submission**: Affective Confusion: A gateway to academic performance or learning anxiety

2. **topic area of the submission**: Cross-disciplinary areas of Education, Other Areas of Education

3. **presentation format**: Paper Session

4. **a 2-3 sentence description**: Our early work with math anxiety, narrative comprehension, and educational game playing reveals that students experience confusion, frustration, and anger if the confusion is persistent and unresolved. Thus, our affective Goldilocks zone model predicts an outcome of long unresolved confusion can be learning anxiety. Alternatively, resolved confusion can promote deep learning thus revealing a complex gateway function for affective confusion.

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Affective Confusion: 
A gateway to academic performance or learning anxiety

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Real-time measurement of facial expressions can be used to improve academic performance with higher levels of engagement through the real-time monitoring of student emotions—emotions that Pekrun et al. (2011) have directly linked to academic learning, classroom instruction, and achievement. These emotions include enjoyment, hope, pride, relief, anger, anxiety, shame, hopelessness, and boredom. Our goal is to understand the different ways emotion may be impacting engagement and self-regulation of learning. One means, that could potentially have the greatest effect on engagement and self-regulation, is by making learning an enjoyable experience even when the material is difficult. Another means would be to help students manage their learning anxiety; for example, using the technology to help students overcome math anxiety. Finally, another way academic emotions may be impacting engagement is through mounting confusion resulting from low knowledge or misconceived ideas.

For decades now, researchers have been motivating students and promoting conceptual change, with varying degrees of success, by presenting them with conflicting information and theories to promote deeper learning (c.f. Chi, Slotta, & De Leeuw, 1994; Chan, Burtis, & Bereiter, 1997). We can now look at some of this research on conceptual change and knowledge building and observe that creating confusion and a state of cognitive disequilibrium can produce deeper learning (D’Mello, Lehman, Pekrun, & Graesser, 2014; Leutner, 2014) in some instances.

D’Mello, et al., (2014) suggest, however, that there is a zone of optimal confusion that requires the duration of the student’s cognitive discrepancy and the severity of the discrepancy be neither too high nor too low—a level of affect we are referring to as a Goldilocks zone for confusion. In this paper we look at some preliminary work conducted in our Emotions and Learning Optimization lab and examine the role of confusion when it is within and outside the zone of optimal confusion.

Study 1 examined the relationship between task difficulty and real time math anxiety. Five instruments were applied to gather information on 12 university students’ math learning and the emotions experienced while performing math tasks in a repeated measures design. Measures recorded were: (1) an adapted version of the Mathematics Anxiety Rating Scale Questionnaire- Revised (MARS- R) (Plake & Parker, 1982), which was used to measure the level of anxiety participants generally experience during math related tasks, on a Likert-scale from 1-5. (2) A self-report measure of task difficulty was
used to group 12 math questions into easy or difficult categories. These binary ratings were used to devise a six-item math test, with three items randomly chosen from the participants’ easy ratings, and three items randomly chosen from the participants’ difficult ratings. (3) The math test devised from participants’ difficulty ratings was used to measure performance on a math task. (4) Self reported math anxiety experienced during the math test was rated using a 5-point Likert scale, with answers ranging from 1 (No Anxiety) to 5 (Extreme Anxiety). (5) Emotional expression was measured while the participant completed the math test, using real-time facial expression monitoring software, Emotient (iMotions). \(^1\)

The results examining task difficulty revealed that three of the seven emotional expressions exhibited during the math test were significantly different as a function of task difficulty—Cronbach’s alpha on task difficulty inter-rater agreement was 0.91. Significant differences were found in anger \([t(11)=-3.15, p=0.01]\), confusion \([t(11)=-2.26, p=0.05]\) and frustration \([t(11)=-3.54, p=0.01]\). These results indicated that while completing questions rated as difficult, participants scored significantly higher on expressions of anger, confusion and frustration. The effect sizes for the differences in emotions on easy and difficult items demonstrated a large effect for anger \(d=0.91\) and frustration \(d=1.02\), and a medium effect for confusion \(d=0.65\).

Within the easy and difficult items, test scores were significantly higher on the questions rated as easy \([t(11)=3.53, p=0.01]\) and the anxiety participants experienced during the math test showed higher ratings of anxiety on difficult items \([t(11)=-2.51, p=0.03]\). Items rated as difficult were further explored to understand the relationship between anxiety and emotions experienced during the math test. Within the difficult items we observed, at times, an increases in both anger \((r=0.89, p=0.04)\) and confusion \((r=0.95, p=0.01)\) and on some items an increases in anger \((r=0.74, p=0.04)\) and confusion \((r=0.73, p=0.003)\) indicating that the increased anxiety participants reported was significantly related to increases in anger and confusion as evidenced on their face when answering this item.

Although our results are only preliminary, they suggest that the combination of affective confusion and anger may be instrumental in developing and sustaining learning anxiety. Task difficulty plays a major role in differentiating the effect of confusion on learners. It appears as though difficult tasks induce higher levels of confusion compared to easy tasks. Learners who are not able to resolve their confusion begin to enter a state of cognitive disequilibrium. Consistent with the findings of D’Mello, et al., (2014), it is our conjecture that when students experience unresolved confusion over an extended period

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\(^1\) The Emotient iMotion software uses the Facial Action Coding System (FACS) developed by Ekman & Friesen (1978) to measure the musculature movement in the face at 19 different Action Units (AUs) and codes these action units into scores for the seven basic emotions (anger, frustration, joy, surprise, fear, disgust, and contempt). Facial Action Coding System (FACS), and labels each element of a facial expression with 19 numbered Action Unit (AUs) that correspond to the activating facial muscles.
of time this effect creates fear and, eventually, the fear leads to anxiety. This state of anxiety heightens fear, frustration and anger resulting in reduced learning performance. Anxiety in this situation becomes an inhibitory emotion and further prevents a learner from returning to a state of cognitive equilibrium from where they can sufficiently regulate their affective response to their learning task and improve their performance. Indeed, this is one of the negative effects that can be experienced when there is too much confusion for too long of a time; that is, when confusion extends beyond the affective Goldilocks zone. Optimally, students need a controllable level of confusion to ensure that they are in an aroused state and can deliver their optimal performance. If students are able to control their response to confusion, by minimizing its negative properties that lead to anxiety, they stand a greater chance to improve their performance.

**Study 2**, addresses part of the thesis work conducted by Stephanie Buono where she investigated the effect social cognitive understanding and task frustration and can have on performance in emerging readers. Participants were 6-9 year-olds (N=22) that were asked to tell a story about a wordless picture book. During this task, Emotient software recorded facial musculature movement to produce a rating for each of the seven basic emotions. The following measures were collected: *Demographic Questionnaire* to measure parent-reports about the child, the family environment, and family attitudes towards language and reading; *Emotional Expression* measured real-time facial coding; *Narrative Competence* was measured using coded narratives produced from the wordless picture book “Frog where are you?” (Mayer, 1969); *Emotion Comprehension* was coded from children’s narratives, using coding scheme adapted from Peterson & Slaughter (2006); and, *Vocabulary* was measured using the NIH Toolbox Picture Vocabulary Test (TPVT) to serve as a control variable.

The relationship between understanding emotion, emotional expression, and narrative competence was examined using a correlational analysis and a hierarchical regression analysis. Three AUs were significantly related to emotion understanding, AU14, the dimpler (r = -0.47, p = 0.03), AU 24, the lip pressor (r = -0.45, p< 0.03), and AU28, the lip suck (r = -0.53, p = 0.01). These AUs matched three out of four AUs in incidence and direction that were also related to overall narrative competence. Further, a hierarchical regression model with three predictors demonstrated that emotion understanding was a significant predictor of narrative competence, over and above the effects of emotional expression [F(1, 15)= 8.4, p= 0.01 -Adjusted R² =0.68].

Early results from this study demonstrate that emotional expressions indicating frustration or tension during a narrative task can indicate negative performance in emerging readers. These findings align with research on the relationship between emotion and cognition and suggest that not understanding the emotions in the picture story generates confusion. Not being able to resolve the confusion is then expressed as frustration and tension, which we conjecture, is an early manifestation of what happens when student confusion exceeds the affective Goldilocks zone limits.
Study 3, emanating from the dissertation work of Zhenhua Xu, examines student emotions in a computer game called CRYSTAL ISLAND (a 3D microbiology narrative game). A facial expression recognition system was used to detect both middle school and university students’ (N = 65) facial movements while they were working on the problem-solving and scientific-reasoning tasks with CRYSTAL ISALND. Two questionnaires were administered to obtain students’ background information including age, gender, ethnicity, year of school enrollment and prior knowledge on life science. Multi-channel process data was collected while participants played the 3D narrative game and they were: 1) software log files and (2) real-time participants’ facial data using the webcam video and Emotient software. The log-file data captured students’ interactions with the game environment including timestamp and action type (e.g., reading books, completing questions in the concept matrix and making a final diagnosis). This study first used R software to track the frequently occurring emotions and facial action units from the raw output generated by the facial expression recognition software. Following that, linear regression models were constructed to examine the predictive effects of frequently occurring facial action units on learning performance. The findings indicated that outer brow raising (AU2) was a strong predictor of the number of questions in concept matrix that were answered incorrectly (R2 = .11, F(1, 57) = 6.00, p < .05) and the number of answers corrected (R2 = .16, F(1,57) = 9.18, p < .05) and the number of attempts students made before submitting the correct answers to the system (R2 = .09, F(1, 57) = 4.82, p < .05). Results from correlation analyses also suggested that students with little prior knowledge of life science tend to experience negative emotions such as eyelid tightening (AU7) and mouth dimpling (AU14). These findings parallel to the previous studies on emotions and agent-based learning environment (c.f. Grafsgaard, Boyer & Lester, 2011). In the past research, AU2 was identified to be associated with frustration, surprise and anxiety (D’Mell & Graesser, 2010; Grafsgaard, et al. 2013). When an individual is confronted with obstacles (e.g., consistently to correct wrong answers in the concept matrix) and does not know how to proceed, s/he is more likely to experience negative emotions (e.g., frustration). Studies on facial expressions and deep learning also indicate that both eyelid tightening (AU7) and mouth dimpling (AU14) are correlated with confusion and concentration (D’Mell & Graesser, 2010). This study highlights the potential for large-scale analyses of moment-by-moment affect in game-base learning since automated facial action unit tracking allows for close examination of persistence cognitive-affective states.

Crystal Island is a well-designed game where the designers are aware there is a zone of optimal confusion that is sensitive to prior knowledge. Study 3 suggests that, when carefully designed, confusion can be a positive element in deep learning if the confusion remains within the optimal zone and that overall, too much or too little arousal/stress could potentially tip confusion levels outside the optimal zone.
Finally, in a study examining emotion and the optimal learning zone (Schnabel, 2016), psychophysiological measures were used to capture emotion during a cognitive load task. The participants were 14 volunteer staff members at an athletic and academic coaching centre. In this preliminary study Galvanic Skin Response (GSR) was observed and analyzed while participants participated in a 3-dimensional perceptual cognitive task, the Neurotracker. This game is a 3D multiple object tracking at increasing difficulties to develop high-level brain functions critical to learning. Each session (six minutes long) delivers a series of 20 mini-tests/games (14 seconds each) where the student needs to remember key targets, then track them moving among distractors for several seconds and then identify them. The game provides constant cognitive load since it adaptively optimizes task difficulty to each participant's level, maximizing cognitive stimulation for the 14 seconds of each game. Difficulty and challenge, changes each game so that the game automatically adjusts itself to the individual's performance of the penultimate game. This allows for observation of autonomic responses (i.e. GSR) during individualized cognitive load and optimal levels of confusion during win versus an increased confusion in games they lost. For the purpose of this study win games represent optimal cognitive performance.

A Repeated Measures ANOVA analysis of the win/lose scores revealed statistically significant differences in GSR change scores during the 14 seconds of the game, (p < 0.001). An increase in GSR scores was observed for the first 7 seconds, followed by a decrease in the last 7 seconds within winning games. Observation of GSR scores that increased in the games’ first 7 seconds and that did not decrease or that continued to increase in the last 7 seconds of the game, resulted in game loss (i.e. decrease in executive function and an increase in confusion). Spontaneous statements from participants indicated self-reports of “feeling lost” “feeling confused”. These finding align with D'Mello's model of optimal confusion zone. The win games are a representation of optimal increase of emotional arousal that generates optimal levels of confusion within the optimal performance zone. This is similar to the pattern of the Yerkes Dodson’s optimal zone of arousal and Demello’s optimal zone of confusion. Too much arousal can tip confusion out of the optimal zone and ultimately reduce access to the zone of optimal executive functioning and learning.

**Discussion and Conclusions**

D’Mello et al., (2014) have modeled the optimal zone of confusion wherein, when engagement is low, the confusion remains unresolved and, when the confusion increases, the student becomes frustrated. Persistent failure, when the student is frustrated results in
boredom. This model is highly consistent with Csikszentmihalyi’s (1990) theory of flow. It also finds support in the U-shaped Yerkes-Dodson Law (1908) of emotional arousal\textsuperscript{2}.

It is our conjecture that when confusion persists, unresolved, over multiple learning episodes the emotions of anger and fear promote anxiety in the students. Our early work with math anxiety reveals that students experience anger when working on their difficult questions. This suggests that confusion may be involved in a more sinister affect than boredom. In the affective Goldilocks zone model, an outcome of long unresolved confusion can be learning anxiety. At this point, the evidence for the affective Goldilocks zone model is extremely thin, but the implications of the model are far-reaching and important. If the model is correct, then the following research questions become critical to answer:

1. Can we identify when confusion is moving the student outside the optimal zone for confusion?
2. For students already suffering math anxiety, can reducing the anxiety, and the frustration, move the student back into the optimal zone for confusion?
3. Can students learn to monitor and self-regulate the level of confusion with feedback and meta-cognitive strategy training?

Further study is needed to strengthen the affective Goldilocks zone model and begin to address the above questions.

References


\textsuperscript{2} The congruence of these two theories is being investigated in our lab by Rose Schnabel (2016).


Abstract
The following paper will discuss survey results collected from nursing and engineering students at a Southern New Mexico Hispanic serving institution. The purpose of the study is to determine if female minority nursing students in a program where advising is structured have a higher GPA in comparison to their peer female minority students who are majoring in engineering in a program where advising is not structured. The survey encompassed open and close-ended questions which cover demographics and student success initiatives in both disciplines to identify how two different advising systems affect female minority students in nursing and engineering disciplines. The survey was designed to evaluate variables regarding the impact structured advising has on student success and persistence in engineering or nursing degrees. The survey results were significant utilizing a Spearman $r$ correlation test, proving the positive impact of a structured advising system in the school of nursing in comparison to the unstructured advising system in the college of engineering.

Keywords: advising, persistence, grade point average, engineering, nursing,
Longitudinal Impact of a STEM Professional Enrichment Program on Middle School Teachers

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Abstract

The longitudinal impact of participating in a STEM professional enrichment program is examined in the context of data collected over the past six years as well as the number of years teachers have participated in the program. Findings include that teachers who have participated in the program seven or more years have higher dispositions toward STEM indicators as well as higher technology integration means compared to teachers who have been in the program fewer years. Implications for teacher professional development for STEM include the need for a sustained program that includes professional development, tools for teaching in the classroom and the technical support to assure success in the classroom.

Introduction

For decades, researchers have studied the influence of teachers on their students and have concluded that teacher effectiveness is the most important factor in student achievement (Darling-Hammond, 2000; Hattie, 1987). Recently, researchers have studied factors that increase student participation in STEM subject areas and have identified highly qualified teachers as a critical element for student success in STEM subjects (Museus, Palmer, Davis, & Maramba, 2011). Even students who are high STEM achieving students recognize that it is critical to have a high quality teacher in the classroom in order to improve STEM education in schools (Christensen, Knezek, & Tyler-Wood, 2014). Teacher dispositions have also been shown to have an impact on student dispositions (Christensen, 2002) and therefore it is important that teachers have positive dispositions toward the subjects they are teaching their students.

Many programs currently focus on improving the STEM pipeline by preparing both teachers and students in engaging activities aimed at creating and increasing interest in STEM careers. In this paper, the focus is on teacher development and the impact of focused, ongoing science and technology training and support for teachers, on the teachers’ perceptions of their own preparation and enthusiasm for their professional roles.

Literature Review

Multiple components are important for improving learning in the classroom. Teachers must be competent and confident in their teaching and they must be supported with the necessary resources, including human support.

Quality teacher professional development is one of the most important components in achieving the goal of learning. One of the main findings from a study of
professional development with a framework provided by the National Staff Development Council was the need for systemic professional development programs that occur over time rather than one-time workshops and seminars (Harwell, 2003). Researchers have demonstrated that teacher quality is dependent on effective and ongoing professional development (PD) opportunities (Desimone, 2009). The learning environment, especially regarding technology, has changed in the last decade and teachers who have been in the classroom for many years may not have the PD support needed to transform their practices to meet the needs of the newer learning environments (Johnson, 2013). In addition to quality professional development, access to tools/technology and support are also critical components in the successful implementation of STEM programs in schools. Teachers should be challenged beyond their comfort level while being provided with the resources and support necessary for success (Jeanpierre, Oberhauser, & Freeman, 2005).

Research has shown that the successful integration of technology into the classroom can increase student achievement as well as support students’ self-regulated learning skills (Bates, Hopkins, & Kratcoski, 2012; Minor, Losike-Sedimo, Reglin, & Royster, 2013).

The Study

This study examined characteristics of STEM educators in Hawaii and the impact of a program longitudinally. The study was guided by the following research questions:

1. What is the impact of providing STEM professional development, tools and support personnel resources to middle school teachers?
2. To what extent do teachers who have participated in a sustained STEM program over time differ from teachers who are new to the program?

Methods

Participants

Responses were received from 95 teachers in May - June 2016 for the Hawaii Pre-Academy project. Surveys administered to Hawaii teachers contained questions about participant activities, perceptions of the impact of the program, level of technology integration, and attitudes toward science, technology, engineering, mathematics as well as STEM careers.

The STEM Pre-Academy Program

The main goals of the STEM Pre-Academy program are to support the development of problem-based and applied learning experiences in STEM for middle school teachers by leveraging research, innovation and technology that serves, motivates and engages students with experiences in STEM. The program began in 2004 as a National Science Foundation (NSF) funded Research Experiences for Teachers (RET) grant for two teachers in one school. Following the initial program, the state and federal governments
funded expansion to include all middle schools. As of 2015, 76% of the middle schools have teacher participation. There have been more than 370 teachers and 10,600 students impacted through the program.

The program includes three components: technology-focused workshops for teachers, hardware and software with technical support to help with implementation an interaction among teachers, university researchers and industry professionals. Curriculum activities and professional development opportunities include a broad scope of STEM areas such as sustainability, aquaponics, water quality, 3D modeling and mathematics, microbial oceanography, and the engineering design process.

Instrumentation

The STEM Semantics Survey (Tyler-Wood, Knezek, & Christensen, 2010) was the primary instrument chosen to assess dispositions toward STEM, given that it has been used in many projects across the country in recent years. The STEM Semantics Survey is an instrument used to assess general perceptions of STEM disciplines and careers using Semantic Differential adjective pairs from Osgood’s (1962) evaluation dimension. The STEM Semantics Survey is a 25-item Semantic Differential instrument based on Osgood’s Evaluative Dimension and containing five scales assessing perceptions of Science, Technology, Engineering, and Mathematics, as well as STEM Careers. This survey was created by adapting Knezek and Christensen's (1998) Teacher's Attitudes Toward Information Technology Questionnaire (TAT), which was derived from earlier Semantic Differential research by Zaichkowsky (1985).

The five most consistent adjective pairs of the ten used on the TAT were incorporated as descriptors for target statements reflecting perceptions of STEM subjects. A fifth scale representing interest in a career in STEM was also created. Each of five scales consisted of a target statement such as “To me, science is:” followed by five polar adjective pairs spanning a range of seven choices. For example, “To me, science is: exciting _ _ _ _ _ _ _ unexciting.” Internal consistency reliabilities for participant perceptions of science, math, engineering, technology, and STEM as a career ranged from alpha = .84 to alpha = .93 for this sample of participants. These numbers are in the range of ”very good” to “excellent” according to guidelines provided by DeVellis (1991).

The Technology Proficiency Self-Assessment for the 21st Century (TPSA C21) was also used to assist in the evaluation of the project. The TPSA measures teacher confidence in their competence in technology proficiency. The instrument included 34 items measuring four subscales: (1) E-mail, (2) World Wide Web, (3) Integrated Applications, (4) Teaching with Technology, (5) Instruction with Emerging Technologies and (6) Use of Emerging Tools. The instrument is a Likert type survey ranging from 1 = Strongly Disagree to 5 = Strongly Agree. Cronbach’s Alpha internal consistency reliability ranges from .73 to .91 with an alpha of .96 for the entire instrument.

Additionally, three measures of technology integration were included in the survey battery. These were Stages of Adoption of Technology (Christensen, 2002), the Concern’s-Based Adoption Model Level of Use (CBAM-LoU) (Griffin & Christensen, 1999), and the Apple Classrooms of Tomorrow (ACOT) teacher stages instrument (Dwyer, Ringstaff, & Sandholtz, 1991). Hancock, Knezek, and Christensen (2007) found that these three single-item instruments, taken together, produce a Technology Integration
scale with an internal consistency reliability of Alpha = .84 for a typical set of preservice or inservice teachers.

Two questions were included for the Hawaii teachers regarding the use of technology tools, resources (training) and support for retaining teachers in the classroom. Teachers were asked to respond to the following statements regarding the extent (1 = Strongly Disagree to 5 = Strongly Agree) to which teachers thought the Hawaii FIRST tools and resources might impact the retention of teachers. Two statements were posed:

1. Availability of new tools and resources with technical support increases the retention of teachers in schools (Tools 1).
2. I am personally more inclined to stay in teaching because of the added tools, resources and technical support provided by programs such as the Hawaii FIRST Academy (Tools 2).

Demographic items included gender, age, years of teaching, number of years participating in the Pre-Academy program, access to technology at home and in the classroom as well as grade level taught.

Results

Longitudinal study of impact over time

Data have been collected by the authors from middle school teachers participating in STEM-related professional development activities for the past six years. The data were gathered from 201 teachers in spring 2011, 147 teachers in spring 2012, 134 teachers in spring 2013, 48 teachers in spring 2014, 117 teachers in spring 2015 and 95 teachers in spring 2016 for the Hawaii STEM Pre-Academy program. Teachers from middle schools across the State of Hawaii responded each year.

Table 1 includes means, standard deviations and sample sizes for each of the samples of teachers from the past six years for the STEM Semantic subscales as well as the technology integration measures. For the STEM Semantic subscales, the group of 2016 respondents rated themselves higher than any prior years on all five of the semantic measures (science, mathematics, engineering, technology and career). The means for each of the six years are depicted in Figure 1.

Figures 2, 3, and 4 display the longitudinal trends for the technology integration measures for teachers participating in the STEM program. CBAM Levels of Use is highest for the most recent year of data, 2016. Over the six years of data collected for Stages of Adoption of Technology, the trend is upward over the time period with consistent means after the increase from 2011 to 2012. For the ACOT measure, it appears 2014 reported the highest means with 2016 as the next highest.

The Tool 1 and Tool 2 measures were added in 2012. These measures that are related to retention of teachers who have access to the Pre-Academy tools and resources have remained stable over the five years as shown in Figures 5 and 6.
Table 1.  

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>STEM Science Scale</td>
<td>201</td>
<td>6.31</td>
<td>.95</td>
<td>147</td>
<td>6.20</td>
<td>1.16</td>
</tr>
<tr>
<td>STEM Math Scale</td>
<td>201</td>
<td>5.36</td>
<td>1.23</td>
<td>146</td>
<td>5.40</td>
<td>1.36</td>
</tr>
<tr>
<td>STEM Engineering Scale</td>
<td>198</td>
<td>5.62</td>
<td>1.17</td>
<td>145</td>
<td>5.56</td>
<td>1.11</td>
</tr>
<tr>
<td>STEM Technology Scale</td>
<td>196</td>
<td>6.34</td>
<td>.87</td>
<td>146</td>
<td>6.26</td>
<td>.99</td>
</tr>
<tr>
<td>STEM Career Scale</td>
<td>200</td>
<td>6.18</td>
<td>1.04</td>
<td>146</td>
<td>6.14</td>
<td>1.07</td>
</tr>
<tr>
<td>CBAM Levels of Use</td>
<td>202</td>
<td>5.34</td>
<td>1.73</td>
<td>147</td>
<td>5.33</td>
<td>1.73</td>
</tr>
<tr>
<td>Stages of Adoption of Technology</td>
<td>201</td>
<td>4.79</td>
<td>1.23</td>
<td>147</td>
<td>4.94</td>
<td>1.05</td>
</tr>
<tr>
<td>ACOT</td>
<td>201</td>
<td>3.60</td>
<td>.97</td>
<td>147</td>
<td>3.52</td>
<td>.98</td>
</tr>
</tbody>
</table>
Figure 1. Trends over time for STEM Pre-Academy participant STEM dispositions.

Figure 2. Mean STEM Pre-Academy teacher self-ratings for Concerns-based Adoption Model Levels of Use, 2011-2016.
Figure 3. Mean STEM Pre-Academy teacher self-ratings for Stages of Adoption of Technology in Education, 2011-2016.

Figure 4. Mean STEM Pre-Academy teacher self-ratings for Apple Classrooms of Tomorrow (ACOT) teacher stages, 2011-2016.
Findings by Number of Years Participating in the STEM Pre-Academy

Teachers were asked to respond to a categorical demographic item regarding how long they had participated in the STEM Pre-Academy program. The options ranged from “this is my first year” to “7 or more years”. An additional option was “not sure” but those responses were removed for the analysis of variance. Regarding technology integration measures of CBAM Levels of Use, Stages of Adoption of Technology and the Apple Classrooms of Tomorrow measures, it appears that for each of these measures the teachers who were in the first year of the program reported the lowest means with significant ($p<.05$) differences for both CBAM and ACOT.
As shown in Table 2 and depicted in Figures 7,8 and 9, for each of the technology integration measures the means for teachers who have been in the program the longest reported the highest means. Access to the tools and resources of the program over time appears to increase levels of classroom technology integration. For the CBAM Levels of Use and ACOT, the differences were significant ($p<.05$).

Table 2.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CBAM</strong> Levels of Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
<td>5.30</td>
<td>1.895</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>24</td>
<td>5.67</td>
<td>1.551</td>
<td></td>
</tr>
<tr>
<td>4-6 years</td>
<td>32</td>
<td>6.28</td>
<td>1.023</td>
<td></td>
</tr>
<tr>
<td>7 or more years</td>
<td>14</td>
<td>7.00</td>
<td>.784</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>6.01</td>
<td>1.473</td>
<td>.003</td>
</tr>
<tr>
<td><strong>Stages</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>19</td>
<td>4.68</td>
<td>1.376</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>24</td>
<td>5.04</td>
<td>1.122</td>
<td></td>
</tr>
<tr>
<td>4-6 years</td>
<td>31</td>
<td>5.32</td>
<td>.832</td>
<td></td>
</tr>
<tr>
<td>7 or more years</td>
<td>14</td>
<td>5.43</td>
<td>.646</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>5.13</td>
<td>1.048</td>
<td>.121</td>
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<tr>
<td><strong>ACOT</strong></td>
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<td></td>
</tr>
<tr>
<td>1st year</td>
<td>19</td>
<td>3.63</td>
<td>1.012</td>
<td></td>
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<tr>
<td>2-3 years</td>
<td>24</td>
<td>3.42</td>
<td>.881</td>
<td></td>
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<tr>
<td>4-6 years</td>
<td>32</td>
<td>3.91</td>
<td>.689</td>
<td></td>
</tr>
<tr>
<td>7 or more years</td>
<td>14</td>
<td>4.21</td>
<td>.699</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td>3.76</td>
<td>.853</td>
<td>.024</td>
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</table>
Figure 7. Teacher self-ratings for CBAM by number of years participating in the STEM Pre-Academy program.

Figure 8. Teacher self-ratings for Stages of Adoption of technology by number of years participating in the STEM Pre-Academy program.

Figure 9. Teacher self-ratings for ACOT by number of years participating in the STEM Pre-Academy program.
The two tools measures were related to availability of tools and resources with technical support and the relationship to retention. Tools 1 is “Availability of new tools and resources with technical support increases the retention of teachers in schools” and Tools 2 is “I am personally more inclined to stay in teaching because of the added tools, resources and technical support provided by programs such as the Hawaii STEM Pre-Academy.” As shown in Table 3 and depicted in Figures 10 and 11, teachers who have been in the program 4 or more years, reported higher means regarding the increase in the retention of teachers in general and them personally to stay in teaching.

Table 3.
Oneway Analysis of Variance for Tools 1 and Tools 2 by Length of Program Participation

<table>
<thead>
<tr>
<th>Years of Participation</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Sig.</th>
</tr>
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<tbody>
<tr>
<td>Tools1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
<td>4.10</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>24</td>
<td>4.04</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4-6 years</td>
<td>32</td>
<td>4.66</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>7 or more years</td>
<td>14</td>
<td>4.43</td>
<td>.94</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>4.33</td>
<td>.84</td>
<td>.021</td>
</tr>
<tr>
<td>Tools2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
<td>3.75</td>
<td>1.07</td>
<td></td>
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<tr>
<td>2-3 years</td>
<td>23</td>
<td>3.87</td>
<td>1.14</td>
<td></td>
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<tr>
<td>4-6 years</td>
<td>32</td>
<td>4.41</td>
<td>.62</td>
<td></td>
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<tr>
<td>7 or more years</td>
<td>14</td>
<td>4.43</td>
<td>.94</td>
<td></td>
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<tr>
<td>Total</td>
<td>89</td>
<td>4.12</td>
<td>.96</td>
<td>.030</td>
</tr>
</tbody>
</table>

Figure 10. Teacher self-ratings for Tools 1 by number of years participating in the STEM Pre-Academy program.
Figure 11. Teacher self-ratings for Tools 2 by number of years participating in the STEM Pre-Academy program.

While there were no significant differences between reported means for the STEM Semantic survey subscales, the teachers who have been in the program seven or more years reported higher means for Science, Engineering, Technology and Career. The STEM Mathematics measure for the teachers who have been in the program seven or more years was second only to the teachers in the first year of the program. Means for each of the measures by categorical years in the program are shown in Table 4.

Table 4.
Oneway Analysis of Variance for STEM Semantics Measures by Length of Program Participation

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STEM Science</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
<td>6.39</td>
<td>1.00</td>
<td>.117</td>
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<tr>
<td>2-3 years</td>
<td>24</td>
<td>6.73</td>
<td>.54</td>
<td></td>
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<tr>
<td>4-6 years</td>
<td>32</td>
<td>6.71</td>
<td>.54</td>
<td></td>
</tr>
<tr>
<td>7 or more years</td>
<td>14</td>
<td>6.91</td>
<td>.32</td>
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<tr>
<td>Total</td>
<td>90</td>
<td>6.68</td>
<td>.66</td>
<td></td>
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<tr>
<td><strong>STEM Mathematics</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
<td>6.01</td>
<td>1.17</td>
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<tr>
<td>2-3 years</td>
<td>24</td>
<td>5.20</td>
<td>1.29</td>
<td></td>
</tr>
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<td>4-6 years</td>
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<td>5.55</td>
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<td></td>
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<tr>
<td>7 or more years</td>
<td>14</td>
<td>5.70</td>
<td>1.25</td>
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<tr>
<td>Total</td>
<td>90</td>
<td>5.58</td>
<td>1.23</td>
<td>.181</td>
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<tr>
<td><strong>STEM Engineering</strong></td>
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<tr>
<td>1st year</td>
<td>20</td>
<td>6.31</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>24</td>
<td>6.05</td>
<td>1.15</td>
<td></td>
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<tr>
<td>4-6 years</td>
<td>32</td>
<td>6.12</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>7 or more years</td>
<td>14</td>
<td>6.59</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>6.22</td>
<td>.93</td>
<td>.323</td>
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<tr>
<td><strong>STEM Technology</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
<td>6.34</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>24</td>
<td>6.31</td>
<td>.83</td>
<td></td>
</tr>
</tbody>
</table>
For all six of the technology proficiency scales from the TPSA, the teachers who have been in the STEM Pre-Academy the longest reported the highest means even if only by a small amount for Email and WWW. While not significant, the Teaching with Technology measure may be of most interest. While other teachers may have similar technology skills, the teachers who have been in the program seven or more years reported higher means on Teaching with Technology, an important measure that is related to the technology integration measures reported earlier.

Table 5.
Oneway Analysis of Variance for Technology Proficiency Measures by Length of Program Participation

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP Email</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>4-6 years</td>
<td>32</td>
<td>4.83</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>7 or more years</td>
<td>14</td>
<td>4.84</td>
<td>.24</td>
<td></td>
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<tr>
<td>Total</td>
<td>90</td>
<td>4.79</td>
<td>.36</td>
<td>.254</td>
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<tr>
<td>TP WWW</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>4.51</td>
<td>.66</td>
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<tr>
<td>2-3 years</td>
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<td>4.58</td>
<td>.38</td>
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<tr>
<td>7 or more years</td>
<td>14</td>
<td>4.66</td>
<td>.403</td>
<td>.861</td>
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<tr>
<td>Total</td>
<td>90</td>
<td>4.58</td>
<td>.49</td>
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<tr>
<td>TP Integrated Applications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
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<td>1.00</td>
<td></td>
</tr>
<tr>
<td>2-3 years</td>
<td>24</td>
<td>4.16</td>
<td>.70</td>
<td></td>
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<tr>
<td>4-6 years</td>
<td>32</td>
<td>4.41</td>
<td>.59</td>
<td></td>
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<tr>
<td>7 or more years</td>
<td>14</td>
<td>4.65</td>
<td>.56</td>
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<tr>
<td>Total</td>
<td>90</td>
<td>4.34</td>
<td>.73</td>
<td>.195</td>
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<tr>
<td>TP Teaching with Technology</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td>20</td>
<td>4.18</td>
<td>.84</td>
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<tr>
<td>2-3 years</td>
<td>24</td>
<td>4.25</td>
<td>.71</td>
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<td>4-6 years</td>
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<td>4.13</td>
<td>.79</td>
<td></td>
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<tr>
<td>7 or more years</td>
<td>14</td>
<td>4.51</td>
<td>.55</td>
<td></td>
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<tr>
<td>Total</td>
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<td>4.23</td>
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<td>TP Emerging Instruction</td>
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<td></td>
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<td>.76</td>
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<td>4-6 years</td>
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<td>3.77</td>
<td>.84</td>
<td></td>
</tr>
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<td>7 or more years</td>
<td>14</td>
<td>4.15</td>
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<td>Total</td>
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<td>2-3 years</td>
<td>4-6 years</td>
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<tr>
<td>----------------</td>
<td>-------</td>
<td>----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>TP Emerging</td>
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<td>24</td>
<td>32</td>
</tr>
<tr>
<td>Tools</td>
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<td>.73</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>.469</td>
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</table>

**Discussion and Conclusions**

This longitudinal study seems to indicate that sustained participation in a quality program improves dispositions toward the subjects taught as well as raising levels of technology integration. For the teachers who have participated in the program for more years, they also see the value of the resources for retaining teachers in the schools. While not significantly different, teachers who have participated for seven or more years show a trend of higher dispositions toward science, technology, engineering and a STEM career. This study also found that the teachers who have participated in the program longer also rated higher in the Teaching with Technology proficiency.

The teaching environment is changing rapidly with new tools and strategies for increasing student learning. It is important that teachers receive effective professional development that allows for continuous learning that is ongoing throughout the year. Teachers need opportunities for active learning that models what they will be doing in the classroom. Programs that provide this type of learning are valuable and can increase teachers’ dispositions and skills related to STEM and technology integration. In addition, these types of programs may also increase the retention of teachers in a school system or teaching in general.

**References**


Harwell, S.H. (2003). *Teacher professional development: It's not an event, it's a process*. Waco, TX: CORD Leading Change in Education.


1. **Title**: Setting the Stage for Innovation: Keeping Undergraduates Motivated and Curious

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6. Paper for Proceedings (on the next page):
Setting the Stage for Innovation: Keeping Undergraduates Motivated and Curious

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Background

Previous research has demonstrated the importance of both curiosity and intrinsic motivation for achieving academic success (Deci & Ryan, 1985; Guay, Vallerand, & Blanchard, 2000; Leslie, 2014; Ryan & Deci, 2000; Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres, 1992). In a meta-analysis of the relationship between motivation and academic success, 22 of 28 studies found a positive relationship (Rosen, Glennie, Dalton, Lennon, & Bozick, 2010). Both are also key for the development of the entrepreneurial or innovative spirit. This mindset is widely recognized as essential for personal and professional success, especially in the field of engineering (Ertuna & Gurel, 2011; Solesvik, Westhead, Matlay, & Parsyak, 2013).

According to Self-Determination Theory (Deci & Ryan, 1985), there is a continuum of levels of motivation which include intrinsic motivation, multiple types of extrinsic motivation, and amotivation (Guay et al., 2000). Intrinsic motivation is associated with more positive learning outcomes while amotivation is associated with the most negative effects (Guay et al., 2000). When individuals are intrinsically motivated, behaviors are influenced by internal reasons such as personal enjoyment (Bruning, Schraw, & Norby, 2011). By contrast, when extrinsically motivated, individuals are influenced by external factors, such as a grade or a paycheck (Bruning et al., 2011). Amotivation is when individuals are neither intrinsically nor extrinsically motivated. As noted by Guay et al. (2000) amotivated individuals have, “…no sense of purpose and no expectations of reward or possibility of changing the course of events” (p. 177). Thus, it is incumbent upon instructors to encourage intrinsic motivation whenever possible.

Curiosity is an integral aspect of the classroom experience and necessary for innovation to occur. “It is the curious child that becomes tomorrow’s innovator…” (Arnone, Small, Chauncey, & McKenna, 2011, p. 195). Curiosity refers to an emotional-motivational state that is characterized by a “desire to know, to see, or to experience that motivates exploratory behavior directed towards the acquisition of new information” (Litman, 2005, p. 793). Curiosity requires novelty and is performed with the intention of some form of closure. While satisfying one’s curiosity may be intrinsically rewarding, if one does not act upon his/her curiosity, then he/she is not intrinsically motivated.

In order to encourage both intrinsic motivation and curiosity, thereby stimulating the entrepreneurial or innovative spirit, IDEAS studio courses were developed at one U.S.
University. These are two-credit-hour engineering electives were designed to include seven core characteristics:

- Each IDEAS course is voluntary; students elect to take the course and the course itself acts as a free elective.
- In IDEAS courses, most students make a physical artifact.
- The work students do in IDEAS courses is motivated by real-life problems. Many times the problems are supplied or inspired by industrial sponsors.
- Students apply broad perspectives to their work in the IDEAS course. Besides the technical viability of their ideas, students must explore the social impact, value, market viability, and other aspects.
- Students are encouraged to apply an open process to generate solutions in the IDEAS course. In many cases, students explore the process as an outcome for the course; they are told that neither the resulting solutions nor the process to reach them are pre-determined.
- IDEAS courses are open to all disciplines in engineering, and in some cases, to all majors throughout the University, resulting in an inter-disciplinary mix of students.
- IDEAS studios courses are small, and in most instances, the enrollment is limited to 16 students.

There are number of different IDEAS courses including: Creative System Design, Concept to Commercialization, Should we Start this Company? and Build Your Idea.

Although these courses were designed to promote many positive consequences, there can be a disconnect between course developers’ and instructors’ intentions and students’ perceptions and outcomes. Research is necessary to determine whether intrinsic motivation and curiosity are fostered in specific courses and classroom settings. Additionally, there is a need to explore comparable situations (in this case, courses) with analogous activities that have high and low interest so they can be distinguished (Chen, Darst, & Pangrazi, 1999).

**Purpose of the Study**

The purpose of this exploratory study was to investigate how intrinsic and extrinsic motivation, as articulated by Self-Determination Theory and curiosity were differentially impacted by undergraduates’ participation in two contrasting courses, an IDEAS studio course and a self-selected comparison course (designated as Course X). For the purposes of this study, amotivation, two measures of extrinsic motivation, intrinsic motivation, and curiosity (operationalized as situational interest) were examined. These variables were measured by the Situational Motivation Scale (Guay et al., 2000) and five questions from the Situational Interest Scale (Chen et al., 1999).

The study was guided by the following research question: How does students’ motivation and curiosity vary by course type (IDEAS studio course vs. Course X) across the semester (beginning, mid-term, end)?
Methodology

Design and Procedure

A one-group pre-test-post-test design was used to investigate amotivation, extrinsic and intrinsic motivation, and curiosity to see whether they were differentially impacted by undergraduates’ participation in an IDEAS studio course and a student-selected comparison course, designated as Course X. Course X was independently and anonymously chosen by each student. It was to be a course in which they were simultaneously registered and that, from their viewpoint, shared as few of the IDEAS course qualities as possible. Students were asked to select their own comparison course for a number of reasons. The key reason was that students enrolled in the IDEAS course were from a variety of majors and therefore had no one other course in which they were all enrolled, preventing a direct comparison of courses. In addition, because the students’ perceptions of the courses might be different from faculty intent, it was felt the students themselves would be the best judge of which other course was most different from their IDEAS course.

Descriptive statistics were used to compare mean scores for each level of motivation and curiosity for each course across the semester. Paired samples t-tests were used to determine whether there were significant differences between mean scores by course type. Cohen’s d was used to determine the magnitude of the difference between the scores when there were significant differences.

Students were assessed three times throughout the semester and asked to respond to the questions from the perspective of the class they were in (either the IDEAS course or Course X). The assessments were conducted online in the 2nd, 6th, and final weeks of the semester. In addition, a questionnaire at the end of the semester asked students to reflect on the extent to which, in their view, the seven characteristics of IDEAS courses were or were not present in both their IDEAS course and Course X. All identifiers were removed before analysis. Instructors did not have access to survey results during the semester, and were not involved in the assessment collection process.

Participants

A sample of convenience (n = 92) from one university was used in this study. The participants were from three different semesters, two fall and one spring. There were 66 males (71.7%), 25 females (27.2%), and one individual who did not identify his/her gender. Over three-fourths of the sample was White (76.1%), with the next largest group Asian/Pacific Islander (9.8%). The majority of participants were seniors (55.4%) and engineering majors. The largest identified major was Mechanical Engineering (30.4%).
Instruments

The Situational Motivation Scale (Guay et al., 2000) was used to measure motivation and amotivation. This validated instrument has 16 questions, designed to measure four kinds of motivation hypothesized by self-determination theory (Deci & Ryan, 1985): intrinsic motivation, two measures of extrinsic motivation (identified regulation and external regulation), and amotivation. Four Likert-style questions are used to measure each type of motivation with a range from Strongly Agree (5) to Strongly Disagree (1). A score is obtained by summing the responses to individual questions for each type of motivation. Curiosity was measured by taking five questions from an existing Situational Interest Scale (Chen et al., 1985). Four of the questions came from the Exploration Intention factor and one from Instant Enjoyment.

Results

Results showed that at each of the three times students completed the assessment, there were mean differences in situational motivation and curiosity between the IDEAS course and Course X. With the IDEAS courses, students consistently had higher scores in intrinsic motivation, identified regulation and curiosity than Course X. With Course X, they consistently had higher scores in external regulation and amotivation than the IDEAS course.

Table 1: Mean Scores for the Three Administrations of the Assessment

<table>
<thead>
<tr>
<th></th>
<th>Mean Score for First Assessment n = 88</th>
<th>Mean Score for Second Assessment n = 80 IDEAS course; n = 79 for Course X</th>
<th>Mean Score for Third Assessment n = 94</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Motivation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IDEAS course</td>
<td>17.11</td>
<td>16.36</td>
<td>16.27</td>
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<tr>
<td>Course X</td>
<td>13.09</td>
<td>13.18</td>
<td>13.45</td>
</tr>
<tr>
<td>Identified Regulation</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>IDEAS course</td>
<td>17.85</td>
<td>16.90</td>
<td>16.90</td>
</tr>
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<td>Course X</td>
<td>14.69</td>
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<td>14.89</td>
</tr>
<tr>
<td>External Regulation</td>
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<td>Course X</td>
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<td>14.18</td>
</tr>
<tr>
<td>Amotivation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDEAS course</td>
<td>7.22</td>
<td>8.45</td>
<td>8.61</td>
</tr>
</tbody>
</table>
Paired samples t-tests showed that each of the differences between the two courses were significant.

However, for the IDEAS courses there was a decrease in Intrinsic Motivation, Identified Regulation, and Curiosity with an increase in External Regulation and Amotivation over time. This decrease occurred between the first and second assessments and was maintained until the end of the course. By contrast, there were no significant differences in any areas over time for Course X.

**Discussion/Implications**

Building and maintaining both intrinsic motivation and curiosity are of key interest to educators. Results from the current study suggest that students were more intrinsically motivated and curious while taking the IDEAS course, compared to Course X. This could be due to a number of reasons including the voluntary nature of the IDEAS courses, the fact that IDEAS courses provided opportunities for close communication with industrial partners, along with professors, as they worked together to solve a “real world” problem, and/or that the incorporation of real-life situations of interest to students in the IDEAS courses. Interest can spark curiosity.

The decrease in participants’ intrinsic motivation, identified regulation, and curiosity in the IDEAS course throughout the semester is of particular interest and could be the result of a number of factors. One explanation could be students’ prior views of the IDEAS courses, similar to their preconceptions about concepts taught. These views might have been based on knowledge of the curriculum or previous students’ assessments of the courses. Whatever the source, this prior knowledge could have acted as a filter while students were in those courses, affecting their motivation and curiosity. Just as with other misconceptions, differing methods of instruction may be needed to alter them. This warrants further investigation.

One limitation in this exploratory study was the selection of Course X. While there were advantages to students self-selecting a comparison course (designated Course X), it could have resulted in multiple kinds of courses being compared with the IDEAS courses. Because students did not list the name of Course X, the researchers did not know how many different courses were being compared. Future research should confine students’ selection of a comparative course to either another engineering course or a known course outside of the major, in order to determine if there are any commonalities that could be impacting students’ intrinsic motivation and curiosity.
Acknowledgements

The authors gratefully acknowledge the support of the Kern Family Foundation to offer the IDEAS Studios through an Institutional Grant and to conduct the assessment study through the grant entitled Assessing Situational Curiosity and Motivation in IDEAS Design Electives.

References


Creating Coherent State Systems of Mathematics Education from Birth through Postsecondary Education: Opportunities and Challenges for Researchers and Policymakers

Saeyun D. Lee
Erica N. Walker

Abstract

In this workshop, the presenters (one an experienced policymaker and researcher with significant policy experience at state and local levels, the other an experienced researcher and professor in math education with significant school teaching experience in grades 9-12) will share a tool designed to assess policies and also local and state practices related to mathematics teaching and learning outcomes. This tool, which includes multiple categories for assessment and action at various stages in the educational pipeline, has the potential to enhance the alignment of existing policies and practices to support positive math outcomes from birth through postsecondary education. In addition, it may also spur initiatives when various constituencies (teachers, administrators, school district leaders, representatives from early education and higher education institutions, and policymakers) identify gaps related to opportunity, achievement, or resources.

After a presentation by the authors, the participants in this workshop will work collaboratively to discuss an issue/issues in mathematics education and use the tool to develop and identify systemic goals and strategies to effectively address that issue/those issues. For example, substantial research has demonstrated that algebra is both a key mathematical topic and gatekeeper for secondary school students (e.g. Star & Rittle-Johnson, 2009). But the pedagogical, organizational, and curricular structures for success in algebra do not begin in secondary school. Best practices related to algebra success have been identified in pre-school and elementary school settings (National Research Council, 2001) as well as in home and community practices that support school learning (Masingila, Davidenko, & Prus-Wisniowska, 1996). Further, it is clear that algebra’s importance does not dissipate once students complete an algebra course in high school. It is important for subsequent courses, college admission and graduation, and career options (Walker, 2001). Thus, we would argue that educators, researchers, and policymakers should evaluate at various points in the birth through postsecondary educational pipeline where there are gaps in systems’ practices to support success in algebra learning. For example, a number of initiatives have focused on “algebra for all”, initially focusing on coursework offerings in 8th and 9th grade (College Board, n.d.). Subsequently, such initiatives addressed issues such as algebraic thinking in the elementary and middle school and the need for increased professional development for teachers related to inquiry-based instruction (Ham & Walker, 1999; NYC Algebra for All Initiative, 2015). The proliferation of early college high schools, in which students are prepared to enter college before completing high school coursework, makes high school preparation for credit bearing college mathematics courses (the first of which is usually college algebra). It has also been determined that many students, despite
graduating from high school, are not prepared for credit bearing college mathematics courses. This is an example where there should be more synergy and alignment throughout the educational pipeline to support college and career goals.

At the conclusion of the workshop, the presenters will present policy and other recommendations for building coherent state systems of mathematics education.

As a result of attending this workshop, the participants will have the opportunity to engage in a robust discussion about how to change discourse, policies, and practices and improve mathematics learning outcomes for all children.

References


Abstract

After attending this presentation the attendees will have a better understanding of the process for an effective academic program review. They will also be provided with some tested and validated tools that can be used for the assessment of the quality of their programs.

Academic programs assessment is an on-going process designed to enhance the educational mission of the academic institutions, and provide a means for faculty to evaluate strengths, and weakness of their programs and suggest modalities for improvement in weak areas. This review will foster improvement in teaching, scholarship and student learning in programs and departments that are amenable to change.

The Council of the Graduate Schools, suggests that a successful program review provides answers to the following examples of questions: 1) Is the program advancing the status of disciplines and professions? 2) Is its teaching and training of students useful and effective? 3) Does the program meet the institutional goals and objectives? 4) Does it respond to professional needs and/or requirements for employment? 5) How is it assessed by experts and educators in the fields? To be able to respond to these questions, faculty should develop explicit statements of what students should learn; verify that the program is designed to foster their learning, collect date that indicate student attainment and use data to improve student learning. The highlights of our recently completed five-year review of our forensic sciences program will also be discussed.
Enhancing intrinsic motivation through teaching medical English vocabulary: An exploratory study

TANAKA, Hiroaki
(Kindai University)

Traditionally, motivational researchers have been concerned about the theoretical constructs of motivation rather than how to enhance students’ motivation. Recently, research interests have shifted away from simply identifying certain types of motivation to developing ways in which motivation might be enhanced. Motivational strategies refer to “methods and techniques to generate and maintain the learners’ motivation” (Dörnyei, 2001, p.2). However, only a limited number of studies have investigated how students become motivated in a language learning classroom. Therefore, the purpose of this study is to identify key factors for motivational strategies for enhancing intrinsic motivation through teaching medical English vocabulary. For the medical English learners, vocabulary has been considered one of the most important and difficult parts of learning and maintaining motivation to learn medical English vocabulary is a crucial part of the learning process.

17 Japanese EFL (English as a foreign language) university students majoring in pharmacy participated in this study. They were enrolled in a first-year English language course. The students met twice a week in a 90-minute class. After four weeks of instruction, open-ended questionnaires were administered to the participants. Open-ended questions are generally preferred to collect information from relevant topics and to determine the full range of possible answers. The data were analyzed on the basis of Self-determination theory (Deci & Ryan, 1985, 2002, 2012). I determined and defined three main categories derived from the Self-determination theory; that is, the need for autonomy, the need for competence, and the need for relatedness.
In addition, data which could not be coded into one of the three predetermined categories were coded with new categories. All qualitative data were carefully examined, coded, and constantly compared to other data.

The main finding of this study indicated that the learners’ need for competence and autonomy were key factors for enhancing intrinsic motivation to learn medical English vocabulary, as Self-determined theory anticipated, though factors related to the need for relatedness were not observed in this study. Implications for theory and practice were also discussed.

**References**


Disciplinary Approach to Creative Science Teaching for Elementary Preservice Teachers’ Practicums

**Topic area of submission:** Elementary education

**Presentation format:** Paper session

**Short description of the submission:**
This study investigated how elementary preservice teachers conducted creative science teaching modules for their practicums. Disciplinary approach in science and educational technology was applied to design of creative science teaching modules. We analyzed teaching sequences, educational technologies, and specific inquiry strategies used in science classes. The effect of disciplinary approach to design of creative science teaching will be discussed.

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ABSTRACT:
This study investigated how elementary preservice teachers prepared and conducted creative science teaching modules for their practicums. We employed the idea of discipline-specificity of creativity. Disciplinary approach, therefore, was applied to design of creative teaching modules so that each disciplinary provided its own perspective on creative teaching such as creativity in scientific inquiry teaching, creative task design and linguistic creativity in English teaching, non-algorithmic decision making and adaptiveness for creative math teaching, and so on. We gathered voluntary preservice teachers who would conduct disciplinary creative teaching modules in their practicums. Among their practicum teaching experiences we video-recorded science classes. Teaching sequences, educational technologies, and specific inquiry strategies used in the science classes were analyzed in terms of fostering elementary children’s creativity. The creativity we analyzed were not general thinking skills but science-specific thinking skills embedded in science practices and used in understanding science contents. We will discuss student teachers’ creative science teaching practices which facilitate elementary children’s creative thinking skills. Also the effect of disciplinary approach to design of creative science teaching for preservice teachers will be discussed.

ACKNOWLEDGEMENT:
This research was supported by the Korea Foundation for the Advancement of Science & Creativity (KOFAC) and funded by the Korean Government Ministry of Education (KMOE).
Fostering the System that Leads Creativity Education for Pre-service Elementary Teachers in Korea

**Topic area of the submission:** Higher education

**Presentation format:** Paper session

**Description of the submission:**

The purpose of this research is to revise and implement university-wide curricular for pre-service elementary teachers in Korea. Throughout the University, we reached at a consensus that the current curricular have several limitations to cultivate creativity of pre-service teachers, which is one of most critical competencies of 21st century learners. Seven out of 13 departments within the University jointly participated in the project to redesign the curricular to foster pre-service teachers’ creativity.

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ABSTRACT:

The purpose of this research is to rethink, revise, and implement university-wide curricular for pre-service elementary teachers in Korea in order to foster pre-service teachers’ creativity. The high quality of teachers in Korea is well-known to the world; we believe the high competencies and devotions of Korean teachers are one of the major driving forces that lead rapid economic developments of Korea after the Korean-War in 1950. A teacher is an attractive profession in Korea due to its high level of job security, a decent level of salary, and respect for teachers as a social norm.

Thus, Seoul National University of Education, the top pre-service elementary teacher education university in Korea, has been able to recruit the best and brightest students in the country. The average freshmen of our university typically rank top 3-5% of the national college entrance exam every year. There is no question that our students have a high level of knowledge and understanding of each subject area as pre-service elementary teachers. Most of our students are very good at studying and following instructions since they have been high achieving model students throughout their K-12 schooling.

In the past, it was believed that a teacher with a high level of content knowledge can be a good teacher as well. However, it’s not true anymore; having solid content knowledge alone is not enough to be a good teacher. The purpose of education is not teaching and learning content knowledge itself anymore. Many countries and organizations have addressed the importance of core competencies of 21st century learners, and teachers should be capable of cultivating those core competencies in the classroom. Core competencies may include creativity, problem-solving, communication, critical thinking skills, etc. In order to foster students’ core competencies, teachers themselves should be taught and have opportunities to develop those core competencies of themselves.
Recently, many educators and researchers are interested in those 21st century learners’ core competencies. Nevertheless, the studies in teachers’ core competencies that can enable them to be confident in teaching and cultivating those core competencies in the classroom are still rare.

The Korea National Curriculum of K-12 schools has been emphasized the creativity since the 6th National Curriculum in 1996. In particular, the current Y2015-revised Korea National Curriculum strongly advocates the importance of fostering ‘the talented student with creativity and convergence’. However, it has been questioned whether the school teachers are prepared to cultivate students’ creativity. We as a pre-service teacher education institution asked ourselves whether our students – i.e., future elementary teachers- are prepared to foster elementary students’ creativity or not. To this end, throughout the University, we reached at a consensus that the current curricular have several limitations to cultivate creativity of pre-service teachers, which is one of most critical competencies of 21st century teachers as well as learners. Seven out of 13 departments within the University jointly participated in the project to redesign the curricular for pre-service teachers.

Before we began to revise the curricular, faculty members from the seven departments sat together and had regular meetings and seminars to openly discuss about our operational definitions of key concepts; namely, creativity, creative teachers, creative education, teaching creativity, teaching creatively, etc. For now, we tentatively define “creative teachers” as teachers who can confidently show creative teaching behaviors in the classroom along with a high-level of teaching competencies and creative thinking skills of their own.

The participating faculty members have been developing or revising their lesson plans
and teaching & learning materials based on the on-going cross-department discussions and seminars. Revised curricular will be implemented throughout the Fall semester, 2016. While implementing the revised curricular, systematic evaluation will be conducted as well to see whether the revised curricular may have any effects on the development of creativity and creative teaching competencies of the pre-service teachers. In addition, we are also interested in finding that to what extent the university-wide, cross-departments curricular reform efforts can be realized.

At the conference, we will share some of our preliminary findings from the above evaluation processes. We hope our case can give you some ideas for revising pre-service teacher education programs, and we would like to discuss with you about issues and concerns on reforming higher education for the future.

ACKNOWLEDGEMENT:

This research was supported by the Korea Foundation for the Advancement of Science & Creativity (KOFAC) and funded by the Korean Government Ministry of Education (KMOE).
Abstract

This study is implemented for finding out the demand of parents and its priority sequence on the qualifications of early childhood teachers and collect the base data for structuring the community of the early childhood by comparing demands on qualification following the children age and institution type.

This study has administered for the subject of 194 pairs of mothers and fathers having children of 3, 4 and 5 years of age that are enrolled in kindergartens and childcare facilities located in B City, one of the large cities in Korea. The level of demand for qualification of early childhood teacher is divided into the required level (importance) and present level (self examination) of the phrase of ‘scale of perception of parents on the qualification of early childhood teacher’ of Shin Hwa-yeon (2014) to assess in the 5-point Likert scale to find out the level of demand on the teacher qualification by facilitating the demand level formula of Borich (1980).

In addition, in order to find out the difference in the level of demand among parents following the children age and institution type, the t-verification is implemented by facilitating the value of the level of demand on the teacher qualification sought by the formula of Borich.

As a result of finding out the difference of required level and present level regarding teacher qualification of entire parents, it is shown to have the difference of statistical significance in all lower categories. In addition, as a result of calculating the level of demand on the teacher qualification through the demand formula of Borich, for fathers, it has the higher level of demand in the sequence of humanity characteristics, teaching attitude, professional knowledge, and teaching skills of teachers and, for mothers, the level of demand is shown in the sequence of teaching attitude, teaching skills, humanity characteristics, and professional knowledge. Also,
fathers showed the tendency of higher level of demand in teacher qualification and entire lower categories than mothers.

As a result of finding out the difference of demands in parents regarding teacher qualification following children age, there is a statistical significance only for parents of 4 years old, and, in the lower categories, the difference of statistical significance is shown only in the teacher humanity. Namely, the fathers of households with any child of 4 years of age, it shows higher level of demand than mothers in the teacher humanities from the lower category. And, regardless of the children age, fathers showed trend of higher level of demand than mothers in teacher qualification and all lower categories.

As a result of finding out the difference of demands in parents regarding teacher qualification following institution type, the demand of statistical significance is shown only for parents of early childhood enrolled in childcare homes, and, in the lower categories, the difference of statistical significance is shown only in the teacher humanities and teacher attitude. Namely, for the households that send children to childcare homes showed higher level of demand in teacher humanities and teacher attitude for fathers and teacher attitude for mothers. And, regardless of the institution type, fathers showed tendency of higher demand in qualification of teacher and all other categories than mothers.

The foregoing result requires the parental education for enhancing the recognition for each parent on qualification of early childhood teacher for structuring the early childhood education community, and in particular, it implies that searching for plan to improve the qualification of teachers as reflecting the high level of demand of father is urgent.
Proposal #1

a) Title of the submission:
Early Childhood Education and Information Ethics
- The Potential of Information Ethics Education in Early Childhood Curricula -

b) Topic area of the submission: Early Childhood Education

c) Presentation format: Paper session

d) Description:
Nowadays, more and more children have been using various electronic devices such as smartphones and tablets. At the same time, problems have been increasingly reported related to ICT device usage in Japan. To examine possibilities of education on information ethics for preschoolers, we decided to conduct model lessons, interview with children aged 4 and 5 years old, and survey with their teachers.

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Early Childhood Education and Information Ethics

- The Potential of Information Ethics Education in Early Childhood Curricula -

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Abstract

We conducted a study to consider the potential of information ethics education in early childhood curricula.

With rapid developments in technology, there has been an increase in the number of children using electronic devices such as smartphones and tablets (often referred to as information communication and technology devices or ICT devices.) In particular, there has been a marked increase in the number of preschool aged children using these devices. At the same time, there has been an increase in the number of problems reported related to ICT device usage and it has been a pressing matter to find ways to deal with this issue through education. In Japan, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) began to include education on information ethics in the public school curricula in 2007 to cultivate an understanding of information ethics and appropriate attitudes required in order to perform necessary activities in an information society. Since then, information ethics has been taught in elementary, junior high, and high schools. However, reports from classrooms show that teachers are struggling with how to present this topic. They still don’t have a clear and uniform strategy on what values need to be established and how to guide students in this matter. In addition, there are no clear descriptions and/or guidelines on which age(s) ethics education should be introduced. Preschools have, thus far, not been included in the curricula, and consequently there have been no guidelines on this topic for early childhood education. Considering this, we decided to examine the possibilities of education on information ethics for preschoolers. We conducted model lessons
and interviews with children aged 4-5 years old, as well as surveys and interviews with their teachers. This project pointed out that it is, in fact, possible to teach information ethics to preschoolers and that preschoolers are quite capable of understanding information ethics. It also revealed, however, that this education requires different approaches and teaching methods for those younger age groups. In addition, because of significant developmental differences between 4 and 5 year old children, it is better to wait to teach some topics until children are 5 years old. We believe that starting this education in early childhood will greatly contribute to the continuation of such education at older ages. In that sense, we believe this research is significant because these are critical ages when the basic values of people's lives are established.
1. Title of the submission.

The Development of the Positive Personality Program for pre-early childhood teachers and Its Effects.

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6. Abstract and/or full paper.
ABSTRACT

The Development of a Positive Educational Program for Pre-Early Childhood Teachers and Its Effects

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The purpose of this study was to development and apply the positive personality program for the pre-early childhood teachers and validate its effectiveness for optimism, self resilience, life competencies. The study was carried out about 15 weekly programs for pre-early childhood teachers 106 people enrolled in early childhood education and child care related departments of the three-year college in busan, republic of korea. To investigate the effect of the program optimism, self-resilience, using the life competencies scale pre-test and post-test was carried out. Frequency analysis was performed with the paired t-test to the results of processing, were also analyzed with the journal of the pre-early childhood teachers. According to the study results it showed that the positive personality program applies the effect in optimism and self-resilience and life competencies of pre-early childhood teachers.

Keywords: pre-early childhood teachers, optimism, self-resilience, life competencies
1. Title of the submission.
   Development of The Multipliership Scale for Korean Preschool Institution Administrator.

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ABSTRACT

Development of the Multipliership Scale for Korean Preschool Institution Administrator.

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This study was to reveal the feasibility to develop the right tools and applying them to measure the multipliership of preschool administrator. Utilizing assessment tools on the leadership of school administrators and managers that was developed in 2010 by Wiseman. The subjects were 123 people manager is being worked on kindergarten and daycare center. The validity of scale is examined item quality and test appropriateness. In the item quality analysis the item response distribution and the item discrimination were examined. In the test appropriateness analysis the construct validity and reliability were confirmed. In conclusion, multipliership scale for decades has consisted of nine factors, a total of 33 questions. Factors are ‘it makes an open space’, ‘lead productive discussions’, ‘to create a culture that recognizes the value of personal’, ‘to take advantage of the strengths found’, ‘help the chain growth through investment’, ‘improve solidarity between members’, ‘broaden the width of the contribution’, ‘it comes with responsibility and self-reliance’, ‘happily help you work’. I figure out the strengths of leadership administrator it appeared to have secured the validity and reliability.

Keyword: multipliership, preschool institution administrator, self-assessment
This paper presents an analysis of campus sustainability discourse at four universities that are part of a growing higher education campus sustainability movement in Japan. Our research objective is to examine some of the different ways that the global discourse of higher education campus sustainability is adapted and co-opted to serve local and non-local needs.

In many higher education sectors throughout the world, the notion of campus sustainability has become a key organizing concept for mission-driven research and the coordination of faculty, administration, and student action around environmental and energy challenges (Cortese, 2003). There is broad recognition that universities have a significant role to play in creating sustainable campuses that serve as models for the communities they serve. Koester et. al (2006) have pointed to the value of a “whole institution approach” to campus sustainability, and many North American institutions have started to adopt integrative sustainability measures, as evidenced by the growing number of member institutions in the Association for the Advancement of Sustainability in Higher Education (AASHE).
Internationally, campus sustainability efforts have also gained popularity, especially in Europe. In Asia, however, though there is a growing movement towards more integrated approaches to campus sustainability, Abe and Nomura (2010) have noted that examples of successful whole institution approaches to campus sustainability are still rare. This paper, which is part of an ongoing (3-year) research project on campus sustainability, asks why this is the case. By examining the way four universities at different positions in Japan’s higher education ecosystem employ the discourse of campus sustainability, we identify factors that could help lead to more integrative approaches, and also identify obstacles faced by institutions in their own contexts. Broadly we seek to answer the following three research questions:

- How prominent is discourse about campus sustainability on the websites of the four Japanese universities?
- How are notions of campus sustainability being adapted to the needs of Japanese universities in their local contexts?
- What cultural values can be seen in the Japanese university discourses on campus sustainability?

Our main data source is the websites and mission statements of two public universities and two private Japanese universities that are leaders in Japan’s growing campus sustainability movement. Each university is representative of a different tier of Japan’s higher education hierarchy. We explore the prominence of sustainability discourse in comparison to other dominant discourses, and consider the roles of language and other forms of representation related to campus sustainability in Japanese higher education.
Following a grounded theory approach (Strauss & Corbin, 1998) the methodology of this research (currently in progress) is for two bilingual researchers to identify four suitable university cases, collect (Japanese language) text and image data from these university’s websites, open code this data independently for themes related to our research questions, and to then collaboratively analyze and synthesize our findings.

We employ Stibbe’s straightforward definitions of discourses as “standardized ways that particular groups in society use language, images and other forms of representation” (Stibbe, 2015, p.22) and present critical discourse analysis that draws on the work of Fairclough (2001), and also theoretical work of Kress and Van Leeuwen (2001) on multimodal discourse analysis.

Our analysis of four university webpages found significant variance in the prominence of campus sustainability discourse amidst the primary four discourses that we identified: internationalization, technological innovation, contribution to the community, and pastoral campus life. Of the four different types of universities we studied from one geographical region, we found that the national university and the local private university employed discourse about campus sustainability most prominently on their websites. The public university we studied also included information about campus sustainability as central to its mission, and provided easily accessible (though not as prominent) information about “eco-campus” or “green campus” activities. Information about campus sustainability was least prominent on the website of the elite private university included in our study despite the fact that
this university is one of a small group of Japanese universities that is a member of an international campus sustainability network.

Campus sustainability has become a global discourse in academia and it is increasingly serving as a cross-disciplinary trading ground for cultural capital among elite universities. At the local level, however, universities such as the small private one studied here are able to leverage their campus sustainability efforts to appeal to the communities they serve, and also to mark themselves as internationalized through their tackling of global problems locally.

**Acknowledgment**

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Title of the submission: Who are the participants? Characteristics of schools participating in multi-city private school voucher programs

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Abstract:

Since enacted in the 1990s, private school voucher programs have been considered a policy solution that addresses education inequity concerns by funding individual students and not schools, empowering families to control their child’s education. The hypothesis is that the market-oriented voucher programs would have positive effects on student achievement by a) providing more opportunities for students to attend high quality private schools, and b) allowing parents to choose the schools that are more suitable for their child. The underlying presumption that the average quality of the private schools that accept voucher students would exceed the average of all the local public schools, and those private schools would be more effective in improving the disadvantaged student’s learning, however, is uncertain and understudied. Despite some survey studies, little attention has been paid to the supply side of voucher programs. The public, scholars and policymakers have little systematic knowledge regarding what kinds of schools are participating in voucher programs and how and why they decided to participate. In this study, we discuss the decision-making model of the schools participating in private school voucher programs in four states and one federal district. Specifically, we estimate the key factors that drive schools’ choices to participate based on cross-sectional data from 2016 from the private school voucher programs in District of Columbia, Wisconsin, Louisiana, Florida and Indiana.

Our general theoretical frame is simple decision-making in the school context. We focus on individual schools as the unit of analysis. We customize that framework for the specific case of participating in a voucher program by considering the benefit (decreased marginal cost per student) and the cost (tuition substitution) of enrolling voucher students, as the voucher amount will rarely cover the average cost of educating a child at the private schools. Our preliminary results confirm our hypothesis that lower quality schools are significantly more likely to participate in a voucher program. This study will make substantial contributions to both the scholarly and practitioner fields. A better understanding of the supply side of voucher programs will help new and existing school choice programs refine their quality constraint regarding market entry. Our analysis also will provide scholars and policymakers with a new approach to understanding the mechanism of how voucher program effects are mediated by the quality of schools that are induced to participate in such programs.
Inclusion of Evidence-Based Practices in IDEA: Moving forward

Topic Area: Special Education

Description of Presentation: This poster presentation will focus on the implementation process in state early intervention systems of the DEC RP. It will include activities to promote the understanding and use of DEC RPs including fidelity checks, coaching, mentoring, and professional development systems. Implementation science will be highlighted as a lens to review how the state structure is employing the evidence-based practices and reviewing their effectiveness as the practices are put into place.

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Abstract

To meet federal regulations in Special Education under IDEA, state Part C agencies must develop professional development systems to prepare early interventionists to understand and implement evidence-based practices. The Division of Early Childhood’s (DEC) Recommended Practices are the foundation of evidence-based practices in early intervention. The practices provide guidance to professionals and families about the most effective ways to improve learning outcomes and promote development of children age birth through 5 (DEC, 2014).

As states support practitioners in understanding and use of evidence-based practices, it is vital that state systems use implementation science (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005) as the foundation for their plan. The following steps are identified to support early intervention in the use of evidence-based DEC RP in their implementation:

- Infrastructure review
- Training and staff support review
- Identification of DEC practices
- Implementation plan

Introduction

This presentation describes the steps and activities a Midwestern state completed in supporting Regional Early Intervention (EI) programs in identifying and implementing specific Division of Early Childhood Recommended Practices (DEC RP). Programs that utilize best practices will better support the families and children they serve (Smith, 2000). These practices were chosen as the foundation of implementing evidence-based practice to support the state-identified measurable result (SIMR) in Part C. The SIMR is based on practitioners supporting caregivers in promoting the social emotional skills of their infants and toddlers.

Understanding the steps and processes of preparing early interventionists in understanding and implementing evidence practices in promoting social-emotional development and challenging behaviors is important. As research related early social-emotional development, self-regulation, attention, and appropriate social skills to the development of higher-order cognitive functioning and future success (Shonkoff & Phillips, 2000), attention turned to the preparedness of early interventionists to work within the domain. The Hemmeter, Santos and Ostrosky (2008) study discussed the need for mentoring, coaching, feedback, and technical assistance focusing on daily routines for early childhood educators to work with children and their families.

As states work to develop a process for their State Systemic Improvement Plan (SSIP), and implementation of evidence-based practices. It will be important to understand and use implementation science (Fixsen, Naoom, Blase, Friedman & Wallace, 2005) as the foundation of their plan. An understanding of this process will inform administrators and practitioners of the specific implementation practices and the personnel preparation necessary to support early interventionists in the implementation of DEC RP.

Framework

In order to change practice, this state utilized a systematic process based on strategies supported through implementation science. Throughout the plan development, a variety of stakeholders were involved to survey basic foundation skills and to establish the initial priorities.
in order to identify the main areas of focus in supporting the Early Interventionist in their use of DEC RPs.

The following steps were used with EI’s to identify the evidence base DEC RP and support staff in their implementation:

1) **Infrastructure**: This included staff survey of their perceptions in knowledge in area of social emotional development (perception of competency across screening, assessment and intervention), pilot teams identified, and focus groups with administrators, interventionist and broad stakeholder group. A community resource plan was also developed.

2) **Training and staff support plan completed**: This included an introduction to DEC RP standards, ranking of standards (in order to choose one or two DEC RP practices), reviewing the states theory of action and action strands.

3) **Implementation plan**: This included the development of an administrator and practitioner support plan. The plan also included activities to promote the understanding and use of DEC RP fidelity checks (practitioner rating and mentor ratings) and the use of internal and external mentors.

**Process**

**Step 1 Gathering information and involving stakeholders:**

- **Survey**: This included a survey of administrators, practitioners, families and stakeholders of their perceptions in knowledge in the area of social emotional development (perception across competency of screening, assessment and intervention).

- **Focus groups**: This was completed with administrators, practitioners and stakeholders in regard to their gaining information into the needs and priorities in the area of supporting professional development needs in the area of early intervention practices and social emotional skills.

- **Ranking of DEC RP standards**: This process started with introducing a variety of stakeholders to the DEC RP (ICC members, Early Intervention practitioners, experienced parents, families, and administrators) and the resources available on the DEC site. Once this was completed, various stakeholders ranked their top five practices that they felt would assist practitioners in supporting caregivers in promoting social emotional skills of their infants and toddlers. The next step was for the early interventionists and service coordinators to review the top five op ranked practices and choose two of those practices as the initial focus of practitioners in supporting caregivers in promoting their infants and toddlers social emotional development.

**Step 2 Training Plan:**

- **Introduction to DEC standards state wide**

- **Provide intensive face to face training to pilot program**
  - Introduction to the DEC site, videos, recommended practices reviewed
  - Review and re-teach foundations of early intervention including philosophy, family assessment and routine based intervention.

- **Ongoing support**
  - Monthly conference calls
  - Short electronic videos weekly targeting “thought” of the week
Call for papers: Inclusion of Evidence-Based Practices in IDEA: Moving forward

- Onsite visits
- Technical assistance mentoring
- Data collection-use of reaching potential observation scale home visits

**Step 3 Implementation Plan:**
- Development and implementation of an administrator support plan outlining responsibility and action steps at each level
- Development and implementation of an individualized practitioner support plan
  - Individualized application steps developed with practitioners
  - Use of DEC fidelity checklists (completed by practitioner, mentor and family)

**Step 4 Future steps:**
- Design a formalized plan to incorporate family understanding and involvement in this process
- Replicate with other programs in the state

**References**
Division for Early Childhood. (2014).
Title: Teachers’ Perceptions of Individualized, Personalized, and Differentiated Learning and How Their Understanding of These Pedagogical Practices Influences Their Integration of Technology to Support All Learners

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Abstract

Research Objective

The purpose of this research study was to examine early childhood/elementary teachers’ pedagogical practices related to integrating technology. The research was guided by the question: How do teachers define “individualized,” “personalized,” and “differentiated” learning as they integrate technology?

A Brief Background of the Study and Research Methodology

Research on how people learn shows that human beings have diverse learning styles, and instruction should be delivered in such a way that it responds to the needs of diverse learners (Darling-Hammond & Bransford, 2005). In addition, Universal Design for Learning (UDL) provides a framework to support all learners, including those with disabilities, in inclusive classrooms and aligns with the vision and mission of special education services (Cast, 2008). The demands of such responsive instruction have resulted in three terms being “tossed around” in schools: “individualized,” “personalized,” and “differentiated” instruction. Most teachers use these words interchangeably (Basye, 2014). However, research indicates that these pedagogical practices are different and have specific conditions under which they would be applied to address the instructional needs of diverse learners. If teachers do not understand the nuances of these pedagogical practices, it is obvious that they may apply instructional strategies where they are not necessary. Therefore, this misunderstanding may negatively influence how they integrate technology in the classroom and how they leverage technology for student learning beyond the classroom. To date, there is limited research on how teachers define these three terms and how understanding such terms influences their integration of technology.

This presentation emanates from a mixed method study that sought to examine the pedagogical practices of 54 early childhood/elementary teachers as they integrated technology in the classroom. Specifically, the study sought to discover teachers’ understanding of the terms “individualized,” “personalized,” and “differentiated” learning as they integrated technology. An explanatory mixed method design was used, whereby quantitative data was collected and analyzed in phase one, followed by a second phase of qualitative data collection and analysis (Creswell, 2013). In the first phase, quantitative data were collected using a survey with open-ended and closed ended questions. In the second phase, a qualitative approach was implemented, which employed one-on-one interviews with a typical sample of 10 participants. “A typical sample would be one that is selected because it reflects the average person, situation, or instance of the phenomenon of interest” (Merriam, 2009, p.62). It is important to note that this presentation will use refined qualitative findings from the typical sample.
Discussion of Expected Outcomes

This Participatory Collaborative Reflection Workshop will be grounded in the work of Mor, Winters, & Warburton (2010, 2012), whereby participants will be invited to actively engage with presenters around the research and how participants’ understanding of the research can influence their future practice. After the presenters have defined individualized, personalized, and differentiated learning and shared findings from research on teacher perceptions of their pedagogical practices as they integrate technology in the classroom, participants will be invited to reflect, share, analyze, and scrutinize their experiences related to the research explained by the presenters (Mor et al., 2010, 2012). Specifically, participants will be invited to:

- Share their experience with integrating technology to support all learners;
- Reflect on their understanding of individualized, personalized, and differentiated learning as pedagogical practices;
- Analyze how these pedagogical practices are related to how they integrate technology in their current practice; and
- Scrutinize how they can leverage what they have learned about individualized, personalized, and differentiated learning as they intentionally integrate technology in their future practice to support success for all learners.

Participant Outcomes

It is anticipated that participants in this workshop will include currently practicing teachers, school administrators, and university instructors involved in teacher preparation.

1. All participants will define and distinguish the pedagogical practices of individualized, personalized, and differentiated learning.
2. Participants who are currently practicing teachers will reflect on how such practices influence their choice of technology integration strategies.
3. Participants who are school administrators will examine how their understanding of the relationship between individualized, personalized, and differentiated learning and technology integration can influence how they conceptualize in-service training for their teachers.
4. Participants who are university instructors involved in teacher preparation will evaluate how they teach and model individualized, personalized, and differentiated learning for their teacher candidates and how such practices influence instructors’ and candidates’ choices of technology integration.
References


Abstract: The NASA Heliophysics Education Consortium (HEC) is a five-year initiative funded by the U.S. Congress in 2016 to promote interest in and learning of space science in informal learning environments such as museums and after school and summer camp events. More than one-dozen partners are working with NASA’s Goddard Space Flight Center in Greenbelt, Maryland on this initiative. UNT’s Institute for the Integration of Technology into Teaching and Learning (iittl.unt.edu) is collaborating with the STEM Innovation Lab at NASA Goddard. IITTL’s primary role is to conduct design-based formative research and selected empirical research studies, on the impact on STEM interest and learning, of the products/programs spawned through the STEM Innovation Lab at Goddard. These products/programs will be refined in UNT’s Design Research Lab environment, and pilot-tested in informal learning environments to produce a sound and timely research base of demonstrated effects on knowledge of and interest in technology-infused activities related to space science. Publications demonstrating measurable effects will be produced.

This poster will feature brief descriptions of several of the technologies under initial consideration by NASA and the instruments to be used to assess impact. Visitors to the poster session will be encouraged to give feedback on the initially targeted technologies and provide additional suggestions. One component of the NASA initiative is to encourage participation by indigenous peoples. Connections with Pacific Islanders will especially be sought.
Operationalizing a Vision: A Single Case Study

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Abstract

The culture of a school is a critical component of school improvement efforts. However, changing the culture of a school is no easy feat. This qualitative case study presents how a female principal, newly assigned to a chronically underperforming middle school in an urban setting, approached changing the culture of the school from that of poor academic performance to a place of engaged students. Themes that emerged from this study focus on the principal’s vision in motion and perceptions of leading the vision. A discussion of these findings and their implications for research and practice are discussed.
Operationalizing a Vision: A Single Case Study

When a school experiences chronic stress, the role of the principal is heightened; it is imperative that the principal balance leadership functions to implement strategies that will change the trajectory of the school from struggle to success (Finkel, 2012; Lynch, 2012; Waters, Marzano, & McNulty, 2003). Leithwood, Louis, Anderson, and Wahlstrom (2004) argued that principal leadership is second only to teaching among variables that impact student learning. Furthermore, principals are often assigned to chronically underperforming schools with the specific expectations of rapidly increasing academic achievement and changing the culture of the school.

At every academic level, from preschool through elementary and secondary to postsecondary levels, learning is the central purpose. The uniqueness of middle school is its very status of serving young people who are between childhood and adolescence. Lounsbury (2015) argued that, in addition to learning specific academic content and skills, middle school is a time when young people learn to believe in themselves and discover their interests; it is a time when character is formed and students develop critical humanitarian and social skills. Leading middle schools can be challenging at best; leading middle schools that are under stress can be daunting.

Education change theory is relatively new (Glickman, Gordon, & Ross-Gordon, 2014). At its foundation, the theory explores the human dimensions of change and focuses on strategic changes at the local or school level. Evans (1996) identified the elements of education change theory: teamwork, two-way communication, culture, and leadership. He further provided a toolkit for implementation of education change; the toolkit included methods for understanding and communicating change, goal setting,
measuring performance, feedback/coaching, and establishing rewards/recognition (Evans, 1996). Evan’s theory did not remain stagnant; Fullan (2009) expanded education change theory to include specific strategies to actually lead successful change. In particular, Fullan emphasized efforts such as professional learning communities, shared leadership, and mentoring.

Glickman et al. (2014) argued that education change theory is unique because it is “based on the study of actual efforts at school change” (p. 353). Critical components of education change theory have been identified: (1) capacity, (2) commitment, (3) leadership, (4) evolutionary planning, (5) problem solving, (6) support, (7) coherence, and (8) school cultures of continuous improvement. In addition to building capacity for change among teachers and school leadership, ownership of the process is essential. As leadership is shared and distributed, continuous improvement and evolutionary planning allows for feedback related to ongoing changes. Planning and subsequent feedback help identify problems, which are interpreted as opportunities to resolve issues. Education change theory does not reflect a short timeframe; time is necessary to work through the changes during which relationships are built and sustained (Glickman et al., 2014).

Education change theory recognizes that “overload and fragmentation” can occur when there too many change initiatives or they are disjointed (Glickman et al., 2014, p. 357). Thus, a degree of logic and consistency with the education change process is needed. The resulting coherence creates predictable or dependable change efforts and, ultimately, new cultural norms are developed to create a school culture of continuous improvement.
This study presents how a middle school principal, newly assigned to a chronically underperforming middle school in an urban setting approached changing the culture of the school from that of poor academic performance to a place of engaged students. The findings presented were derived from a larger, comparative case study for which quantitative and qualitative data were collected over the span of three years at 18 middle schools. In the larger study, the middle schools were identified as part of the federal grant, Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). The GEAR UP grant was awarded to these schools to help develop and sustain a college-going culture. Schools that were selected under the grant had a federal free or reduced lunch school rate of 50% or higher, tended to have a history of poor academic achievement as defined by state benchmarks, and were often situated in a community that reflected low numbers of college attainment among adults. The research question that guided this study was: How does a principal of a chronically underperforming middle school operationalize a vision of student success?

**Study Design**

This investigation used a case study methodology (Creswell, 1998) to examine how a principal operationalized her vision to change the culture of a school. The larger study included extensive qualitative and quantitative data (state available school data, in-person observations, teacher surveys, core class teacher interviews, principal interviews, and pictures at the school). However, for this particular article, only the data from one school principal during the first three years were examined. The names of the principal and school are pseudonyms.
Participant and Setting

When Karen was hired as principal at Zone Middle School, she had been in education for almost three decades. Karen had been a teacher, a dean, an assistant principal, and a principal. She had experience working within the secondary level at both the middle and high schools. At the beginning of data collection for this study, she had just been hired to be the principal at Zone Middle School.

Zone Middle School is situated in a large, urban community setting. At the time the study began (2012-2013), the school’s population was approximately 1,300 students and included Grades 6-8. Of these students, 90% were from an underrepresented ethnic group. Most of the students, 73%, identified as Hispanic/Latino; the English language learners represented 20% of the overall student population. The school’s federal free or reduced lunch rate was 88%, which reflected students having a high-poverty socio-economic background. From 2007-2011, the school had been identified as In Need of Improvement each year, indicating it did not meet Adequate Yearly Progress under the state’s school accountability measures with No Child Left Behind (NCLB). In 2012, the state changed from NCLB’s model to a growth model with a 5-star rating system. Under the new evaluation system, Zone Middle School needed improvement in whole school growth and proficiency, rating as a 2-star school. However, in 2013, at the end of Karen’s first year at Zone Middle School, the school had a 3-star rating. This indicated that the school was acknowledged for its successes with public recognition, and Karen earned negotiated flexibility in decision-making.
**Data Source & Analysis**

Semi-structured interviews were the data source for this study. During the first year (2012-2013), the interview began by asking the principal to provide a description of her professional background. This was followed by perceptions about her school, including general questions about the school, personal and school goals for the year, and the school improvement process. For the second year (2013-2014), the interview simply began by asking the principal to describe how things were going at her school and how many new teachers she had that year. This was followed by exploring specific improvement efforts undertaken at the school. During the third year (2014-2015), the interview again began by asking the principal to share how things were going at the school.

This study was approved by the university’s Institutional Review Board (IRB) before data collection occurred. During each of the three years, the principal was contacted by email to schedule a date/time to conduct the interview, which occurred in the principal’s office. The interviews were approximately 60-90 minutes in length; each interview was audio-recorded and transcribed verbatim at a later time.

**Data Analysis**

The data analysis occurred in several phases. First, the interviews were heard in their entirety, in chronological order by year. Upon listening to each interview, memos were written after each interview. Next, each transcription of the interviews was read holistically. Broad themes, such as goals, teachers, and initiatives were identified. The final phase consisted of a line-by-line analysis to gain clarity and refine the themes. In addition to a thorough review by the research team, member checking occurred by
providing the principal with an opportunity to review the findings. The findings of this study only apply to the school under study and are limited to the principal who was interviewed.

**Findings**

Karen worked to operationalize her vision at Zone Middle School through various actions. For example, she set her vision in motion by addressing effective teaching and student discipline. In addition, her perceptions of leading the vision were instrumental in the process. These findings are discussed below in more detail.

**A Vision in Motion**

As Karen assumed the role of principal of Zone Middle School, both the assistant principal and dean left; as a result, she had to hire individuals for two key administrative positions while she navigated her new assignment leading a school that had been designated as chronically underachieving. Karen indicated that the school had “lost its way for a while” and that she had been hired to make changes quickly. Because this was a school where “kids didn’t want to go,” and she expressed determination to dramatically change that reality. She likened the situation to being at the edge of a cliff, indicating that they could fall over or “make an amazing leap and be on solid ground again; and I think that’s the direction we’re, we’re going.”

Karen’s first approach was to align and streamline existing programs and processes in order to leverage resources while developing a new strategic plan. She implemented a block schedule, brought in a new curriculum, and wrote a grant to furnish every student with a laptop. In addition, to demonstrate that she would be “here for a
while” she painted and decorated the administrative suite of offices in soft, welcoming tones and artwork to make it feel more like one’s home.

When discussing her actions, Karen used several terms to describe herself: change agent, visionary bully, and task master. Reflective of these self-identifiers, she administered culture and climate surveys to identify successes and challenges expressed by her staff. To force accountability, she regularly conducted walkthroughs and asked for lesson plans. Indeed, she indicated “it’s culture shock!”

Not only did Karen assess the school’s status, she intentionally acted on the results she was accumulating through the surveys, walkthroughs, review of lesson plans, and other forms of data analyses. For example, the block schedule was adjusted to include a common planning time for teachers. For students, electives were added to help excite student learning while still maintaining a focus on student needs within core subjects. Also, a “playtime” session was added during the lunch break; students were encouraged to play basketball, football, or just run around the school grounds.

Additionally, a “college corner” was established in an unused classroom; a welcoming staff member was available during the lunch period and between classes to encourage students to pursue their goals, such as being successful middle school students, graduating from high school, and pursuing college. Furthermore, the grant to supply laptops for every student was funded. With that grant, she implemented an online program in which every teacher could provide course details, materials, missing homework, etc. She also created a Netbook Café, which was a designated area in the cafeteria where students could continue to use their laptops to work on assignments or play online games during lunch (either before or after eating). Trusting every student with
a laptop supported her argument that students should be empowered to be responsible for their own actions. She stated, “Give them [students] that responsibility and teach them how to own it.” Karen referenced that student engagement had “skyrocketed” and described students as “calm” and “relaxed.” Altogether, she described a cultural change in the way students behaved and added, “Students are happy; they are allowed to be kids, and there is no state test for that [success].”

**Addressing effective teaching.** In addition to having to hire two key administrative positions immediately, Karen had to assess the existing teaching and support staff. She shared that she had very high expectations for everyone and focused on the quality of teaching. She appeared to hold a strong belief in teacher growth and that she could “teach anybody to be a better teacher.” Karen described she was strategic about visiting classrooms, providing feedback, and constantly coaching her teachers to improve. She referred to some teachers as “old school” and not doing her kids any good. Karen noted that she asked her teachers to “Prove to me you’ve taught the standard.” Every time she was interviewed, she indicated that there were still teachers who were not living up to her standards and had to deal with those teachers.

She discussed continuing to work on teacher growth. This growth included time for teachers to conduct peer observations; teachers conducted walkthrough observations two times per week and were required to suggest a strategy that could help the teacher, as well as identify a strategy that the observing teacher could put to use. Karen had also implemented a teaching template that all teachers could use in an effort to help teachers understand her instructional expectations with respect to quality and consistency.
During the three years of the data collection, she hired numerous teachers. When asked what she sought in teachers, Karen stated that the most important quality was how the individual related to people and that everything else could be taught. Karen shared an example in which a person acted negatively when not being watched and vowed “that’s not what we need in here…it’s the subtleties – do they believe all kids can do this…or is it just lip service?” Karen stated that she knew rigor was important and that kids needed to be accountable, too. She noted that improvement would happen by building “skills, confidence, and lots of practice.” Karen summed up one interview by stating that if teachers believe students can succeed and the teachers act on that belief, the student will learn.

**Addressing student discipline.** District (and national) initiatives called for solutions to the disproportionate number of school suspensions among males from underrepresented groups. Karen’s response was to restructure the suspension process through a progressive suspension plan. The plan included: (1) a simple “walk & talk” by which a teacher could take a student out of the classroom to help reduce negative behavior, (2) a few minutes or class period in which the students would go to a separate classroom, and (3) full-day, in-school placement for an extended period of time. Karen explained that the plan reduced suspensions/expulsions and kept students learning in school. She stated that students were doing “better; parents are grateful.” Of note, Karen was given a flexible budgeting schedule (i.e., zero-based budgeting) in her third year that allowed her to get staff allocations for this practice.
Perceptions of Leading the Vision

Karen recognized the dramatic changes she was leading at Zone Middle School. Rather than being overwhelmed, she described all of the efforts as “a platter” that she was working to hold up. In reference to juggling the platter, she noted, “Yeah, that part is easy because we have amazing people here.” Karen was confident about the efforts put in place to build capacity; she said, “I know what to do; I know how to get us there.” She ended with, “…so it’s a good place; I know my school.”

Karen described everyone’s involvement in the new efforts. A representative sample includes words such as, “my kids,” “our parents,” “our community,” and “we encourage it.” Karen believed she had changed (and turned around) the school culture at Zone Middle School. She specifically said, “It has taken all this time to have this new culture.” Karen went on to say that the school had reached a cultural change and point in which learning could occur and specifically noted that everything was in place. She concluded, “Can you tell I love this school?”

Discussion

Karen demonstrated an understanding that change would take time and was persistent in seeing follow-through in that change. Interestingly, the progression toward change was evidenced by the differing focus in the interviews each year. In her first year, Karen’s actions appeared to be a reflection on her vision of success; a vision of no excuses, and a vision of what could be. In her second year, it was clear that having others know about her vision was not enough; Karen wanted to ensure that everyone was an active part of the vision; it was about building capacity to see the necessary changes. Finally, by the third year, she had included what she believed were critical components to
sustaining her vision of student success, including structures and process, beliefs, and programs. While the vision was a fundamental force, and staff were carrying the vision forward, it was at this point that risk-taking and experimentation efforts were applied to sustain and enhance a learning organization. What emerged is that there were very specific actions taken by Karen that set her vision in motion. However, the actions alone were not sufficient; her perceptions of leading the vision were equally critical in operationalizing a vision of student success.

Interestingly, in operationalizing her vision, Karen’s vision in motion and perceptions of the vision reflect key components in education change theory discussed by various researchers (Evans, 1996; Fullan, 2009; Glickman et al., 2014). Moreover, she seemed to unconsciously apply Senge’s (1990) habits of a learning organization. Karen modeled Senge’s habit of personal mastery; she actively focused on what was valued and important to the current reality and expected the same of her staff. Her high expectations were guided by challenging existing mental models, which Senge (1990) identified as critical to creating a lasting paradigm shift within individuals and as an organization.

Karen was able to press on while supporting others; she had buy-in and follow-through, and a contributing factor was that she had a well-defined vision and was able to share that vision. Karen, therefore, was able to have her staff work toward a common aspiration, as Senge (1990) suggests for creating a learning organization. By having a common aspiration, Karen generated team learning, in which everyone was constantly building their capacity and enhancing redefining needs. Thus, within three years, Karen and her team embodied systems thinking; Zone Middle School became a learning organization.
Indeed, Senge et al. (2000) affirmed that schools could become learning organizations. Within a school setting, the creation of a learning organization provides an opportunity for schools to “reach a state of continuous change or transformation” (Coppieters, 2005, p. 134). This has become increasingly necessary as principals face added pressures in an era of high-stakes accountability and improved student achievement outcomes, similar to those Karen was facing. Hoppey and McLeskey (2013) found that the principal’s role is a key force in leading change and desired outcomes. When Karen worked to operationalize a vision of student success, she changed the culture of the school, and her role was a key force in that process.

**Conclusion**

Karen’s efforts appeared to be intentional, strategic, and evidenced through her actions and perceptions. They were strategic as she conducted needs assessments and established ways to address identified needs. Yet, as she carefully implemented changes, Karen understood change would take time. Therefore, she was able to reinforce her vision over time, and perhaps, most importantly, she was given the time to do this as she became a stable force in the school. As she operationalized her vision of student, Karen wanted her school to be a place where students wanted to be. She believed school was not a place focused on what you do to students but what you do for students. Through her vision, everything else followed.

**References**


The First Year on Tenure-Track: A Latina’s Reflections

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Abstract

Recruitment and retention of faculty of color continue to be areas of concern for leaders among high education institutions. In particular, the need to have faculty of color on campuses remains critical to mirror rapidly changing student demographics and reap the many educational benefits to diversity. This paper presents a Latina’s personal narrative of her experience during the first year in a tenure-track position at a public university in the Western United States. The author concludes that creative hiring processes, attention to a sense of belonging, and balance within the role may impact efforts to increase recruitment and retention.
The First Year on Tenure-Track: A Latina’s Reflections

Recruitment and retention of faculty of color continue to be areas of concern for leaders among higher education institutions. The need to have faculty of color on higher education campuses remains particularly critical amidst the rapidly changing student demographics. This need is more apparent when comparing undergraduate enrollment percentages against faculty percentages in postsecondary institutions. For example, the National Center for Education Statistics (NCES, 2016a), reported a 119% enrollment increase in Hispanic undergraduate students between 2000 and 2014. Yet, of the 1.5 million full-time faculty at degree-granting postsecondary institutions in 2013, only 4% were Hispanic (NCES, 2016b). Even more, among full-time professors, less than 1% were Hispanic females (NCES, 2016b). With this reality in mind, the purpose of this study was to share a personal narrative of my experiences during the first year in a tenure-track position at a public university in the Western United States to help aid efforts related to recruitment and retention of faculty of color.

**Brief Review of Literature**

Undoubtedly, “achieving the aims of a more diverse faculty is not about numbers or quotas, but rather, about changing the culture of the campus to value, embrace and wrestle with the changes that a more diverse faculty brings” (Hughes, 2015, p. 670). Moreover, it is known that faculty of color are critical members of higher education institutions who contribute a number of positive educational benefits. A more diverse faculty, for instance, can effectively impact student recruitment, promote more inclusive practices and a diverse curriculum, and support overall student success (Akombo, 2013; Fries-Britt, Rowan-Kenyon, Perna, Milem, & Howard, 2011; Mayo & Chhuon, 2014; Strayhorn & Johnson, 2014; Subramaniam & Jaeger, 2010). In addition, faculty of color can strengthen the institution (Hughes, 2015), enhance the
institutional climate and culture (Akombo, 2013; Bilimoria & Buch, 2010), and can even help to improve overall impressions of an institution (Subramaniam & Jaeger, 2010). Altogether, Basak (2013) identified fundamental benefits, such as bringing a multicultural understanding to academia, promoting unity, providing an enrichment of academic traditions, and promoting democracy.

Although there are many known benefits; there are also many challenges to faculty diversification. For example, the “normal search process in higher education has been largely unsuccessful at diversifying the faculty” (Mayo & Chhuon, 2014, p. 224). Beyond the search and selection process, researchers have long documented that when faculty of color are hired, they face added pressures or have increased service obligations based on their cultural background. To illustrate, over 20 years ago, Padilla (1994) referred to this as a cultural taxation. Unfortunately, this challenge of added obligations has persisted as evidenced by the more recent work of other researchers (Fries-Britt et al., 2011; Mayo & Chhuon, 2014; Cerecer, Alanis, & Murakami-Ramalho, 2011). As Hughes, Horner, and Ortiz (2012) simply put it, “they are sought out to meet the institution’s needs for diversity despite the need to be an academician and work for tenure” (p. 603).

One common recommendation for combatting such added obligations and other challenges experienced by faculty of color is to provide mentoring opportunities. Lechuga (2014) indicated that, although there is no single comprehensive definition of mentoring, it does play a critical role in the retention and success of faculty members. Zambrana et al. (2015) indicated that mentoring is an issue of equity and that faculty from underrepresented groups, in particular, should have access to the same effective practices as their colleagues. This recommended
practice, however, can be “inconsistent at best, and ineffective or inequitable at worst” (Yun, Baldi, & Sorcinelli, 2016, p. 442).

As the challenges persist and the need for recruitment and retention of faculty of color continues, it must also be recognized that “little has been written from the perspective of faculty candidates from traditionally underrepresented backgrounds” (Hughes et al., 2012, p. 595). As a result, the missing voice from faculty of color may be another reason for the lack of success in recruitment and retention strategies. Moreover, with the world of academia largely comprised of White males (Hughes et al., 2012), the missing voice from women of color is vital. Specifically, it remains critical to better understand how to support Latina faculty (Gonzales, Murakami, & Núñez, 2013; Núñez, Murakami, & Gonzales, 2015) Researchers (Mayo & Chhuon, 2014) asserted that “individual stories can help individual stories can help make visible the tensions and equity of diversity work in higher education.” Thus, in this study, I use my voice and share my personal narrative of my first year as a tenure-track faculty member.

Methodology

In this qualitative study, autoethnography was used as the primary research method. This method brings voice to an experience by way of an intimate, autobiographic account (Hughes et al., 2012). Specifically, a personal narrative was employed, allowing the researcher to take on dual identities of academic and personal self to tell an autobiographical story about a particular experience (Denzin & Lincoln, 2000).

Researcher Background

I am currently an Assistant Professor at the University of Nevada, Reno. My family and I emigrated from Mexico to the United States when I was a young child. I began to grasp the English language after attending kindergarten in rural Nevada where I was raised. Ultimately, I
attended the University of Nevada, Reno (UNR), a mere 90 miles from home. I was fortunate enough to have been selected as a Bill and Melinda Gates Millennium Scholar (GMS), which funded my higher education degrees: bachelor’s, master’s, and doctoral. However, after accepting a graduate research assistant position, I also received financial support through the university during graduate school. I am a first-generation college student from a low-income family background. I attained each of my degrees from UNR without any deferments; this was in large part because the GMS requirements at the time did not allow much deferment time in an effort to prevent attrition among scholars. I always wanted to have a career in education but mostly envisioned myself as a high school teacher, regardless of my desire to earn a terminal degree.

Path to the Tenure-Track Position

While I was working as a graduate research assistant, faculty members were very strategic and transparent with me. In short, I was informed that upon completion of my doctor of philosophy (PhD) degree, they would prepare me to be qualified to pursue a professorship role in academia. Similar to their transparency, I was quick to share that I appreciated their support, would work to meet those qualifications, but would still pursue teaching in the K12 education field upon earning a PhD.

As I made progress toward my PhD and worked as a graduate research assistant, the main focus of my work was to support efforts related to the federal grant, Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). In the final year of my assistantship, the faculty member who was a principal investigator for the GEAR UP grant was working on a new grant application, in which I agreed to be written into the grant as a postdoctoral fellow to support research and evaluation. In all honesty, I was not sure if the grant would be awarded, so I
did not put much thought into the possibility of returning to a higher education institution upon completion of my PhD.

In August 2010, I attained my original goal – to be a high school teacher after earning my PhD. Toward the end of my second year as a high school teacher, that same faculty member contacted me and indicated the grant had been awarded and wanted to know if I was still interested in the postdoctoral position. The option seemed unreal, but I actually did not hesitate at the possibility. I believed it would otherwise be incredibly difficult, if not impossible, to make my way into the same university system from which I had graduated. Thus, just two days later, I submitted my intent to not return to the high school at which I was teaching. However, I did not immediately resign or release myself from the teacher contract because I did not believe it would be an automatic guarantee of the postdoctoral position. Technically, it may have been a guarantee because I had already been written into the grant; however, not long after submitting my application, I was informed that the title/role had been changed to Research Assistant Professor. The change required me to compete in a national search. I did not question my qualifications for the national search because I believed I was academically prepared for the professoriate, but this new process certainly changed my chances of selection. Indeed, I competed and was selected for the position of Research Assistant Professor.

For three years, I conducted research for a GEAR UP grant under the leadership of the faculty member/principal investigator, who also served as an informal mentor. This was, therefore, a grant-funded, non-tenure track position. The role did not include formal course teaching requirements; this role allowed me to begin to establish a research agenda and enhance my research experience. I was also encouraged to join committees to familiarize myself the service process, while gaining an opportunity to know other faculty in the college. In essence, I
tried to view myself as being a tenure-track faculty member, holding myself accountable to similar measures, and my colleagues were intentional in providing those experiences for me.

Perhaps part of the reason I was afforded these types of experiences was because their intent (though I was not fully aware at the time) was for me to be able to transition into a tenure-track line upon someone’s retirement. As I approached my third year as a Research Assistant Professor, a colleague announced retirement plans. I contemplated the idea of leaving my role and transitioning into the tenure-track position. As my colleagues and I inquired into the process, I was informed that a recent policy change no longer allowed for such a transition, but I could compete in a national search for the tenure-track opening. Again, I found myself competing in a national search for a position that was no guarantee. I was selected.

The First Year

On July 1, 2016, I began my first year in the tenure-track position as an Assistant Professor. In reflecting on my trajectory to the position, I began to wonder whether my path was rare. Even more, being familiar with existing research related to faculty of color in tenure-track positions, I felt I had some sense of understanding recruitment and retention of faculty of color. In considering these two areas of exploration, I became increasingly interested in better understanding my own experiences and exploring how this understanding could be used to inform research and practice. I inquired about needing approval from the university’s Institutional Review Board and started taking notes about my experience, reflecting on events, and considering their connections to research and practice.

It is also important to note that I was pregnant with my first child and due July 25, 2015, the same month I began my tenure-track position. Therefore, although I was not required to report to campus until late August, I worked feverishly to (a) plan for my first two graduate
courses (was given a 2-2 course load), (b) finalize necessary areas related to my prior role (grant writing/reporting for GEAR UP and revising manuscripts in progress), (c) draft at least two manuscripts for publication, and (d) learn about appropriate paperwork related to maternity leave. To the best of my ability, I completed the above components and felt confident beginning my tenure-track role.

**Personal Pressures**

At the college’s faculty welcome meeting in late August, my dean introduced me to the faculty as an Assistant Professor (along with other new faculty members). Although I had already been a part of the faculty in my non-tenured role, this announcement helped me realize that I, undeniably, had a greater responsibility and was now a much more integral part of the college. My program coordinator and dean expressed an understanding about my new role as Assistant Professor, as well as being a new mother. On more than one occasion, the dean and other faculty members recalled their personal stories about parenting and working toward tenure, which demonstrated a great deal of empathy. Although they seemed understanding, I ended up not formally using maternity leave; instead, I worked at home when possible and was adamant about fulfilling my responsibilities; I did not want my commitment or ability as an Assistant Professor to be questioned.

**Tenure & Promotion Orientation**

I attended a campus wide, new academic faculty orientation that was primarily focused on tenure and promotion. It was at this orientation that I realized I lacked a lot of information about the process. I learned about university policies related to tenure and promotion but a host of information directed new faculty members to speak with college deans, department chairs, and other administrative faculty in regard to specific expectations by field. There was a panel of
faculty members across the campus who represented the continuum of the tenure and promotion process (i.e., one was under review, one had two years in the tenure-track role, another had just received tenure and a promotion). Each had valuable input to share, and I tried to learn lessons from their experiences. For example, one indicated having managed time by setting a timer and committing that designated block to prepare for class. Another echoed similar efforts, indicating that a class could be taught by planning a 1-hour PowerPoint presentation or by simply writing one word on a white board. My take-away was that I needed to find what worked for me.

Others went into detail about how they tracked their service, as well as what was valuable or useful towards tenure. For instance, one panel member mentioned keeping track of every single contact made with students in an informal advisory or mentoring capacity, while another panel member indicated only recording meetings with formally designated advisees. A third panel member focused on committee work and stated that any work assumed had to have a mutual benefit to self and the organization. The largest take-away was to protect my time and not take on too much service. I sat there thinking about how much service I was doing; I wondered if I was already the faculty member of color whose service could impede the progress toward tenure and promotion.

The final component was focused on research expectations. Again, it was made clear that expectations would vary by college or department. For example, for some faculty members the expectations might include a published book, while a book may not qualify as research for other faculty members. One panel member mentioned having reached the third-year review and being informed that more first-authored publications were needed. Another panel member discussed the process of having articles under review, others in draft, and ideas in progress to maintain a steady flow in research efforts. My colleagues had recommended I work to publish three articles
per year, and hearing that there was so much variation, I made a note to myself to ask my associate dean about specific expectations with my college during my annual evaluation time. I cautiously set my goal to publish three articles in one academic year.

Relationships

My prior role in the college and my work on committees helped me to learn about other faculty members’ research interests and commitments. In working on committees and continuing them into the tenure-track role, I was able to establish a collegial relationship with many faculty members in the college. One member from one of the committees for example, provided support and information about the tenure and promotion process and becoming a parent during that time. Another colleague asked me how my experience was going and commented that this was one of those jobs in which more and more work was required, but it was very rewarding and did not feel like work. In another committee, it was decided that a subgroup should work on some research related committee objectives, and we began collaborating not just within the committee roles but as a research team. On a frequent basis, I also felt comfortable disrupting my informal mentors’ work to share my current successes, challenge, or simply to say hello. Each conversation and other similar ones throughout the year helped me to better understand the sense of community in the college and my position within it.

However, not every experience was positive. For example, it was all too common for me to get comments indicating they (faculty members) thought I was a student or that I looked very young. I did not assign blame to them for their candid comments; somehow, it seemed to push me to want to show them that I should not be confused for a student or that my seemingly-young appearance did not mean I was incapable of effective work. There were also incidents in which I walked through the hallways and smiled at other professors, but I did not get a response; I
assumed they did not know who I was, even though I knew who they were. In another incident, I had spoken up in a professor’s absence and shared a meeting update. After the meeting, a senior faculty member approached my office and suggested I not speak for other professors. I stated that I was not speaking for someone else; rather, I was simply updating the entire group on the information I could share. I mentioned that if there were office politics involved, I was unwilling to take part in such negativity; the faculty member responded that I should also be cautious about my involvement, even when it might seem positive. It made me uneasy, and I contemplated sharing it with my college administrators, but I thought about it over a few days and then vented with my informal mentors. It was suggested I share the experience with my dean or associate dean, but it did not seem worth the potential drama.

At a higher administrative level, I must note that I had various opportunities and met with upper-level administrative leaders across the campus. I understand that upper-level administrative leaders meet many individuals, and I did not expect them to remember each person’s name. Still, each subsequent event at which I shook their hands, I was once again greeted with, “It’s nice to meet you,” I felt unknown. I was also not comfortable enough to inform them that we had already met. I reflected on whether it might make more sense for them to consider greeting faculty members with comments like, “It’s wonderful having you here,” “Thank you for what you do,” or “It’s great to see you.” I imagined that if I had been greeted in this way, I would not have to be reminded each time that they actually did not remember me.

I worked hard to remember others’ names and roles within the college and across campus. Within our college, I took the initiative of introducing (or re-introducing) myself to those around me during college faculty meetings. There were no all-college introductions that took place, so I often took note of names when one faculty member addressed another. I also
often left meetings and ran straight to my office and studied the directory page; I focused on who I had heard speak and matched faces from the meeting to their pictures on the website in order to learn their names. After one meeting, I recall one professor’s introduction. The professor also asked me how my role was going, shared insightful experiences to which I could relate, and said I was welcome to seek help or advice, if needed. The simple introduction was very thoughtful and impactful; I felt supported and encouraged. In every subsequent meeting, I found myself greeting others and being greeted by more faculty members, having more casual and professional conversations, and feeling more comfortable in that setting.

Faculty members within my own program were informal mentors and were amazing, to say the least. They were transparent, showed compassion and genuine care, and it was evident that they worked to protect my role and responsibilities. They were (and continue to be) deeply cognizant of the demands that can be placed on tenure-track individuals, particularly faculty of color. I believe they were very intentional and strategic in supporting my progress and success. In some cases, I learned later that they had protected my time by requesting I not be asked to join a committee or be offered additional responsibilities. I also received frequent reminders to remember to advocate for myself and to be cautious about my involvement in additional service work. At times, I did overhear issues about college politics, but it was clear that there was a deliberate effort to keep me out of them; I was happy to remain neutral.

I was also open and honest about the things I did not know how to do. Some questions I asked were: What types of things do I usually discuss in my first advisement meeting with master’s students? When do I begin chairing doctoral committees, and how many will I do? What flexibility do I have with my course scheduling? Is there a target goal with publications? How much service work does a faculty member typically do in our college? What happens
Annual Evaluation

An additional process that I encountered was the submission of my annual evaluation; it was due January 15, 2016. This would reflect six months of my tenure-track position. My abstract provided a fairly succinct and clear description of my time in the role. It represented my teaching, advising, research, and service, including grants, and I will focus on some of those components here.

I noted that I had worked hard to fully immerse myself into the roles and responsibilities of my position. During the summer of 2015, I was on an overload contract, which allowed me to work on GEAR UP funding, so I documented that these grants were successfully awarded for the 2015-2016 academic year, totaling $458,000. Upon starting my first semester in Fall 2015, I taught two courses (1 master’s, 1 doctoral) and got positive student evaluations. I also indicated I would be teaching two spring courses and three fall courses (the 3-2 course load transition for the upcoming 2016-2017 year). In Spring 2016, I taught a fully online course, which was the first course to use a fully online delivery within our program. In addition to this formalized teaching, other teaching efforts occurred at the local, regional, and national levels through presentation and workshop sessions at conferences, general trainings, and as a guest lecturer. I also advised and mentored students; my transition from the Research Assistant Professor role to the Assistant Professor role, reflected a 175% growth the number of students I advised in 2016. As a committee member, I supported two students to dissertation completion, three through their
proposal, and many other doctoral students who were considered in process, as well as having supported one master’s student to completion, with several other master’s students in process.

I acknowledged being in my tenure-track position for a short time; yet, I was proud to have published one peer-reviewed article and one newsletter article. I also moved two articles from in preparation status to submission, which were under review during the evaluation (and subsequently got accepted with revisions in the summer). I was first author on all of this work. In addition, I was serving on 11 research projects, all helping to expand my research agenda. I also supported program evaluation of academic bootcamp programs for our university’s provost and continued a follow-up evaluation that was set for completion in Spring 2016. In addition, I as a co-editor of a book and served on research teams for several studies related to GEAR UP, leadership, and diversity initiatives.

I documented my service on a number of committees at various levels (i.e., university, college, local community). For example, I noted that I continued the leadership role for a charter school board. I also provided service to GEAR UP in events at the local, regional, and national levels. Specifically, I served on the State Evaluation Team, I also served in the national evaluation consortium. I was a member of a national committee to completely re-design the national indicators and annual performance reporting for GEAR UP. I provided translation services to various stakeholders within and outside our university. In addition, I served as an editorial adviser for a journal and served as a peer-reviewer for a number of journals.

Essentially, I believed these areas demonstrated strategic, thoughtful, and extensive efforts toward teaching, research, and service. I felt confident about my progress, and I was looking forward to seeking feedback in regard to my efforts. On several occasions, I also asked our associate dean some clarifying questions, such as what supportive materials might be needed
as attachments to my evaluation, as well as how much I needed to include from my course evaluations. The associate dean’s office was open and welcoming, and I felt it was okay for me to “pop in” to ask questions.

As a first-year Assistant Professor, I was required to schedule a meeting with my associate dean to discuss my evaluation. I was not sure what the process would entail, but I did not feel any apprehension toward it. In addition, the associate dean was also in the first year of that role, so I approached the meeting as a mutual learning experience, and I recall mentioning that during the meeting.

There were two most striking parts that I noted from my evaluation meeting. The first part was that I received praise about my excellent progress, and it was recognized that I did very well while having had a baby. I felt that my hard work was acknowledged. At the same time, my rating reflected a commendable mark (rather than an excellent mark). I immediately experienced a sense of cognitive dissonance – the words I was hearing indicated excellence but my actual rating did not reflect that. The reasoning was that I was too new to truly demonstrate or receive a rating of excellent. My immediate question (having recalled my orientation training) was, “What do I have to do to get an excellent rating in research? Do I need to publish six articles per year…or…?” The response was that the college average in publications was 2.5 articles. I found the .5 interesting and confusing, and I decided that my mentors’ advice early on about publishing three articles each year was still a strong and valid goal. I did think to myself, “…but in just six months, I published one and have two under review.” My self-consolation was that I would get the two in review accepted and in the following year’s evaluation, I would have three publications.
The second striking part was that there was a cautionary note in regard to my service. It specifically indicated I should “Be cautious about how much service you take on.” It was reassuring to know that my college administrators were taking note of my often-burdensome service work. At the same time, however, I grappled with how the written note could translate into actual practice. I reflected on whether I was the embodiment of a faculty member of color who is too often described in literature reviews as having too many service responsibilities.

The Final Months

As the final months for my first year on my tenure-track contact approached, I was asked to take on further service work, despite the fact that I specifically referenced having received a cautionary note in my evaluation. As a result, I politely declined additional committees, task forces, panel sessions, etc. In January 2016, I started planning my upcoming fall courses because I would be required to teach three graduate courses (Tuesday through Thursday from 4:00-6:45PM). I had not fully processed how my upcoming schedule would impact my professional and family life. However, one day in a hallway conversation with a colleague from a different program/department, the professor mentioned being adamant about protecting family time by declining service responsibilities beyond 5:30PM. I realized my course schedule alone would prevent me from doing something similar, but I started to think more strategically about how scheduling could impact my professional and family life.

I soon inquired with other colleagues about how they used time management, structured their course schedules, and created time for research. Perhaps the most common response was that some courses could use a flipped model, be fully online, or could follow a hybrid format. At this point, I was teaching a traditional course and an online course, so I began to consider the idea of the hybrid model. I strategically began to draft my three syllabi schedules and considered
ways to rotate some course sessions online. It was evident that at the primary stages of planning and development for online sessions, a lot of work is needed. However, the thought of providing students with some variation to the content delivery and format was appealing. It was also appealing to know that a mutual benefit to this course delivery could take place. I casually shared my ideas with more individuals because I did not know if I needed formal permission from someone to be creative with my schedule. After several points of reaffirmation, I structured what would be strongly beneficial for students’ learning but could also work for me.

During this time of year, I also started getting an influx of documents to review, such as master’s theses, dissertation proposals, or dissertations for defense. There were at least two meetings each month related to a master’s or dissertation defense. As I was busy reading student work, I was also busy working to submit my own presentation proposals that would likely happen during my off-contract time during the summer session. Specifically, each month from February through May 2016, I worked on presentation proposals (1-2 per month) and also attended a professional conference (1-2 per month).

Additionally, I was asked to join a university-district collaboration effort to completely revise our college program, syllabi, and course sequence that required monthly (sometimes weekly) meetings; I also served on three separate dean or other upper-level administration meetings in which I was invited to share some perspectives related to my first year or my diverse background. Furthermore, during the second semester, I was required to finalize and submit programs of study for my new master’s degree advisees. I was also engaged in grant management activities. Specifically, I wrote the renewal for the GEAR UP grant for the following award year and closed existing grants. Lastly, I attended end-of-year closing events.
Consequently, as I entered the final month (May 2016) of my nine-month contract, I realized that I had no tangible, drafted research manuscripts. I soon set my eyes on my “off contract” days of summer. My reality was that summer would be critical for finalizing classes, conducting conference presentations, but most importantly, working on what everyone around me kept reminding me was the essential part of my role – publications.

**Discussion**

As Mayo and Chhuon (2014) indicated, “While we encourage *all* [original emphasis] higher education institutions to consider the benefits of a racially diverse faculty…being situated at research-intensive universities has unique implications” (p. 233). These authors added that research-intensive universities often set the tone for policy and practice. Thus, the discussion that follows includes three areas to consider from my personal narrative that could inform policy and practice related to recruitment and retention of diverse faculty.

**Use Creative Hiring Processes**

Traditional hiring practices, advertisement, and recruitment efforts must change to attract faculty of color. Researchers (Bilimoria & Buch, 2010; Hughes, 2015; Mayo & Chhuon, 2014) have noted that informal lines of communication, non-traditional organizations for recruitment, postdoctoral positions, consideration of hiring one’s own graduates, and diversity within search committees are all strategies that can support creative hiring processes. In my case, although I did not immediately envision myself in higher education, personal recruitment efforts and attempts at creative hiring processes, paved my way to the professoriate. Similar to other experiences, this required a few individuals who believed in my potential and advocates who understood the difficulties with traditional hiring (Mayo & Chhuon, 2014).
As a Latina female, it is not uncommon for individuals from underrepresented backgrounds to want to stay geographically close to family (Johnson, 2008; Williams & Luo, 2010), and I was no different. I stayed within 90 miles from the rural town in which I was raised. In seeking my PhD, however, I did not know that institutions typically do not hire their own graduates (Basak, 2013). Consequently, my personal desire to be close to home was in conflict with institutional hiring practices. With more creative hiring processes, faculty of color may be able to better navigate these two seemingly opposing aspects.

Enhance a Sense of Belonging

There is extensive research related to first-generation, low-income students of color at the K12 and postsecondary levels indicating that their sense of belonging is critical to educational success (Jehangir, 2009; Tinto, 2007). For me, this need for a sense of belonging extended to my professional environment. Altogether, the creative hiring efforts, the relationship experiences, and the many questions I asked and conversations I had with others were critical components to my sense of belonging.

From the most simplistic level of working to know colleagues’ names to a more complicated level of wishing upper-level administrators greeted me in a more welcoming manner – all appeared to impact my sense of belonging. The greatest impact on my sense of belonging, however, came from my informal mentors. Their offices were “safe havens” where I could comfortably seek advice, ask any question, and feel in the presence of friends. Above all, I did not feel alone because of my informal mentors; rather, I felt welcomed, supported, and cared for because of them.
Provide Balance

With an understanding of the literature, my experiences related to the additional responsibilities that faculty of color tend to have (Cerecer et al., 2011; Fries-Britt et al., 2011; Hughes, et al., 2012; Mayo & Chhuon, 2014; Padilla, 1994). However, an individual’s self-awareness and reflections may help the individual to seek balance within the role. For me, balance came from learning to manage my coursework scheduling, course preparation, and grading. In addition, balance came from seeking input to better understand what kind of flexibility and decision-making was possible or appropriate. It also came from a constant self-analysis in which I considered whether I was seeking (or being offered) too much service work that inhibited my time for research. It was a constant balance in processing and deciding whether I could decline a particular additional service component. Clearly, I declined some added service work, and some I did not. In order to build relationships and enhance my sense of belonging, additional service components were often critical. However, too many responsibilities could be detrimental toward tenure and promotion (Hughes et al., 2012). Therefore, what must be recognized is that, oftentimes, this need for balance strongly conflicts with the need for a sense of belonging.

Conclusion

Recruitment and retention of faculty of color is unquestionable. Yet, the “result of decades of effort to increase faculty diversity, particularly when it comes to underrepresented minorities, has been disappointing” (Roy, 2013, para. 5); more needs to be done. As has been noted, targeted hires can be used to bolster recruitment initiatives (Mayo & Chhuon, 2014). In my experience, the opportunity to first serve as a Research Assistant Professor, introduced me to unfamiliar systems and how to navigate them as a faculty member. This trajectory also helped
me to begin to build a research agenda; this is certainly paramount in a tenure-track role at a research-intensive institution. Also, some form of mentoring, even if informal (as in my situation), can still help faculty of color understand expectations, be able to seek questions/advice, and build relationships. Of course, mentoring must occur in a manner that does not undermine capabilities but helps to build on the strengths of faculty of color. Furthermore, these trusting relationships can help faculty of color gain a sense of belonging and purpose on that campus. Still, their purpose on campus needs to be well-understood and protected in order to foster balance within the role. It was all too often in my experience that the rhetoric and the reality of expectations did not match, especially in consideration of service work. Consequently, faculty of color must cautiously self-advocate, but the surrounding faculty and the existing institutional policies and practices must be used to further support recruitment and retention efforts.

References


Cooperative Learning: Preparing Students for Workplace Interaction

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Cooperative-based settings prepare students for intellectual and social awareness, career readiness and intellectual and social development to become better contributors and facilitators (Stephan, W. G., & Vogt, W. P., 2004) in a multinational team. By sharing accountability in learning, and providing feedback that is necessary in establishing a shared identity as members of an institution and an organization, students are able to promote the social support needed to improve participation, to personalize the educational experience, to increase collaborative achievement (Gillies, 2007) and to improve the quality of team-based learning.

Cooperative learning is an instructional procedure of small groups for individuals to work together to maximize their own learning, as well as each other’s. (Johnson, 1991). If properly implemented, cooperative learning leads to greater learning and superior development of communication and teamwork skills (Buch, 2012) in which individuals have the capacity to conceptualize their cognitive advantages in transitioning from academe to employment.

In cooperative teams, individuals can engage in discussions in which they construct and extend conceptual understanding of what is being learned, and develop shared mental models of
complex phenomena. Through the use of cooperative learning, individuals will be prepared to perform better in multicultural teams, and participate in strengthening their interpersonal and professional communication styles.
Title: Using Number Talks to Transform Mathematics Classrooms and Develop Mathematical Thinkers

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USING NUMBER TALKS TO TRANSFORM MATHEMATICS CLASSROOMS AND DEVELOP MATHEMATICAL THINKERS

Ruth Parker, CEO, Mathematics Education Collaborative (MEC) and co-developer of Number Talks

In the early 1990s, having observed the fragility of students’ thinking about and with numbers for more than two decades, my colleague Kathy Richardson and I commiserated that there must be a better way to teach arithmetic. Past and current practices have simply never produced large numbers of students with number sense, nor have they produced many students who can work flexibly and efficiently with numbers.

In our search for solutions to this decades old problem, we began asking the teachers we were working with at the time to try to see what students would do naturally to solve arithmetic problems if we didn’t first tell them the rules to follow. As these teachers began to listen carefully to students and how they thought about problems, the idea of daily Number Talks was born; a 10- to 15-minute routine where students mentally solve computation problems in their own ways, defend their ways of thinking and consider approaches used by their peers.

Since then, I have had the opportunity to introduce Number Talks to thousands of students and teachers across the K-20 continuum, and to parents, administrators and business leaders throughout the country. I have conducted Number Talks with students, teachers and parents in diverse communities and have watched and listened as teachers have taken Number Talks back to their own classrooms at all levels from elementary schools through universities. Teachers and students love Number Talks. And it is also clear that they want and need additional support as they work to change their practice in profound ways using Number Talks as their own ‘sites for learning’. In response to this need, Cathy Humphreys and I co-wrote the book Making Number Talks Matter (Stenhouse, 2015), a guide to Number Talks for mathematics teachers across the educational continuum.

After nearly three decades of working with parents, teachers, administrators and business and community leaders, it is crystal clear to me, and to external evaluators who have studied this work, that when these important stake-holders experience Number Talks as learners, then in overwhelming numbers they support the practice, and they want to see it implemented in schools. Many business and community leaders have expressed that in addition to an increased understanding of mathematics, Number Talks help instill in learners several other dispositions deemed vital to the workplace of today. They need workers who are curious, who can think outside the box and who believe in themselves as problem solvers; workers who have a disposition to persevere until problems are solved; and, workers who can work productively with others, express ideas clearly, and use sound mathematical arguments to present ideas and to critique the reasoning of others. Many business leaders have expressed during our meetings that they want to hire locally, and yet they can’t find workers with these necessary skills and dispositions.
**Number Talks** are gaining national and even international attention as more teachers implement them in classrooms, noting the impact on themselves and their students’ mathematics learning. This growing attention was on display during an on-line book study on *Making Number Talks Matter* (Humphreys and Parker, 2015) facilitated this past school-year by Teacher Laureates at the Teaching Channel. Over 700 elementary through high school teachers and coaches from many countries participated in the 11-week book study. During the study it was common to hear teachers throughout the U.S. and abroad comment that they were learning a great deal of mathematics alongside their students.

**WHAT IS GAINED BY INSTITUTIONALIZING NUMBER TALKS?**

Daily Number Talks are by far the most efficacious way I know of developing student agency in mathematics; of deepening mathematics content knowledge for teachers and students alike; and of developing productive mathematical dispositions in virtually all students. Number Talks serve to deepen student and teacher understanding of arithmetic, and they make a strong contribution to developing number sense. In a very short period of time (just weeks), when Number Talks are practiced frequently, students and teachers come to know that mathematics makes sense and that they can make sense of it in their own ways. Teachers and students alike develop a genuine curiosity towards and a desire to understand how others are thinking. This one profound (yet simple) 15-minute daily practice can shift the entire culture of a mathematics classroom – away from one where students learn math primarily as rules and recipes to be memorized; and towards one where understanding mathematics is expected and where reasoning, sense-making, and mathematical discourse are the norm. Number Talks bring the Mathematical Practices to life in classrooms at all levels.

In summary, some of the important outcomes of this fifteen-minute daily routine include the following:

- Teachers and students gain a much deeper understanding of the operations of addition, subtraction, multiplication and division of rational numbers, place value, and the arithmetic properties – all mathematical relationships that undergird the study of mathematics at every level;

- Students come to know that mathematics makes sense and develop a disposition to persevere until things make sense when confronted with mathematical problems and situations;

- Mathematics classrooms become communities of learners where students trust each other and their teacher, and where everyone is eager to learn from each other;

- Students, teachers, administrators and parents, alike, learn through Number Talks that people approach mathematical problems in different ways, and that this is a good thing. They come to know that when various perspectives are shared, everyone involved learns the mathematics more deeply. They learn to genuinely care about hearing from others and
value frequent opportunities to compare various ideas and ways of thinking about problems.

- Virtually all students become comfortable bringing their ‘voice’ to mathematical discussions during *Number Talks*, and this tendency is often carried into their other subjects as well. One essential aspect of *Number Talks* done well, is that students are put completely in control of deciding if and when to bring their own voice to the public space. A totally safe environment, where they know they will never be put on the spot, allows all students to engage in learning, and *Number Talks* provide time for everyone to think and to ‘rehearse’ or ‘subvocalize’ an idea as they get ready to share it publically.

- Students and teachers leave *Number Talks* curious and wanting to know more. They observe their own growth and that of their peers as they come to enjoy challenging themselves and being challenged during *Number Talks*. They come to understand that important mathematical ideas are never fully mastered in that they continue to deepen in complexity over time. Teachers and students together develop a curiosity that leads to new questions, and a disposition to pursue finding out, and thus, *Number Talks* also spark many worthwhile mathematical investigations around how numbers work.

Phil Daro, one of three principle authors of the Common Core State Standards in Mathematics, directly addresses the importance of *Number Talks* when he talks about mental computation, saying, “You can’t really do mental math without doing algebra. This is algebraic reasoning in its purest form” (NCSM/TM presentations 2010 and 2014).

Daro again addresses the importance of *Number Talks* when he writes, “Inside every number calculation are buried the seeds of algebra. This wonderful new book shows how to use *Number Talks* to grow those seeds and meet the challenges of the Common Core. Cathy and Ruth have given us a wise and practical book on how *Number Talks* can help solve some of the most pressing problem facing schools” (Humphreys and Parker, 2016).

“... *Number Talks* can help solve some of the most pressing problems facing schools.” I agree. The impact of *Number Talks* on student and teacher learning continues to be studied and documented. There is clear evidence for the efficacy of the practice; evidence compelling enough that virtually everyone currently involved in mathematics education should want to become more knowledgeable about the practice. MEC is now working to design a leadership plan to help take *Number Talks* to scale while holding true to essential components of the practice.

If you would like to further explore partnering with MEC as part of our upcoming leadership efforts, please contact me via email at mec@mec-math.org.

References:


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   A Wizard for School Opening Events

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A Wizard for School Opening Events

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Abstract
There are about 20.2 million students attending American colleges and universities in fall 2015 and we expected the
number will increase annually. To facilitate the decision making for the students and families, the school normally
considers to offer opening events. However, there are a few issues at opening events: (1) campus tour is a human
resource intensive task; (2) event scheduling and location switch are difficult for prospective students and families;
(3) the mutual communication channel is not easy to access. In this paper, we identify a few research questions and
propose a system to address these questions. The WOW (Wentworth Opening Wizard) is an innovative integrated
system, which not only provides mid-scale navigation on campus by using NFC and Wi-Fi techniques, but it also
allows the students and families to schedule interested events with navigation support when using it.

Keywords - School Opening Week, Campus-wide Navigation, NFC, Wi-Fi.

1. INTRODUCTION
According to the National Center for Education Statistics (NCES), there are about 20.2 million students attending
American colleges and universities in fall 2015 and the number has increased 4.9 million since fall 2000 [1]. To
facilitate the decision making, the colleges and universities normally offer a few opening events to help prospective
students and families understand the school, including the school’s vision, resources, courses, financial support, the
characteristics of the departments, campus settings, etc. However, the communication was mainly single direction from
the school to the students and their family. Even worse, the schools normally have limited budgets and resources to
support all prospective students, such as campus tours, and the students have difficulties to explore all interested events
on unfamiliar campus. There are many challenges in current settings of opening events, but we would like to think of
them as opportunities to apply new technologies to solve parts of them.

Firstly, a campus tour is one of the most time-consuming event, but it is an important factor for the students and
families to choose a school. Although Global Positioning System (GPS) navigation system has become popular and
convenient in outdoor environment, it is not easy to provide such a service easily at an indoor environment, such as
rooms in a building or a connection between buildings.

Secondly, there are many interesting events happening at the opening day and the students are easy to miss some of
them without noticing it. Although a school brochure can provide a detailed event schedule, the students and families
can feel annoyed and lost, especially they need to switch locations for different events. Scheduling selected events and
understanding what’s happening on campus has become a challenge.

Thirdly, it is difficult for the schools to service all prospective students, and the students and families also encounter a
difficulty to ask questions and get an instant feedback to facilitate decision making. Even though the schools want to
provide follow up support, traditional sign up sheet approach can’t provide data analysis.

In this paper, we propose to have an integrated platform, WOW (Wentworth Opening Wizard), to address above issues.
As shown in Figure 1, the WOW is an Android 6.0 mobile application developed by using Android Studio 2.1 and it
provides mid-scale, campus-wide navigation service by using NFC (Near Field Communication) and Wi-Fi
technologies. In addition, the system also provides event tracking and support for mutual communication between the school staffs and the students. In the following of the paper, we will introduce the current status of the development and discuss the future direction of this project.

![Figure 1: The WOW mobile application. (Left) Main dashboard page; (Right) A navigation drawer provides an easy-to-access options.](image)

**II. NFC NAVIGATION**

Although a traditional GPS-based navigation system has shown a successful usage in some fields, such as driving and outdoor navigation, it doesn't help prospective students and families or someone unfamiliar with the area to explore the campus and get to their desired destination. Based on the observations, we found that there is a need to have a more reliable way to access directions, especially when GPS systems are inaccurate or inaccessible. NFC is a new short-range wireless connectivity standard that uses magnetic field induction to enable communication between electronic devices in a close proximity [2]. This technology is currently used for many different services, such as Google Wallet, Apple Pay, and Nintendo Amiibo.

NFC tags allow the users to accurately determine their location on campus by touching their NFC phone or tablet to an NFC tag, which is normally preprogrammed. This action will then enter the locations data into the application. The location data can then be used to provide directions, reminders, and location specific information (such as building names, room numbers, hours of operation, etc.). Our previous work has demonstrated that it is feasible to use NFC tag to provide mid-scale navigation [3]. We extend our work to the WOW system and provide campus-wide navigation. As shown in Figure 2, by tapping NFC tags placed all around the campus, the users can get the current location in details. If that user registered some opening event through the Event Calendar feature, a path information to the desired destination from current location can be provided.
Figure 2: WOW NFC Navigation. (Left) A screen for tapping on NFC tag to know current location. (Right) A search result on the map to support indoor navigation.

III. WI-FI NAVIGATION

Although NFC tags are relatively cheap and have very flexible placement options, NFC navigation system still requires initial deployment cost and efforts [3]. However, Wi-Fi access points (AP) are already available on most campuses and every smartphone or tablet has Wi-Fi access [4]. By using existing Wi-Fi signal strengths, the system can provide a dynamic location and direction information.

Wi-Fi APs on a campus also have unique media access control (MAC) addresses, which allows devices to differentiate between the routers, especially since some campuses may have a number of routers in close proximity to one another. Our Wi-Fi navigation module collects the signal strengths from these APs in order to determine a user’s location. As shown in Figure 3, we verified our idea on the third floor of Wentworth Hall at the Wentworth Institute of Technology in Boston. Each room has a Wi-Fi AP and we collected a few received signal strength indicator (RSSI) inside and outside of a room. After mapping those RSSIs to the room numbers and Wi-Fi MAC addresses, the WOW Wi-Fi navigation can provide an accurate location information. Figure 3 shows the output of current Wi-Fi navigation module.

IV. CONCLUSION AND FUTURE WORK

The school opening events have provided an opportunity for the students and families to know the school. However, existing opening events system has many challenges and these challenges offer an opportunity to find solutions with state-of-the-art technologies.

In this paper, we have identified three issues at opening events: (1) campus tour is a time consuming and human resource intensive task; (2) event scheduling and location switch are difficult for prospective students and families; and (3) the communication channel was mainly single direction from the school to the students and families, and the school cannot collect and analyze data to support future opening events.
Based on these observations, we designed and implemented a new Android mobile application, WOW (Wentworth Opening Wizard), to address above issues. The WOW system uses state-of-the-art techniques, NFC and Wi-Fi indoor positioning, to provide mid-scale navigation, which is helpful for some school opening events, such as campus tours, location switches for an event, etc. In addition, it also provides event scheduling for the students to plan events in advance. Figure 1, 2 and 3 have shown the status of current development.

Although the current development has demonstrated a promising direction for school opening events, we are considering to explore following research directions to enhance the service.

A. Back-end data analysis server

While the WOW system provides services to the students, the students and families can also provide their public information comments (text or voice) to help the school prepare for the next year. We are considering to setup a server by using Node.js to provide data analysis with statistic open-source software. Based on the analysis, the school can have an idea of the geographic information, students’ academic background and preferred events or activities for the opening events.

B. Speech-based routing support

The WOW NFC and Wi-Fi navigation services can only provide text-based navigation at current stage. To provide a better usage, we are working on creating a GPS-like speech navigation feature that can guide the prospective students and families naturally. Integrated with Events Calendar feature, we believe the system can provide a CLICK and GO scenario.
C. User study with prospective students and families

We are working with the school administrative office to include 2016 opening events into the WOW system. As long as we have the details of all planned opening events, we will start to invite users to test the features, including NFC navigation, Wi-Fi navigation, events scheduling, etc. The post-interviews are also considered to get qualitative feedbacks to improve current system.

REFERENCES


Implementing Non-Cognitive Development
Through Dynamic Experiential Learning Techniques

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Abstract

Outcome-Based Education often focuses on cognitive skill development. While Indigenized educational approaches seek to promote individual ethics “attentively, respectfully, and responsibly,” often times there still exists the axiology of education as a product; this is especially true in postsecondary education. The Northwest Indian College TRiO Student Support Services (NWIC TRiO-SSS) program is designed to serve first-generation, low-income, and students with disabilities, by utilizing non-cognitive developmental interventions to establish a “sense of belonging,” ameliorate historical educational trauma, and also identify and adapt to multiple learning styles and modalities. Based on methodologies developed for the NWIC TRiO-SSS Non-Cognitive Development strategy, education is framed as neither a product, nor discipline, and instead viewed as a reconfiguration of neural pathways. Students’ educational trauma, PTSD, depressive disorders, and others can be ameliorated concurrent with cognitive development and coursework through: individualized coaching/advocacy, writing mentorship, motivational interviewing, reconfiguring self-construal, and mindfulness.
There exist many systemic failures and inherent sociocultural biases within the institutions of American education. After years of mandated core competencies, standardized test requirements, and normative expectations associated with education, curricular benchmarks often create a barrier for student advancement, rather than serving as a gained asset. The usual Student Will Be Able To (SWBAT) institutional outcomes often do not take into account the holistic needs of the learner. The tactic of asking for the need and the want develops agency for the student. The considerations of student experience and positioning academia in context of functional knowledge disassembles the barriers and rearranges challenges into attainable, and pragmatic, goals. This adaptive approach to learning enables a student to move a little further away from the margin toward the collective definition of success, while also serving as a criticism of the academic institution as a whole to ensure that only the most optimal, and beneficent, methods are utilized in engaging students within academia.

There exists a need for a pedagogy which caters to the distinct individualized needs of marginalized learners; individuals whose differences set them apart from the mainstream student demographic, and render them unable to benefit from homogenized learning outcomes. These learners do not have the luxury of agency, or time, to benefit from a pre-set learning outcome. Instead, these are individuals who have developed their own distinct needs for an education that fits their individual needs from their learning institution. These needs, however, may not reflect the outcomes intended by the institution, and when amalgamated into overall student statistics can appear as failures. The inability to progress due to either failure - or outright rejection - of regimented competency measures, implies that a student’s needs are not met. This leads to social trauma as these individuals may disappear from classes and student spaces and become even
more separated and disconnected from institutions of learning. To exacerbate the disconnect, students dropped from their classes risk damaging their GPA and/or academic record, or worse they may end up owing large amounts of student debt and are even more severed from the academic pipeline. When a student’s needs are met, and considerations are situated holistically, the student develops self-efficacy - connection to their education - which leads to persistence, higher grades (or other institutional outcomes and/or benchmarks), graduation, and eventually practical application of knowledge leading to an increase in a student’s quality of life. The impetus is to create a tactical pedagogy: to meet these individuals where they are at, to literally ask: “What do you want?” and “What do you need?”

Marginalized students are often placed into classes for which they may not be prepared. Students who struggle with remedial math and English requirements may also feel isolated in an academic institution, especially students who are non-traditional, first-generation, low-income, and/or may have a disability. Therefore, it’s imperative that academic advisors and student support staff understand and acknowledge students’ needs and wants and employ tactical pedagogy. Academic advising has undergone a series of revisions throughout modern education to increase effectiveness (Poole 2013), and just as any sort of critical theory in pedagogy, a whole host of styles and methods have taken stage: holistic advising, intrusive advising, eAdvising, prescriptive advising, and countless other forms. While there have been several studies analyzing advising methodologies (Poole 2013), there is a common theme which emerges: students no longer require mere assistance in choosing an academic pathway, they require assistance with making healthy life choices.

The specific method employed is fairly straightforward: (1) a student engages with an instructor/advisor/facilitator, (2) through multiple forms of needs-assessment and student/coach
interaction, a set of objective-based goals are developed, (3) specific academic and/or life needs are met using an "experiential learning" approach, and (4) successes and failures are utilized to improve the method across scale and discipline. The work of the instructor, the advisor, and/or the facilitator is to assist with defining the need, the want, and to situate the functional knowledge within context of place, culture, and environment. The needs/wants will be different for every individual learner, and necessarily so. This paper does not seek to analyze, categorize, and criticize each form of instruction and advising, rather this will serve as a foundation to explicate the current method of Coach Advocacy at the Northwest Indian College TRiO Student Support Services program (NWIC TRiO-SSS), and further detail the specific activities which employ non-cognitive development methods to overcome potential trauma associated with education. This paper seeks to emphasize tactical pedagogy as a means for a student to develop specific knowledge and skills to accomplish explicit objectives and overcome inherent fears/trauma associated with education. Furthermore, this paper will not discuss specific summative outcomes of the methods employed as we have adopted a Community-based Participatory Research (CBPR) process for assessing, analyzing, and disseminating results; meaning, until we have not only consent, but also data-ownership and buy-in from our students, and their community, this paper will simply highlight the specific methods developed utilizing prior research and evidence of effectiveness.

Position

Education, as a strictly intellectual concept is often positioned as a discipline, a method, and/or an outcome (Walton 1963; Wittrock 1986; Acharya 2003). We frame education specifically as neurological development; the literal reconfiguration of neural pathways leading
to change in consciousness and associated behavior. Traditional pedagogies, particularly those utilized in math and language can require a hegemony which could be oppressive, even traumatic, for students who are situated outside of the typical American educational system (Perry 2006). Therefore, through positioning both education and trauma as forms of stress, an "educator" must take into consideration a student's specific associations with not only course subjects and classroom spaces, but also environmental factors which may contribute to harmful stress. This can be accomplished by first identifying the specific cognitive functions that a student is expected to learn, and then identifying non-cognitive methods to incorporate those functions into the student's experience holistically.

By focusing on the specific required function, rather than broad subject, there exists potential for redress of trauma associated with the institutions of learning. The NWIC TRiO-SSS Coach Advocates utilizes several methods to associate positive feelings with academic outcomes ranging a whole host of academic applications including writing, completing assignments, attendance, applying for financial aid, etc. Coach Advocate staff seeks to cultivate a sense of belonging among all first-year students using these principles and collaboratively develop non-cognitive life skills in areas such as Sense of Place. Furthermore, Instructors incorporate into lessons, the knowledge of cultural values which support a student’s ability to communicate in diverse situations, listen deeply, think critically, and organize and articulate ideas. Within the framework of Tactical Pedagogy, Coach Advocates use a concept akin to military tactics as a way to take stock of their weaponry and identify objectives. Strategies are developed to adapt and overcome - to win the battle against what a student identifies as the “enemy” of their success- and break down barriers that prevent the student from reaching their idea of success. Coach Advocates then use the tools of experiential learning and non-cognitive association and
skill-building to further equip a student with skill-sets necessary to effectively communicate and lead in diverse situations. By enabling a student’s access to “intelligence,” allowing a student to anticipate further challenges, also increases their signaling capacity; receiving and expressing information - and most importantly need - both verbally and non-verbally. This also furthers the overall institutional capacity as self-efficacious students can also modify, deploy, and even train other students to use analytical and critical thinking skills to draw and interpret conclusions from multiple perspectives, axioms, and experiences.

Application

Students who are not engaging, attending, producing, graduating are problematic to an educational institution. They bring down retention and graduation rates, which create frustration for administration and faculty alike. Within the TRiO grant there are three identified student characteristic targets-Students with disabilities, low-income students, and first generation students. These are generic labels to help sort out groups of individuals and all of these students have some need or want that is not being met. During the phase of program development it was pre-supposed that students who fit within these categories were experiencing a disconnection education in a way that made their education unattainable. The first effort to clarify the disconnection was to develop a comprehensive script for the first student meeting. This script incorporated the spirit of Motivational Interviewing to engage the student in a collaborative working relationship, Miller, W. R., & Rollnick, S. (2013). Academic Life Coaching is used as a framework for creating a relationship that is a non-hierarchical and provides a foundation for both the student and the coach to explore different areas and be creative in finding individual solutions that work specifically for that student. (Williams, J. A. 2016). Culturally sensitive
questions were incorporated due to the majority of students of who were identifying themselves as Native Americans.

The anticipated outcome of the lengthy interview was to develop rapport with the student and then identify goals that students and coaches would work on together throughout the quarter. What we did discover is that students did not have time for a lengthy interview; they had distinct emergent needs that if not met on the fly would result in immediate negative consequences in the form of absenteeism, failure to complete an assignment, or complete the class. There was very little long term goal consideration, let alone the ability to make and keep an appointment for next week. The other focus of development was on the idea of non-cognitive activities to increase overall engagement. The idea was to create activities that increased student sense of connection to their education and to the educational institution. This manifested as a “Backgrounds Matter” campaign that was incorporated as the underlying theme to the program development of the grant. It was determined that individuals have unique backgrounds (their power) they brought to the college (place) and then a relationship developed. Commitment ceremony, personal tours, Student Executive Board (SEB) members telling their backgrounds, incorporating experiential learning to places at where there is no hierarchy and which have their own distinct backgrounds (Lopez Island Camas Research Garden, Geology field trips, Doe Bay, North Dakota and Birch Bay). Open Space Facilitation practice developed the personality of the relationship. This effort was utilized to take away the hierarchy that is found in so many relationships in academia. The imbalance of power in academia of “I have what you will need to be successful on my terms” rather than “What do you need?” to be successful on your terms. Allowing the individual to define success and honoring that design cemented the development of personality. The following
methods are the specific applications of non-cognitive development couple with tactical pedagogy and experiential learning.

Methods

Each of the following methods begins with an invitation for the learner to participate to establish inclusion to increase comfort level with the activity as well as to increase the motivation to learn. (Daffron 2011)

**Method one: Initial Interview with the student.**
Purpose: To create a rapport, identify strengths and identify needs.
Design: Using Motivational Interviewing Techniques, Academic Coaching tools and preference assessment the coaches become familiar with the student’s level of resiliency, their immediate needs, and their challenges to assist them with self-identification of success. Students are initially asked for permission to discuss these things and are advised of the confidentiality that is maintained within the content of their discussion.
Outcome: Students who are able to identify an immediate need that will allow them to remain in school, such as Financial Aid, Childcare, or inability to communicate with an instructor, are immediately armed with the knowledge or support to take the next step. Coaches use accountability actions to ensure students use the tools they develop.
Application: For example: a student who identifies the need for food is advised about SNAP assistance and is walked through the on-line application.

**Method two: Non-cognitive skill building workshop: “Box of Objects”**
Purpose: To develop connection to education and to other students.
Design: The exercise allows students within a group setting of their peers identify from a collection of objects and are asked to verbalize how they feel connected to that object and then share with the group. The facilitator than provides additional examples of connection to strengthen concept of power, place, and relationship. (Deloria & Wildcat 2001).
Outcome: Students are able to identify and verbalize connection as a feeling.
Application: For example: a student who selects a piece of beach glass may describe how they are reminded of being connected to the beach, the water, and family.

**Method three: Non-cognitive skill building workshop: “Learning Styles Activity”**
Purpose: To present the concept of learning styles as a definition of a tool and not as an identity.
Design: Students listen to the facilitator read different scenarios regarding completion of a task. Students group with likeminded individuals after each reading up and they are encouraged to group together with likeminded individuals and discuss how they chose to identify with the particular scenario.
Outcome: Students discover that different tasks may require different learning techniques and learning styles are fluid, flexible, and without a hierarchy of power.
Application: Students are able to consider themselves as not confined to one presumed learning style that they use for every task and are free to utilize the style that meets the task at hand.

Method four: Non-cognitive skill building workshop: “Letter to Self Activity”
Purpose: To use writing as a tool to connect their current self with the future self.
Design: Participants are invited to first join in a humorous group writing exercise of fill-in-the blank scenario exercise to help make a positive association with writing. They are next given a prepared sheet of paper and taken step by step through the process of how to write a letter to their future self. Within the letter the student is asked to identify motivators, support people in their lives, and to write out a phrase of encouragement that has worked for them in the past. The letter is to be read whenever the going gets tough during the quarter. (Our experience with students has been that effort declines immediately after the rush of midterm is over.) Completed letters are collected in individual sealed envelopes that will be made available to them when the student feels the need or the Coach Advocate senses the need.
Outcome: Student identify motivators, support people and positive self-talk
Application: Students are able to plan for the future and utilize a tool that will help increase motivation.

Method five: Non-cognitive skill building workshop: “Bacon and Eggs”
Purpose: To introducing the theme of personal commitment and encourages the concept of understanding and honoring differences in individual preferences.
Design: Participants are asked to listen to a question and then move to the picture that illustrates their response. There is time built in for small group discussion and sharing out to the larger group after each question. Students are reminded that there are no wrong answers and to answer what is true for them. The facilitator then uses analogy and metaphor to debrief and demonstrate the concept of commitment to education and personal preferences.
Outcome: Students witness that they have similarities and differences with their preferences and there is no hierarchy to preference related to commitment, only personal choice.
Application: Students are defining how they will commit to their educational goal.

Method six: Panel Discussion: “Background Matters”
Purpose: To highlight the variety of student backgrounds and their stories of individual success
Design: Pre-selected students are invited to share out in panel discussion style their background, their current educational goals, how they are meeting them, and their future goals. Following the panel discussion, individual students are then invited to be interviewed by the panel students—one on one and using the same format and record these interviews in written and video format. Outcome: First-year students will be asked to volunteer to share aloud and record their essay on video with the understanding that future students will hear their message and self-construe a similar positive mindset change. Videos are made available for viewing. Application: Students are defining how they will commit to their educational goal.

Consideration

Considering that while each student may be different, for practicability some classifications can be utilized. The majority of the student population served and those who have been interviewed to assess their background using the extensive interview and knowledge coaches experience and are grouped into four general classifications:

Type A – Student with strong foundation-done well all her life, has the degree/tutoring-often overlooked because they are overlooked-overly anxious/huge amount of responsibility or worse seen as the model—but not necessarily Dunn and Kruger effect tactical response is to reduce anxiety-develop living in the moment thinking schools and anchoring them to the idea of past success that can be transferred to current success. This may involve breathing techniques, relaxation techniques and positive visualization

Type B – Student with self-driven foundation-student that may or may not have done well in school but this is also the student that misses all of the class—but does all of the work tactical response is…to learn how to take the test. Develop strategies to attend class, review family and cultural responsibilities that prevent the student from attending class. Look at strengths; assess level of self-efficacy and connection to educational goals.
Type C – Remedial Student/Developmental Disability-undiagnosed disabilities, pushed through high school taken same math class 6 times-paid for it 6 times. Etc. Strategies include diagnostics for immediate accommodations such as large print, access to lecture note prior to lecture, sit down with instructor to brainstorm accommodations. Arrange Vocational Rehabilitation counselor to meet with the student and the coach at the college.

Type D – Student rejecting classic education model and are rated as being high risk by faculty, staff and advisors who are in contact with them. These may be students who have enrolled in school to access financial aid as a source of income and will attend class just long enough to receive their distribution are made ineligible because of incurred student debt. Students with undiagnosed learning disability who refuse attempts for support and want to “tough out” their education and ultimately drop out or are forced out by their poor academic performance. Another example from this group is the student athlete who is recruited, eager to play ball, but is not seeking to complete their education. The tactic to engage these students is to assess their true wants, career assessment and align them with appropriate resources such as career guidance, financial counseling, and job finding techniques.

A key advantage to tactical pedagogy is methodological malleability, meaning that through situating a particular knowledge or skillset to not only the student, but also the place, can be accomplished without compromising said knowledge. Furthermore, by situating the knowledge in context to place, a pluralistic approach can be incorporated which does not erode, discount, or degrade a student's prior knowledge. This is an especially pertinent consideration for work with indigenous peoples, or other peoples with particular knowledge held as sacred and/or fused with their entire epistemology (Deloria & Wildcat 2001). English language, for instance, is the result of centuries of colonization, and to fail to take this into consideration when working
with students who may have English as a second language. Instead, English language should be approached, positioned, and instructed as a functional knowledge to reach a specific outcome of the student's choosing, rather than as a hegemony and/or tool of oppression.

It’s also imperative to situate the method to the place, respecting the surrounding community and culture. Place-based education can also utilize functional knowledge, through experiential learning and pragmatic application, to meet specific outcomes. For instance, a student may reject learning trigonometric functions in a classroom, however may understand and apply trigonometry by using an astrolabe to measure the height of a tree or building. The student in this way can see an immediate, and practicable, outcome. This is a double-edged sword however, as often times place-based education can utilized as a crutch to reject particular knowledge due to ethnocentrism and/or xenophobia.

Conclusions

The specific activities developed for inclusion into the NWIC TRiO Student Support Services are based on models which have shown evidence of effectiveness. To assess specifically how effective, and observe the longitudinal impacts of tactical pedagogy and associated experiential learning will require further research, ideally in various places and populations, and a clearer review and understanding of functional knowledge. Furthermore, this method could be a rehash of another, previously tested, form of pedagogy under a different name, once again requiring a more rigorous review of the literature as well as transcultural educational review outside of the western academic paradigm. It may be that tactics employed have a different name
or are not understood or labeled as non-cognitive designed skill building. The goal is to identify and collaboratively review the similar programs and strengthen the results.

Implications for Education are numerous. There are several that have emerged in the short time that the program has been in place. The effect of using tactical pedagogy to promote decisive movements and targeted effort increases efficiency. Students who have lingered for years failing to move forward with their educational goals are rapidly assessed, armed with the correct tactics and graduate. Students who have wallowed in self-doubt and were unable to find the muster to continue are identifying their resiliency and using it to slay heretofore confounding prerequisites and moving into their programs of study after developing self-efficacy. Finally, students with undiagnosed disabilities and who for years questioned their intelligence now work directly with instructors and coaching staff to create accommodations to target their needs and ultimately demonstrate their ability to succeed.
References


New Social Studies: Use of Inquiry to Engage Learners

Social Studies Education

Poster Session

Move beyond a simple list of who, what, when, and where in your social studies curriculum by enabling students to delve into the how and why—give students the power to guide their learning by answering their own personal questions about topics. Example inquiry lessons and lesson planning strategies for implementing the process will be shared.

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Abstract

Science-based classes have been using inquiry-based instruction for years. Often, these classes are hands-on and encourage students to ask questions, test hypotheses for possible solutions, and finally share results with one another. Historically, social studies classrooms have been the exact opposite: the teacher instructs (usually in lecture form) a long list of events and people which are connected via major themes or ideas with the expectation students will be able to recite and justify the information back. Very rarely were students encouraged to ask questions or challenge the opinions of the instructor. To do well in these classes, all that was asked of students was rote memorization and the ability to justify events with similar perspective to the teacher (or group if working cooperatively). It is no wonder students found these classes drudgingly boring and monotonous.

To best meet the needs of our 21st century students, we need to change the way we approach instruction in the social studies classroom. Modern students no longer need instruction into basic historical facts; these things can be learned by simply "asking Google." Instead, teachers in the social sciences can improve engagement and understanding by borrowing the inquiry process our science colleagues have been using for such a long time. Inquiry-based learning is student-centered. It allows students to question and generate their own answers and perspectives on topics. Teachers are able to move out of textbooks and lecture to become facilitators of the information. Students practice a process which is used in both college and future career fields.

By bringing the inquiry process to the social studies curriculum, students are in control of their learning. Students are given a prompt, usually a controversial question from a topic or era. Students propose answers and develop supporting questions they will need to answer to address
the over-arching theme or question. Next, students find and use sources to support or refute their hypothesis. This step also includes strategies and procedures for organizing and sorting their data. Finally, students share and compare their results with classmates—each student is allowed to develop their own unique understanding of the topic and creatively share it with their peers.

During this poster session, participants will see examples of how the inquiry process is used in a social studies classroom. Examples include how to use the process at a variety of different educational levels: elementary, middle level, high school, and university level classes. Additionally, planning techniques and ideas will be shared giving participants a "starting off" point for modifying and updating existing curriculum to include inquiry-based lessons.

Keywords: inquiry, social studies, education, instructional strategies
Title: Flashy Fluorescence: An Interdisciplinary Approach to Art and Science

Topic Area of Submission: Cross-disciplinary areas of Education, Art Education, STEM Education, Secondary Education

Presentation Format: Poster Session

Description: Applying both Chemistry and Visual Arts disciplines, students will use “green chemistry” techniques to extract photo-reactive chemicals to produce colorant that will then be used to make interesting art projects with hidden designs.

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Abstract: Messy, measurable, and memorable are great indicators for learning in the Art... and Chemistry classroom. Chemistry and Visual Arts are not typically seen in tandem; however, these two subjects are related. Chemistry provides the basic elements of design, while Art unifies these aspects which appeal to the aesthetic senses. Through this investigation, students will be able to extract fluorescent pigments in order to use them to create Visual Art pieces that incorporate an additional dimension revealing “hidden” designs through the use of UV or black light. The colorant is sourced from nontoxic plant or general household items. These materials are generally inexpensive, readily available and ensures that this project is friendly to the environment as well as economical to the classroom teacher. Exemplar pieces and lesson plan handouts are available.
Title: *Wii Are Having Fun, Aren't U?* Using a *Wii U* to Engage the High School Math Student

Topic Area of Submission: STEM Education, Other Areas of Education

Presentation Format: Poster Session

Description: Lesson plans and exemplars on employing gaming systems, with an emphasis on the *Wii U*, in a secondary school mathematics class environment.

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Abstract:

Mathematics is everywhere - and this includes video games! The entertainment system developed by *Nintendo*, the *Wii U*, has captured the attention of youth everywhere through a myriad of games. Young adults instantly gravitate to the charming characters and the exciting storylines which sparks students’ interest. The use of video games has been employed at the elementary panel and can also be utilized at the secondary level. Applying mathematical concepts through the use of these games, can lead students to a better understanding in a variety of high school numeracy topics. Further, this gaming console can aid in engaging students through the thrills that this interactive technology has to offer. This presentation will investigate how games, including *Nintendo Land*, *Mario Kart 8* and *Mario Maker*, can relate mathematical concepts to students at the secondary level.
Abstract

This is a study in progress and preliminary data is reported. The study is the beginning of a programmatic research effort. Individuals from US and international universities are recruited as collaborators.

Online instruction has emerged as a significant trend in how instruction is delivered by institutions of higher education. Internationally, distance education courses, are increasingly being offered online. The model is employed by many universities in offering online undergraduate and graduate degrees. Blended courses that integrate online instructional features with face-to-face instruction are also offered in most disciplines as part of campus based curriculum offerings. A critical difference between online instruction and face-to-face instruction is the reliance on visual display designs (design patterns) for the representation and presentation of instructional information. Some of the traditional elements of face-to-face instruction do not generalize to online instruction. An example of such elements includes some aspects of accommodating cultural differences. Institutions of Higher Education (IHEs) in the United States invest heavily in professional development to ensure that faculty accommodate the needs of students from different cultures in face-to-face instruction. However, in online instruction there is little evidence that similar efforts are being made to determine if there are cultural differences that impact the design of online instruction and in turn the performance of online students. Yet, most IHEs in the US are actively recruiting students of diversity and many are targeting online programs globally.

The study represents the early stages of an effort in investigating whether postsecondary online learners vary in their responses to course design and pedagogical features due to the students’ cultural background. The cultural groups, being studied, include Asians, Hispanic/Latinos, Middle Easterners, African Americans, Caucasians, and Native Americans.

The methodology employs three sets of survey items derived from reviews of the research literature. The surveys include 1) online pedagogical features, 2) course design features, and 3) visual design principles. Responses of individual online learners, enrolled in collaborating
institutions, to each item within the three surveys along with demographic information are recorded online.

The specific research goals of this study are as follows:

- To begin with an examination of the basic design and pedagogical features of fully online asynchronous courses and the underlying design principles;
- To explore the need for programmatic research to validate cultural differences relative to pedagogical and design features employed in online instruction features at the post-secondary level;
- To develop research based guidelines for accommodating cultural differences among online learners;
- To stimulate interest among researchers in IHEs internationally in addition to the US in joining this collaborative research effort.

The purpose this study is to inform future research and to attract additional collaborators to participate in a programmatic research effort related to the study of cultural differences in online instruction. The preliminary analysis of a pilot study indicates that there are cultural differences that occur among different cultural groups as measured by responses to selected survey items. To date the sample size of responses in this study from some cultural groups is currently too small for a comparative analysis across cultural groups. The purpose of expanding the number of collaborating IHEs is to increase the size of the data pool and to ensure sufficient size across cultural groups for appropriate analyses.

**Online Instructional Context of Cultural Differences**

The use of visual display technology, as applied in online courses, to present instruction is distinctly different from face-to-face teaching/learning environments. Face-to-face instructional environments provide a natural setting for teaching. Instructors can build the classroom culture that works best for them and their teaching style. Reinforcement of students in face-to-face instruction is more easily achieved and addressing cultural differences among learners becomes a natural part of the instructional process. Instructors in face-to-face instruction also have the advantage of observing student reactions and responding to non-verbal cues. The accommodation of cultural differences among online learners may be more important than in face-to-face instruction. This is especially true in asynchronous online instruction delivered via distance education models where neither the nature nor the impact of cultural differences has been validated at the post-secondary level as has been done in face-to-face instruction. A large body of literature exists on the impact of cultural differences on teaching and learning in face-to-face instruction. The accommodation of cultural differences in face-to-face instruction is a high priority in teacher education in US universities as is multicultural education. Yet, the instructional implications of display designs as employed in online instruction have not been sufficiently researched from the perspective of cultural differences among online learners. There
appears to be the perception that online students are all alike and that the same course features and display designs tend to be effective with all students.

The rationale for this study is that insufficient attention has been given to the impact of cultural differences on how online learners respond to display designs pedagogical features employed in the presentation of online instruction. The visual display is the most common element of online instruction. It is what the learner responds to. Said in another way, the visual display design presented via the monitor is central to how online instruction is presented to the learner in online instruction. The impact of cultural differences on how online learners respond to visual displays has not been validated in asynchronous online instruction.

While the literature addresses the importance of considering the cultural background of students in face-to-face instruction, there is a lack of research on how cultural differences impact the outcomes of online instruction and how to accommodate validated cultural differences. What tends to be the current practice is to assume that all online learners enrolled in a common course are the same in terms of how they respond to visual display designs. This display attribute of online instruction is what distinguishes online instruction from face-to-face instruction. This study focuses on asynchronous online instruction and instruction presented online in hybrid and blended instruction.

There is a body of research outside of education that relates to the rationale for this research. In the world of business, and is called “cultural markers.” When the business world relies on digital displays in marketing, they want those displays to be maximally responsive to the cultural differences of their potential customers. If they are not, then their business plan may fail. If there are cultural markers in business, might there be cultural markers in instruction that contribute to successful learning in the digital world of education?

**Cultural Context of this Research**

A significant unanswered question in online instruction centers on what the probabilities are that culture impacts how online learners respond to display designs and/or the instructional features routinely employed in the development of online courses at the post-secondary level. If it is found that cultural differences do impact learner outcomes, then it may be assumed that differences will vary across cultures. This sets the stage for conducting programmatic interdisciplinary research. The focus in higher education on marketing online courses worldwide, combined with the growing diversity among students in US IHEs make researching cultural differences in online instruction a major need. If cultural differences are found to impact online learner outcomes, accommodations will be needed to address the differences across cultural groups. The accommodations will likely be achieved through modifications in display and instructional designs. As noted in Figure 1, online instruction has changed the instructional environment. There are two distinct instructional environments in addition to varied blended models. Today, the face-to-face environment receives extensive attention at all levels of education to accommodate diversity in educational settings. This is not true in online instructional environments where instruction occurs via display. Knowing how online courses
are designed in different countries and cultures could inform subsequent research. Domestic environments in the U.S. are by no means immune to cultural differences.

Figure 1: Online Learning Environments

It is difficult to estimate the amount of money being spent today by the public and private sectors to design and develop online courses and training programs without attending to the question of whether cultural differences impact online learner outcomes. Yet, if cultural differences are found to exist, the cost of accommodations may be expensive. However, not to create those accommodations may be even more costly from the perspective of learners. On the other hand, such research and accommodations may benefit all online learners. The context of online instruction has clearly been impacted by advanced technologies. It is hard to comprehend the impact that technology has had on education. Progress will continue in educational applications due to the invention of advanced technologies. This progress in technology may minimize the impact of cultural differences relative to the role of visual displays in online instruction. Or, ease the task of achieving accommodations across cultural groups.

The study that we are engaged in represents a preliminary effort to determine if there are cultural differences that impact online learner outcomes. It also represents a step toward engaging others to join in subsequent collaborative research efforts.

The relevancy of this discussion on the context of culture to the proposed research is to emphasize the importance of beginning a research initiative to explore the implications of cultural differences on the design of online instruction. In general, the importance of being responsive to cultural differences in face-to-face teaching is well established. Few would likely argue that it is not equally important in online instruction. Given the rate of growth in online instruction, a case could be made that researching the implications of cultural differences is even more important in online instruction. The research that has been done is very limited and does not study cultural difference from the perspective of design principles related to display, nor does it address the wide array of cultures reflected among the students in post-secondary institutions.
The focus of this research is on design principles and pedagogical features related to how instruction is presented via display. The display is the most common element in the delivery of online instruction. Despite a significant literature base on visual display design that was accrued decades prior to the Internet, there is little evidence that this knowledge base has been significantly addressed in the movement toward online instruction. The delivery mode for online instruction is dramatically different from face-to-face instruction. But, the design focus appears to have been more on the structuring and framing of content than the principles of display design. The goal is to contribute to building the knowledge base on maximizing the effectiveness of instruction delivered online for all learners.

**Literature Perspective**

The challenge experienced by society in accommodating cultural differences varies depending on the context. For example, many neighborhoods and communities are made up of families from different cultures. Over time, the families accommodate their differences in a very natural way. The challenge to society is not in defining culture or identifying advocates for accommodation; the challenge is knowing under what conditions cultural differences might warrant special attention and determining how accommodation can best be achieved. The international literature is filled with examples of how everyone’s quality of life is improved and how the interests of a global society are served when cultural differences are valued. However, little is known about the impact of cultural difference on how online learners respond to instruction delivered via visual display i.e., the monitor. This is particularly true in online instruction where technology plays a critical role in the teaching and learning process. Online instruction exists at all levels of education - especially the post-secondary level - yet educators know very little about the significance of cultural differences within this mode of instruction.

While the lack of research in validating the impact of cultural differences in online instruction is evident, the literature argues that it is important to accommodate cultural differences in all modes of instruction. Barber and Badre (1998) discuss cultural markers as interface design elements and features “that are most prevalent and possibly preferred within a particular cultural group” (p.1). This concept would seem to have application in online instruction. The authors also stress that culturability should be one of the design principles in website design. An international user interface should take cultural markers into consideration for particular international users.

The fact that education and industry have moved at an unprecedented rate to implement online instruction without addressing even the most basic questions that undergird the delivery of instruction via display technology has resulted in a major void in the knowledge base needed to maximize the effectiveness of online instruction. This void becomes even more significant when combined with the lack of research on the impact of cultural differences on learner outcomes.

In describing how cultures are formed and how they impact every corner of society, Hofstede and Hofstede (2005) describe the patterns of thinking, feeling, and potential acting that were learned throughout a persons’ lifetime, as culture – the software of the mind. They go on to
refer to culture as “consisting as the unwritten rule of the social game” (Hofstede & Hofstede, 2005, p.3) and offer a model for extending an examination of culture from studying national and global differences among nations to analyzing organizations for cultural

While the early work of Hofstede and Hofstede occurred prior to the emergence of the Internet as a vehicle for delivering instruction, their work provides a rationale for examining the following question: How do cultural differences impact online instruction for online learners?

Survey Design

The survey was configured into two parts. Part 1 was a modified replication of the study done by Hu (2009). The modified Hu’s (2009) five-point Likert Scale instrument included 31 design features and 32 pedagogy features. Respondents were asked to rate their preferences on a five-point scale, ranging from strongly disagree (0) to strongly agree (5), for each individual feature.

Part 2 was the modified replication of the study by Chiu (2013). There were two elements in Part 2. A Likert Scale using the same design as Hu (2009) employed in Part 1 using the thirty-two items from the design principles researched by Chiu (2013). These statements of design principles were modified to be relevant to the targeted educational age group surveyed. Part 2 also included the normative distribution in Q methodology developed by William Stephenson. The Q methodology provides an approach to exploring correlations between persons’ viewpoints toward an issue or a topic (Brown, 1996). A Q methodology tool developed for the research by Chiu (2013) was used in the presentation of the Q-sort exercise. See Appendix A for list of the pedagogy and course design features items. See Appendix B for a list of the visual display design principles.

Participants

A convenience sample is being employed. The researchers identified a pool of faculty at appropriate post-secondary institutions with a high incidence of diversity among enrolled students. The faculty members were interested in this area of research and experienced in teaching online. Guidelines were provided participating faculty. They were advised not to specifically invite students because of their ethnicity rather they were instructed to invite all students in a class. Faculty at participating post-secondary institutions informed students about the opportunity to participate in completing the survey(s). The assumption was that if enough complete classes participated there would be sufficient number across the targeted cultural groups. However, this approach has not yielded the needed sample size per cultural group. Handouts and content for emails were developed for faculty to share with students. Students were allowed to make their own decision on participation based on the information provided in the handout/email. Demographic data was requested as part of the survey(s), but no personal identifiable information was collected. The IRB and the IRB approval notice from the University of Kansas was provided the participating faculty to be shared with their appropriate institutional research office.
The number of collaborators is now being expanded to increase the number of international IHEs as collaborators. Representatives of attending IHEs will be invited to consider becoming collaborators.

**Variables**

**Dependent variable.** Dependent variable were participants’ responses to each survey item. The ratings for Part 1 and Part 2 Likert Scales ranged from 0 – 5. The ratings for the Q-sort tool in Part 2 ranged from 1 – 7.

**Independent variables.** Independent variables were participants’ personal information, such as age, gender, ethnicity, language, and educational background, as well as participants’ technology using frequency and skills.

**Data Collection and Procedures**

Participants were requested to complete both Part 1 and Part 2 of the online survey. In pilot testing most participants completed the complete survey within 30 minutes. Besides Part 1 and Part 2, the participants were asked to offer their personal information such as age, gender, cultural background, and educational background. The instruments also collected data on their attitudes towards design principles. No responses were personally identifiable.

The customized computer system to record participant responses and to save data automatically in the computer database of the host institution via a network system was developed. All datasets automatically transferred to a database via the secured network. The system only allows investigators to access the database by using their password and user name. At the end of the project, storage partitions that were used to store confidential data will be overwritten using partition-level overwriting tools.

**Data Analysis**

Efforts are underway to expand the number of collaborating institutions of higher educations with specific attention given to the student composition from the currently underrepresented cultural groups. New collaborators are being confirmed. Since this is a progress report in the larger context of a study in progress, we need sufficient sample size per culture group for purpose of statistical analysis. Descriptive statistics such as the mean and standard deviation for each survey item were reported in the Results section of the conference paper in order to determine which items have been rated as highly important or of the highest agreement among participants from different ethnic groups. There is wide variability in the number of responses to surveys across the seven cultural groups. The four ethnic groups (i.e. Caucasian, Hispanic, Asian and Middle Eastern) were used in the analysis as they had the most number of responses recorded (of at least 50 participants or more). For purposes of this progress report we have drawn a sample of 50 responses from the four groups with the largest responses.
As can be seen from the table displayed, there are significant differences in many of the features, especially between Caucasian respondents and their Middle Eastern counterparts. These are only some initial findings that begin to inform us of how we can improve our online instruction with regards to the pedagogy and design features to be included or not included in the future. In the analysis, we found that differences between selected cultural groups were statistically significant. The most significant differences are between Caucasian and Mid-Eastern participants. For example, “allow students to post their work to learn from other students”, mean score for Caucasians is 4.82, for middle eastern is only 3.73. Percent difference is 19.3%.

**Figure 1. Cultural Group Differences for Pedagogy and Course Design Features**

<table>
<thead>
<tr>
<th>Pedagogy and Design Features</th>
<th>Cultural Group</th>
<th>Difference (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. allow students to post their work to learn from other students (P)</td>
<td>Caucasians (4.82, 96.4)</td>
<td>Middle Eastern (3.73, 77.1)</td>
</tr>
<tr>
<td>19. provide tools to allow students to engage in (synchronous) online chats (D)</td>
<td>Caucasians (4.54, 90.8)</td>
<td>Middle Eastern (3.58, 71.7)</td>
</tr>
<tr>
<td>42. allow students to review their own work (D)</td>
<td>Caucasians (4.74, 94.8)</td>
<td>Middle Eastern (3.65, 73.1)</td>
</tr>
<tr>
<td>43. provide tools to allow students to post media resources online (D)</td>
<td>Hispanics (4.63, 92.7)</td>
<td>Middle Eastern (3.56, 71.3)</td>
</tr>
<tr>
<td>47. engage students in assignments related to course objectives (P)</td>
<td>Caucasian (4.42, 88.4)</td>
<td>Middle Eastern (3.35, 67.1)</td>
</tr>
<tr>
<td>55. provide clear explanations for how students access instructional support services (D)</td>
<td>Hispanics (4.76, 95.1)</td>
<td>Middle Eastern (3.63, 72.7)</td>
</tr>
<tr>
<td>55. provide clear explanations for how students access instructional support services (D)</td>
<td>Caucasians (4.59, 91.8)</td>
<td>Middle Eastern (3.63, 72.7)</td>
</tr>
<tr>
<td>57. be reliable and free from technical problems. (D)</td>
<td>Hispanics (4.84, 96.7)</td>
<td>Middle Eastern (3.74, 74.9)</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>57. be reliable and free from technical problems. (D)</td>
<td>Caucasians (4.66, 93.2)</td>
<td>Middle Eastern (3.74, 74.9)</td>
</tr>
<tr>
<td>63. require minimal technical support (D)</td>
<td>Hispanics (4.78, 95.5)</td>
<td>Middle Eastern (3.65, 73.1)</td>
</tr>
<tr>
<td>63. require minimal technical support (D)</td>
<td>Caucasians (4.58, 91.6)</td>
<td>Middle Eastern (3.65, 73.1)</td>
</tr>
</tbody>
</table>

Figure 2. Cultural Group Agreement for Pedagogy and Course Design Features-Most Important Principles

The four cultural groups collectively indicated the above items as the most important features for Pedagogy and Course Design Features.

**Agreement on Most Important Features**
- 3. allow students to post their work to learn from other students (P)
- 14. provide feedback on student work by using tracking (as used in editing) (D)
- 16. allow students to keep a record of communications with other students (D)
- 18. provide navigation options that are easy to follow (D)

Figure 3. Pedagogy and Course Design Features Differences-Least Important Principles

**Agreement on Least Important Features**
- 24. provide information on how the course fits into their academic program (P)
- 27. provide feedback tailored to performance of individual students (P).
- 33. provide access to versions of lectures for review (D)
- 34. include interactive learning activities (P)
- 40. allow students to maintain electronic records of their work (D).
- 49. provide discussion opportunities among students related to the content (P).
- 60. stimulate critical thinking among all students (P)
- 61. provide a schedule for chat sessions (P)

The four cultural groups collectively indicated the above items as the least important features for Pedagogy and Course Design Features.
The high agreement across cultural groups is a positive. The translation of principles into online instructional features is the challenge. While we are finding differences between cultural groups on features there is agreement on principles. The high level of agreement on the most important visual display design principles is an important observation.

**Figure 5. Cultural Group Agreement for Visual Display Design Principles-Most Important Principles**

- Principles were derived from research and juried by experts
- Principles underlie beliefs and development
- Principles differ from features in that there are rarely precise examples
- No statistically significant differences between cultural groups

### Agreement on Most Important Principles

- 5. Learners need time to process information and to reflect between each segment of learning.
- 11. Simultaneous media presentations should be kept simple.
- 12. 'Chunking' content into short-term memory so that it relates to long-term memory is important in designing online instruction.
- 14. Online navigation should include several modes of access.

**Figure 6. Cultural Group Agreement for Visual Display Design Principles-Least Important Principles**

### Agreement on Least Important Principles

- 3. Design should minimize working memory load and instead utilize the greater capacity of long-term memory.
- 26. Activities should be designed to provide a rich context for learning involving inquiry and revisions of ideas.
- 28. Students should be provided opportunities to understand the connection between the knowledge they are taught and everyday life.

There were some interesting observations from the cultural groups agreement on the least important visual display design principles. Item 28 was somewhat of a surprise instructors tend to be concerned about making instruction relevant to students in their daily lives. They may be
more sophisticated than we give them credit for being in that they are thinking about preparation for subsequent learning.

**Discussion**

The study represents a preliminary step in a proposed programmatic effort to research the impact of cultural differences on online learners. It is driven by the unprecedented growth in the offering of online courses and degrees in post-secondary institutions of higher education. The design of these courses tend to be made generally available to all students enrolled in the same courses without consideration given to the differences that may be represented by their cultural backgrounds. In most post-secondary classes there is likely to be diverse cultures represented by enrolled students. This tends to be true of international students in residence who meet institutional admission requirements as well as those distance education students who have enrolled from their home country. The significance of the question on the impact of cultural differences on online learners is accented by the major investment of fiscal and human resources that institutions of higher education make to insuring that the multicultural needs of their students are met in face-to-face instruction. This is evidenced by the level of professional development offered to faculty, the presence on many campuses of multicultural centers, yet little evidence appears to exist that sufficient attention is being given the needs of online learners from different cultural groups. This emerges as a problem of some magnitude when one examines the extreme difference between online learning environments and face-face-learning environments. This is especially true in asynchronous courses and instruction offered as part of blended course models. There are critical differences between face-to-face teaching and learning and online teaching and learning via a display such as occurs in online instruction.

**Implications**

Implications supporting needed programmatic research on course design and pedagogy features. There is evidence of differences between groups on features as well as a need to increase sample size preferably to 200 per group. There is strong support needed for programmatic research on visual display design principles as well seeing that there is consistent high agreement on both principles of high and low importance. There is a need to create operational examples of design principles and verify the operational example of principles in an instructional context.

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Appendix A

63 Pedagogy and Course Design Features

1. provide students access to content in manageable chunks.
2. provide tools for instructors to easily track student work and grades.
3. allow students to post their work to learn from other students.
4. incorporate clear and regular reports on student progress and grades.
5. allow students to monitor their own rate of progress.
6. include activities that involve students in engaging in teamwork to produce products.
7. use interactive activities that promote collaboration among classmates.
8. align assessments with course objectives.
9. provide study guides for exam preparation.
10. provide students understandable course goals and objectives.
11. encourage students to share information about themselves at the beginning of the course.
12. allow all students to work independently at their own pace.
13. include self-correcting quizzes.
14. provide feedback on student work by using tracking (as used in editing).
15. allow students to easily communicate with other students.
16. allow students to keep a record of communications with other students.
17. involve students in reviewing the work of other students online.
18. provide navigation options that are easy to follow.
19. provide tools to allow students to engage in (synchronous) online chats.
20. present clear and understandable performance expectations.
21. provide an explicit orientation to the course structure and requirements.
22. include sufficient and easily understood menus.
23. provide web pages that are designed to be intuitive and immediately understood.
24. provide information on how the course fits into their academic program.
25. allow students to easily access required instructional resources.
26. introduce the instructor(s) personal teaching style and professional expertise at the beginning of the course.
27. provide feedback tailored to performance of individual students.
28. provide students with multiple options for communication.
29. include a glossary of the essential vocabulary for the course.
30. provide students with an understandable information on the grading system.
31. be efficiently accessible anytime and anyplace where connectivity is available.
32. provide a detailed syllabus.
33. provide access to versions of lectures for review.
34. include interactive learning activities.
35. ensure that students know appropriate times to contact the instructor.
36. engage students by using tools e.g., message boards or threaded discussions.
37. encourage students to access additional resources.
38. inform students on how to communicate with the instructor.
39. provide students target dates for monitoring their progress.
40. allow students to maintain electronic records of their work.
41. provide free interpersonal communication tools to students.
42. allow students to review their own work.
43. provide tools to allow students to post media resources online.
44. allow students to easily access their grades on assignments.
45. allow instructor to tailor their responses to individual student work.
46. allow students to easily navigate from the start to the end of assigned tasks.
47. engage students in assignments related to course objectives.
48. allow instructor to inform students of changes in content at the same time.
49. provide discussion opportunities among students related to the content.
50. allow students to introduce themselves to classmates.
51. allow easy access to any part of the course.
52. allow students to customize the interface, e.g., adjusting font size to enhance readability.
53. encourage students to communicate with each other.
54. provide for the use of popular social media tools e.g., Facebook.
55. provide clear explanations for how students access instructional support services.
56. allow students to demonstrate learning through completion of varied activities.
57. be reliable and free from technical problems.
58. provide downloadable audio lectures in a common format e.g., mp3,wmv.
59. allow students to keep a record of communications with the instructor.
60. stimulate critical thinking among all students.
61. provide a schedule for chat sessions.
62. ensure that all web addresses (URLs) are accurate and active.
63. require minimal technical support.
Appendix B

32 Visual Display Design Principles

1. Affective signals for online learners are essential in maximizing e-learning.
2. The time limitation of working memory must be considered in designing visual displays.
3. Design should minimize working memory load and instead utilize the greater capacity of long-term memory.
4. Factors, such as attention, engagement, goal setting, monitoring, and action control, must be addressed in multimedia learning.
5. Learners need time to process information and to reflect between each segment of learning.
6. In viewing or listening to messages, it is more likely to be interpreted correctly when it is expressed more than once and in alternate forms.
7. Visual displays should be designed consistently with other displays the student may perceive at the same time.
8. Requiring the learner to mentally integrate different sources of information interferes with learning.
9. Mediated activities, while teaching common content at the same time, result in more effective learning.
10. Cultural factors impact interactive activities and require that interactions be presented along with background information.
11. Simultaneous media presentations should be kept simple.
12. ‘Chunking’ content in short-term memory so that it relates to long-term memory is important in designing online instruction.
13. The design structure of an activity should include motives, actions, and responses to cultural needs.
14. Online navigation should include several modes of access.
15. Online instruction is most effective when using multiple representations of information.
16. Knowing students' prior knowledge is central to the design of online instruction for struggling learners.
17. Students learn better when the summarization does not include the same wording as the original instruction or contains additional detail.
18. Concurrent narration and animation result in higher performance than content presented through text and animation.
19. Visual and auditory stimuli impact learning, through engagement and a balance between textual, pictorial, and verbal presentations.
20. The interaction among multimedia design features needs to be examined relative to their contribution to cognitive overload.
21. In learning there is interaction between the learner and the instructional environment.
22. In accommodating individual differences through multimedia, emphasis needs to be placed on the mix of instructional modes.
23. Multiple means of engagement are critical to creating conditions that stimulate engagement in learning.
24. Multimedia-designed instruction allows the learner to make connections between verbal and visual presentations.
25. When incorporating displays, the display should look like a pictorial image of what it represents.
26. Activities should be designed to provide a rich context for learning involving inquiry and revisions of ideas.
27. The motivational value of multimedia (both video and audio) needs to be considered in instructional design because they help to reduce fear of failure.
28. Students should be provided opportunities to understand the connection between the knowledge they are taught and everyday life.
29. Instructional developers need to be sensitive to the affective reasoning ability of students when developing online instructional resources.

30. Unnecessary information should be kept to a minimum to avoid cognitive overload.

31. Learning activity occurs through actions oriented toward goals while the goals are becoming routine.

32. Online navigation options should be kept simple.
Appendix C

Research Team

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3. Abdulkareem Alalwani, Visiting scholar, University of Kansas
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Title:

How to Improve Literacy for All: *The Development and Application of the AIM Integrated Literacy Model*

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Abstract:

**Illiteracy is an urgent and growing problem in the United States.** Data from a groundbreaking report (Kirsch, Jungeblut, Jenkins, & Kolstad (2003)) indicated that the US was experiencing a literacy epidemic. In 2013 a report funded by the *US Department of Education* and the *National Institute of Literacy* showed the illiteracy rate in the United States has not changed over the past decade. An estimated 32 million (14%) adults in the U.S. cannot read. Even more startling is the data indicate that 21% of adults in the United States read below a 5th-grade level.

**The trajectory for individuals with low literacy is grim.** In a study by Harlow (2002), commissioned by the *US Department of Justice* demonstrated a strong link between academic failure and delinquency, violence, and crime. This study spurred an onset of media attention and increased awareness about risk factors individuals who are struggling readers face. This link between low literacy rates and crime is substantiated from data presented from a report from Birth to Read (2015). The researchers reported that over 70% of inmates in America's prisons cannot read above a fourth-grade level. These data also linked poverty to low rates of literacy (three out of every four food stamp recipients perform in the lowest literacy levels) and high levels of infant mortality.

**Illiteracy is a generational problem and will only worsen over time.** The levels of language parents utilize in their home directly affect their children. A study by Hart and Risley (1995) found that the average child in a family receiving public assistance hears 153,000 fewer words per week than the average child growing up in an affluent home where the parents are college educated. Being exposed to enriched, robust language is the first step to literacy. A child growing up in poverty without exposure to robust language puts the child further behind all other children in his or her age group.

**Educators have been working hard to improve student literacy for decades.** Policies and mandates alone will not lead to improved instruction in classrooms. Effective programs with aligned implementation strategies are the best way to ensure that all students will have access to best practices in literacy learning. (Duda, Penfold, Wernikoff, & Wilson, 2015). Without ensuring that all students receive the instruction necessary for acquiring literacy, the achievement
gap will continue to widen, and opportunities for participating in a worldwide economy will continue to decline.

**The public schools in Philadelphia, PA, have not been immune to this ongoing challenge.** The Pennsylvania Department of Education (2015) reported that only 40% of 3rd-grade students were reading at or above proficiency, as compared to the statewide average of 70% of students reading at comparable levels. While recognizing the gravity of the situation, the district actively sought answers to this issue. The AIM Integrated Literacy Model offers an innovative solution to this ongoing problem.

**The AIM Integrated Literacy Model offers an innovative solution to this ongoing problem.** From its inception, AIM’s mission has included identifying, designing and delivering effective curriculum and instruction for their students and to disseminating effective practices for all students. Thus, the AIM team began their search for identifying a comprehensive literacy program with documentation of improved student outcomes that would ignite passion for learning for all students. AIM recognized that one program was not sufficient to accomplish their goals nor did “off the shelf programs” necessarily address the continuum of skills and abilities necessary for students to become proficient readers and writers.

As a result, the AIM Team committed to developing a model that was theoretically sound aligned with the standards, rigorous in nature and that attended to differentiation. They recognized the importance of input from their educators but also sought professional development and counsel from nationally known researchers and practitioners in the field. Consequently, the team developed a model that addresses the role of oral language, the foundational skills of reading and writing as well as the higher order skills of constructing and expressing understanding. AIM’s innovative approach to providing effective literacy instruction has resulted in a model that includes both a combination of evidence-based and evidence-informed programs, practices and materials.

**Making it Happen.** This case example highlights two urban schools and the journey of program developers to help teachers implement the AIM ILM with fidelity. An important component of this case example includes the application of Implementation Science to support knowledge translation into actual practice and to build internal implementation capacity of school level educators. A key to sustainability is to have both an effective literacy program and effective implementation methods. Lessons from various stakeholders will be highlighted
including: 1) the process for operationally defining what teachers actually need to do and how to empower them with aligned training and coaching; 2) getting the “right” people in place to support and sustain this new work (school and district level implementation teams, school-based literacy leaders (coaches); and 3) specific tools used for translating research to practice, and practice into complex environments. Data on improved teaching practices, fidelity, educator and parent satisfaction and improved student outcomes will be shared.
Title of the submission
Poster Title: We Got Your Six: A Library and Student Veteran Collaboration

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“We got your six” is a military term for “We have your back” and is both critical in any operation and understood as a vow. With four military bases, one being a combination of two Air Force bases, San Antonio has a booming veteran population and The University of Texas at San Antonio (UTSA) is enrolling a growing number of veterans. These students have a specific set of needs as they seek to transition successfully to the academic environment. Student veterans are often nontraditional students; they have experienced things that others in their age demographics have not and often feel they do not fit in with the usual student populations. In addition to the usual student veteran associations that provide resources for veterans, libraries can construct a neutral place of support for veterans to study, rest, and learn. This poster showcases how the UTSA Libraries were able to create a dedicated physical space and provide targeted support for this specific student demographic. The means by which the UTSA Libraries started this initiative is not cost prohibitive and yielded positive results. The UTSA Libraries accomplished something that any library could duplicate to facilitate a conversation with a growing population of student veterans with specific needs.
Title of submission: Improving Teacher Candidates’ Preparedness to Engage Families

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Abstract:

Overview

Innovation abounds in education; yet boundaries—of place, position and power—such as those between K-12 teachers and university faculty limit change. As Bryk, Gomez & Grunow (2010) argue, “The field suffers from a lack of purposeful collective action. Instead, actors work with different theories of the same problem, activities are siloed, and local solutions remain local” (p. 4). In order to form a “colleagueship of expertise” focused on solving a specific and shared problem, some educators have been developing a new model to create and sustain change: The Networked Improvement Community (NIC) (Bryk & Gomez, 2008).

NICs are a core element of improvement science that redefine traditional research relationships. In a typical research partnership, only researchers do the “intellectual heavy lifting at the front end of the idea pipeline” (Bryk et al., 2010, p. 2). This work may result in innovation that practitioners then implement; or, may result in research that begets research—but never exits the academy and enters the classroom. Improvement science attempts to break this traditional research structure through a problem-centered approach that joins academic research, clinical practice and community expertise; operates on a much shorter timeline (as short as 90 days); and uses overlapping and repeating research/implementation phases [referred to as Plan, Do, Study, Act (PDSA) cycles] (Bryk et al., 2010). Unlike experimental designs which require accurate replication, in this model, variation is considered data because the ultimate goal is to develop and test creative solutions that can be quickly and affordably implemented in the local context (Bryk & Gomez, 2008; Bryk, et al., 2010; Lewis, 2015).

Over the past two years, the Council for the Accreditation of Educator Preparation (CAEP) launched the Family Engagement Networked Improvement Community (NIC) with seven Educator Preparation Providers (EPP) in Washington, D.C., Georgia, and Illinois. The NIC focuses on improving pre-service teachers’ communication skills in their work with diverse families. These seven EPPs formed a NIC because of both a recognition of the importance of families in children’s education, as well as an acknowledgment that their preparation programs need to improve or enhance their current curriculums in this area. They chose the NIC model in order to develop and test creative solutions that can be quickly and affordably implemented into their teacher preparation classrooms (Bryk & Gomez, 2008; Bryk, Gomez & Grunow, 2010). To address the needs of the spectrum of stakeholders involved in teacher preparation, and specifically family engagement, the NIC includes faculty, candidate teachers, mentor teachers, principals, and parents affiliated with each EPP.
This model of inclusion—multi-site, multi-state, multi-stakeholder—makes the NIC adaptable to the local context and user-centered. Through iterative research pilots, (CAEP) developed a family engagement course to develop and test specific strategies to improve the communication skills of candidate teachers. The goals of the trainings are to emphasize relationship building and proactive, positive engagement and teach candidates to view families as assets and partners with teachers in their child’s education. The result is a free resource for educator preparation provider faculty and their teacher candidates that includes two modules: 1) How to conduct a parent teacher conference and 2) How to conduct a phone conversation.

Methodology

Pilot 1: Phone Call Training
After engaging in iterative research cycles to identify areas of need and potential solutions, a phone call training was developed and piloted from September-December 2015.

The phone call training involved five steps:
1) Pre-assessment mock phone call
2) Pre-training survey
3) EITHER in person OR online phone call training
4) Post-training survey
5) Post-assessment mock phone call

These steps are detailed below.

Pre/post phone call:
Along with Dr. Joan Walker (see below), the NIC is developed a pre-/post-test to assess the phone call training. Candidates will completed a 3-5 minute mock parent phone call prior to attending the in-person training or to completing the online training. Actors were trained to play the part of the mock parent. Candidates were given a scenario with a profile of a mock family (including parent and K-6 student), as well as a prompt for the call. The mock parents were trained to follow a script with certain pre-selected responses to use to respond to the subject.

Pre-/post survey:
Prior to training, candidates completed a short online survey to collect demographic information, as well as variables for comparison on the post-test. In addition, candidates completed a post-training reflection. This reflection asks some of the same questions as the pre-training survey for comparison purposes, as well as open-ended questions to collect qualitative data.

Phone call training:
Candidates participated in either 1) an in-person training or 2) an online training (including video modules and short exercises) on communicating with the families of their (prospective) students focusing on how to make both “success/good news” and “challenge/bad news” phone calls to their students’ parents. The goals of the training were 1) to emphasize relationship building and proactive positive engagement and 2) to teach candidates to view families as assets and partners with teachers in their child’s education.

To develop these trainings, the NIC worked with several national experts on parent communication. First, Dr. Samantha Cohen, the National Director of Training and Support at the Flamboyan Foundation
delivered the in-person training. In her role, Samantha coaches national organizations that are launching family engagement efforts and builds Flamboyan’s strategy for national partnerships.

The online phone call training was developed with Mr. Orin Gutlerner, Director, Match Education and Sposato Graduate School. Prior to his role with Sposato, Mr. Gutlerner spent five years at Harvard University’s Graduate School of Education working to re-shape the Undergraduate Teacher Education Program and acting as a guest lecturer in the Graduate School.

The assessment for these trainings was developed with Dr. Joan Walker, Associate Professor, Pace University. Dr. Walker’s research has led to the development of an innovative online course on parent-teacher interactions.

**Pilot 2: Parent teacher conference online case study**

Simultaneous to implementing the phone call project, the NIC is developed the next project in the cycle—a simulated parent-teacher conference through an online platform. The NIC worked with Pace University professor, Joan Walker, to develop a case-based digital learning environment to develop and assess elementary candidates’ readiness to support Title I families. In spring 2016, the NIC piloted the online case study, which develops candidates’ skills in conducting an initial parent-teacher conference, with their candidates. We chose to focus on parent-teacher conferences as the second project because they are a standard professional practice for all teachers; however, they are rarely addressed in teacher pre-service programs. Martin et al. (2006) found that during a parent-teacher conference, teachers out-talk parents by a ratio of 10 to 1. Building on the learnings from the phone call training, we emphasized 1) relationship building and proactive positive engagement and 2) candidates viewing families as assets and partners with teachers in their child’s education.

The inquiry-based learning environment of the case is constructed on three principles: First, the multimedia platform allows candidate teachers to simulate experiences, such as a parent-teacher conference, to which they do not normally have access in pre-service education. Second, candidates observe both effective and less effective approaches to the common—but rarely observed—professional practice of parent-teacher conferencing. Bandura (1986) found that observational learning that includes both watching an expert perform an action, as well as observing the consequences of those actions is an effective learning mechanism. Finally, we assume that specifically what the candidates observes matters. According to Rittle-Johnson & Star (2009) watching contrasting examples of a more and less successful conference will be more beneficial than observing just a single model.

The above model has been tested and validated by Walker and her findings were published in her award-winning Journal of Teacher Education article. This article won the 2013 Outstanding Journal of Teacher Education (JTE) Article Award from the American Association of Colleges for Teacher Education (AACTE).

**Pilot Results**

The data from the two pilots, including surveys, performance on tasks gauged via rubrics, and focus groups of participating faculty and candidates were analyzed to evaluate the usefulness of the piloted tools. Based on feedback, modifications were made to content and plans were created to maximize next steps. To increase the likelihood that the project will be self-sustaining, we are investing time and
resources in the development and testing of online trainings. At the end of the grant period, these online trainings will be available free of charge for the EPPs. Each participating EPP will have several concrete products they can use with their candidates for ongoing professional development. Online trainings will save the EPPs considerable resources as they will not have to pay for an in-person facilitator or develop their own in-person curriculum. Based on outcomes from the phone call and parent-teacher conference trainings, we will continue with additional PDSA cycles through December 2016.

Learning objectives
The objectives of these modules is to help the candidates understand the importance of communication in improving family engagement. This will be accomplished through providing the principles of effective parent teacher conferences and parent teacher phone calls. The goals of the trainings are to emphasize relationship building and proactive positive engagement and teach candidates to view families as assets and partners with teachers in their child’s education.

Anticipated results
We anticipate this project will lead to greater awareness of the importance of positive relationships and engagement between the educator and the families they teach. In particular, candidates will be better prepared to conduct Parent-Teacher Conferences and Parent-Teacher Phone Calls.

References:
1. **Title of submission:** Hiring of the Fit: What is the Relationship among Pre-Service Teachers’ Competencies, Beliefs, and Hiring Outcomes in an Urban District?

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6. **Abstract:**

   **Objectives or purposes**
   Surveys of school administrators reveal hiring quality educators is a critical factor in efficient and effective school operation. "Errors made in the selection process have direct and far reaching consequences for students, administrators, other teachers, and the functioning of the school as a whole" (Ebmeier & Ng, 2005, p. 202). Recent work demonstrating that students assigned to different teachers experience substantial and persistent variation in their achievement growth has further underscored the importance of recruiting high quality teachers (e.g., Aaronson, Barrow, & Sander, 2007; Kane, McCaffrey, Miller, & Staiger, 2013; Kane, Rockoff, & Staiger, 2008; Rivkin, Hanushek, & Kain, 2005). Despite the deleterious consequences to student outcomes of hiring ineffective teachers, there has been little progress to link teacher quality with factors observable at the time of hire (Rockoff, Jacob, Kane, & Staiger, 2011). Responding to both the lack of evidence linking existing screening procedures to student outcomes and the demonstrated need for evidence-based screening processes, this investigation explored the relationship of competencies and beliefs likely to predict a teacher's retention and effectiveness to hiring outcomes.

   A sample of pre-service teachers from 10 educator preparation providers whose student teaching placements took place in an urban district was utilized. First, their preparedness to teach was explored through the perceptions of their supervising teachers, university supervisors, and the pre-service teachers themselves using the INTASC Readiness Survey to measure competencies. Next, the Haberman Pre-Screener, a scenario-based instrument that has been found to be predictive of effectiveness and retention, was utilized to measure beliefs. Then, the relationship between pre-service teachers' preparedness to teach and their hiring outcomes was explored. Finally, pre-service teachers’ approach to the new teacher hiring process was explored qualitatively to provide context for the quantitative analyses.

   **Perspective(s) or theoretical framework**
   A Consortium for Policy Research in Education (CPRE) working paper described the following seven somewhat disturbing trends of the changing teacher workforce: (1) Larger, (2) Grayer, (3) Greener, (4) More Female, (5) More Diverse, (6) Consistent in Academic Ability, and (7) Less Stable (Ingersoll & Merrill, 2012). In 2007-2008, the modal teacher was a first-year educator - a drastic change from 10 years earlier when a seasoned veteran of 15 years represented the modal teacher. The problem is particularly salient in urban, low-performing schools serving high minority and high poverty students where in some cases the teacher dropout rate exceeds the already high student dropout rate (National Commission on Teaching and America’s Future [NCTAF], 2007). NCTAF (2007) further asserted that these districts are therefore twice as likely to have beginning teachers serving their at-risk populations and are continuously rebuilding their staff. Based on data from the National Center for Education Statistics (NCES) and teachers with value-added and growth data, Jacob, Vidyarthi, and Carroll (2012) estimated that approximately 10,000 of "our best" teachers are lost annually across the 50 largest districts in the United States. Further, the authors found that finding a replacement teacher of comparable quality can take up to 11 hires.
The constant filling of vacant teaching positions due to teacher turnover comes at high academic and monetary costs to districts. The estimated cost of teacher attrition is $7.3 billion a year in the United States - $19,013,750 to the urban district serving as this study's setting alone; "even without a price tag on lost teaching quality and student opportunities to learn, the message is clear: high teacher turnover is draining school districts of precious dollars that could be used to improve teaching quality and student learning" (NCTAF, 2007, p. 5). Ronfeldt, Loeb, and Wyckoff (2013) found empirical evidence suggesting substantial negative impact, particularly in schools serving minority and low-performing students, of teacher attrition on student achievement. Teachers who are unprepared are twice as likely to leave by the end of their first year according to NCES data (Ingersoll, 2006). With the high costs and a preponderance of beginning teachers who are less likely to stay in teaching, especially in urban districts, the expectation would be that a great deal of effort would be put into researching and fine tuning teacher selection methods to maximize the positive impact of new teachers. However, research on methods of selecting effective teachers is underdeveloped in proportion to the need.

As suggested by Boyd, Lankford, Loeb, Rockoff, and Wyckoff (2008) and Rockoff et al. (2011) the effectiveness of the teacher workforce and improvement of student learning could be achieved through the use of composited, evidence-based measures. Following this example, the study described in this dissertation utilized a composite of measures not typically used in hiring decisions to explore the relationship of pre-service teachers' preparedness to teach and their hiring outcomes. In other words, the present study explored whether or not the pre-service teachers who may be most likely to be effective and survive in the district were selected to teach in the district.

**Methods, techniques, or modes of inquiry**

The present study explored the following research questions.

1. To what extent are pre-service teachers prepared to teach in the urban district?
2. What is the relationship between pre-service teachers' preparedness to teach and their hiring outcomes?
3. How do pre-service teachers approach the new teacher hiring process?

Taken together, the answers to these questions were intended to provide a clearer picture of which pre-service teachers end up working for the urban district studied and whether or not they are the candidates who may be most likely to be effective and survive in the district.

This study utilized a correlational model, a variant of embedded design, in which qualitative data are embedded within a quantitative design to help enlighten the mechanisms at work in the correlational model (Creswell & Plano, 2007). Corresponding analyses for the first research question included descriptive statistics and comparisons. Following Capraro et al. (2010) a comparison of INTASC Readiness Survey Ratings by informant type was conducted using 95% confidence intervals. Regarding the Haberman Pre-Screener results, a one sample t-test was used to examine the difference between the sample mean and Haberman’s cited mean. Data were further examined for significant differences in INTASC Readiness Survey rater evaluations between pre-service teachers who fell below and above Haberman’s recommended cut-off score (above 32 and without a low score in any of the dimensions) with independent t-tests. Results of these analyses were related to hiring by regressing the measured and latent variables separately on each of the possible hiring outcomes, following Capraro, Capraro, and Helfedt (2010). Following Rockoff et al. (2011), pre-service teachers' hiring outcomes were separately regressed on their total Haberman Pre-Screener score.
Qualitative data, utilizing sequential mixed-method approach (Creswell, 2014) – surveys then interviews with volunteer participants - were included in this investigation to obtain a clearer idea of how the hiring process works from the perspectives of teachers new to the district. As such, these data provided insight into results observed in the above quantitative analyses, allowed for the identification of some of the factors affecting the hiring process not captured by the quantitative analyses, and provided an understanding of the participants’ views and experiences (Gibbs, 1997). Data were analyzed following transcription using Descriptive Coding (Saldana, 2012). After coding, within-case and cross-case analysis methods (Creswell, 1994) and the constant-comparative method (Glaser & Strauss, 1967; Lincoln & Guba, 1985; Thomas, 2011) were employed to identify similarities and differences between the groups. Particular attention was paid to areas where stakeholder perspectives overlapped, contradicted, or were unique.

Data sources, evidence, objects or materials
In the present study, the relationship of the likely effectiveness of pre-service teachers who completed their student teaching placements in the urban district studied to their hiring outcomes was explored. To do so, likely effectiveness of student teachers was ascertained through the collection of information not typically available to districts at hire because these less commonly gathered metrics have not been fully explored and may be more powerful predictors of a teacher candidate's effectiveness than typical hiring metrics.

The INTASC Readiness Survey is a Likert-type instrument that was originally developed by Dr. Elisabeth S. Foster. Survey asks participants to rate student teacher performance on items that are a regular part of their training. The INTASC Readiness Survey consists of 63 items measuring the 10 beginning teacher standards. Examinees were instructed to rate themselves on each item using a five-point Likert-type scale. The internal consistency reliability estimate for the survey in Capraro et al. (2010) was .978. Franklin (2011) reexamined the internal consistency reliability of the subscales; the Cronbach’s alpha coefficients for the subsets were: content pedagogy = .79, developmental appropriateness = .72, differentiated instruction = .71, varied instructional strategies = .81, motivational techniques and learning environment = .91, communication and media use = .83, planning for instruction = .70, formal and informal assessment = .81, reflective practice and professional growth = .73, school and community relationships = .85. Franklin (2011) described the process used to verify the instrument's content validity. Results of an expert panel review confirmed that the instrument demonstrated content validity (Franklin, 2011).

The Haberman Prescreener is one of few validated teacher selection instruments, measures dispositions of teacher candidates not typically captured, and showed promise as one of the multiple measures utilized in Rockoff et al. (2011). The intended purpose of the tool is to provide principals and human resources with information about the likely effectiveness of urban teachers prior to hiring (Haberman 1993, 1995), matching a demonstrated need in the district studied. All of the pre-service teachers in the sample were expected to graduate in May of 2013 and were tracked through their job search. Their hiring outcomes were compared to their performance on both instruments and explored through qualitative interviews. Examining patterns of selected teachers is informative to the field of research on teacher selection and can aid school administrators and district personnel in determining future matches of teachers most likely to succeed in a classroom in the urban district studied.
Results and/or substantiated conclusions or warrants for arguments/point of view
Considerable variation in the preparedness of the sample was observed highlighting the importance of effective hiring practices to distinguish among applicants who may look similar on typical observables. Although the mean total score of participants in the sample was higher than the population mean on the Haberman Prescreener, their likeliness to score low in many of the constructs measured including Organization and Planning, At Risk Students, Survive in Bureaucracy, Fallibility, and Explains Teacher Success questions how successful they would be teaching in the urban district. No significant relationships between teachers’ preparedness to teach, particularly in terms of competencies, and their hiring outcomes were found. This result was anticipated because the qualitative interviews revealed that principals typically screened candidates using brief interviews and did not observe competencies or beliefs similar to those utilized in this study.

Scientific or scholarly significance of the study or work
With the obvious and economically meaningful advantages of having more effective teachers, the expectation would be that a large body of research and reform efforts would be concentrated on improving hiring metrics and processes to identify, attract, select, and retain teaching candidates who are most likely to be effective. "Given this set of circumstances, it is clear that much research is still needed on how high-quality teachers may be identified, recruited, and retained" (Rockoff, 2004). In response to inefficient district screening processes and gaps in teacher selection research, this study utilized prior performance and the Haberman Pre-Screener, both with a growing evidence base in relation to teacher effectiveness and retention, to explore pre-service teacher scores in relation to their hiring outcomes. Thus, present study contributed to the research in these areas by investigating the competencies and beliefs of pre-service teachers, from teacher preparation providers that feed into the urban district studied, in relation to hiring outcomes.

Not only was the present study designed to inform gaps in the literature reviewed, but this study was a step for the district towards evaluating the readiness of PDS pre-service teachers to teach full-time in the district’s classroom. As such, this study provided the district with examples of evidence-based tools to allow for comparisons of pre-service teachers across teacher preparation providers. Analyses of data collected from these instruments provided the district with a better understanding of strengths and weaknesses of pre-service teachers and teacher preparation providers. Hiring outcomes of PDS pre-service teachers were explored quantitatively in relation to these strengths and weakness, as well as qualitatively to inform interpretations of hiring patterns. Overall, the results of this investigation may be used to begin to inform the district’s decisions to: preference optimal match teachers within the hiring process, increase the percentage of optimal match teachers accepting positions, provide a better understanding of the professional development needs of new teachers who completed their student teaching in the district, inform future partnerships with teacher preparation providers, provide more as well as more timely choice to principals and schools, and potentially decrease teacher turnover.
References


The Effects of A Collaborative Learning Community on Black Doctoral Students

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Abstract

Many doctoral candidates fear falling into the “All But Dissertation” (ABD) category once they reach the solitary process of writing the dissertation. A small group of African American doctoral students established a “finish line” cohort in the mid-1990s as a way to support and navigate the bureaucracy of the dissertation process. In 2013, an original Finish Line member invited former classmates and a new cohort of novice researchers to form what is now called the Finish Line. This is a peer run, non-university supported learning community that supports and provides structure for African Americans in various stages of the doctoral process. The Finish Line currently consists of more than seventy-five African American doctoral students from six institutions in the State of Michigan. The learning community secures spaces and establishes schedules to meet educational goals particularly writing the dissertation. Collectively, the group meets twice a year for dinner, welcoming new members, encouraging continuing members, and celebrating recent graduates.

The premise of the Finish Line is based on the psychological perspective of student retention. According to Bean and Eaton (2002), this perspective is based on four psychological processes that lead to academic and social integration. These processes are: positive self-efficacy, handling stress, increasing efficacy, and internal locus of control. Bean and Eaton suggest that these psychological perspectives shape entering students’ perceptions of college and university life. Avolio and Gardner (2005) promote the theory of Authentic Leadership Development (ALD) which focuses on the process of developing leaders and how that process can be measured. The presenters seek to use this proposal for future research to generate fundamental ideas to promote the attainment of doctoral scholarship for Black researchers in higher education.

The goal of this workshop is to cultivate an open dialogue, with higher education professional and graduate students, and to provide insight on supportive practices that can promote achievement to degree completion, specifically for African American students. By using the psychological perspective of Bean and Eaton (2002) and the ALD theory of Avolio and Gardner (2005), the presenters seek to establish a research agenda that is inclusive of all university faculty, staff and students with a specific focus area of identifying methods and practices that increase graduate rates for Black doctorate students.

References


Sealing The Cracks of The Educational Pipeline: How Advocacy and Collective Responsibility Inspired Latinas’ K-16 Success

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SEALING THE CRACKS OF THE EDUCATIONAL PIPELINE: HOW ADVOCACY AND COLLECTIVE RESPONSIBILITY INSPIRED LATINAS’ K-16 SUCCESS

Recent research has attended to the gender, race, and socioeconomic obstacles that Latinas face in American education. However, less is known about the experiences of Latinas who are the first in their families to complete a baccalaureate degree. This research differs by offering an examination of influential factors for first generation Latinas in their K-16 success and how their gendered experiences informed their educational success. From their counterstories, the author has shown how advocacy and collective responsibility inspired Latinas to succeed throughout the educational pipeline. This article is an expansion of ideas and stories from my 2012 doctoral dissertation study. Key words: Collective Responsibility, Counterstories, First-generation College Students, Latinas’ Education.

Introduction

A college degree can provide a gateway to better career and life opportunities, particularly for underrepresented females of color. This is particularly relevant for Latinas who are severely underrepresented in American high schools and colleges. Latinas’ college completion rates are 10.3 % in the 2011-2012 academic year, which falls significantly lower than White females at 68.2 % and Black females at 12.2 % (National Center for Educational Statistics, 2013). Despite these obstacles, the intent of this article is to examine how gender influenced Latinas’ schooling experiences and what factors contributed to their successful completion of baccalaureate degrees as first generation college students.
Social Capital Is Key In Latinas’ Success

Existing research shows that family and peer support as a means of social capital is one of the most important and influential factors in determining success for Latinas. (Aguilar, 1996; Cantú, 2012; Castillo & Hill, 2004; Ceja, 2004; Gloria, 1997; Gonzalez, Stoner, & Jovel, 2003; Gonzales, 2012). More specifically, Latina mothers have proved to be instrumental in facilitating their daughters’ educational success (Ceja, 2004; Gándara, 1995; Garcia, 2004; Garza, 1998; Gloria & Castellanos, 2012; Gonzalez, Stoner, & Jovel, 2003). Other studies have concluded that mothers were highly contributory in their verbal encouragement and support for college retention (Ceja, 2004; Garza, 1998; Hernandez, Vargas-Lew, & Martinez, 1994; Wycoff, 1996).

How mentoring others in their community is also instrumental in understanding what inspires Latinas. Gloria and Castellanos (2012) confirmed that Latina first generation students utilized stories of their own experiences to help other Latinas in the college going process. Barajas and Pierce (2001) found that Latinas were able to successfully navigate college by having a positive cultural image through supportive relationships with other Latinas on campus.

Methodology

Exploring how Latinas used their cultural identities to persevere in their educational experiences makes Wing’s (2003) Critical Race Feminism (CRF) an essential theoretical model for this study. CRF provides a theoretical framework useful to examine the complexities and fluid gendered identities of Latinas’ stories and offers women of color a discourse that reflects the multiplicities of distinctive experiences that women of color have. The methodological approach used in this qualitative narrative research
utilizes counterstories as a strategy of inquiry. Critical race counterstories serve as a retelling of dominant narratives that often describe the lives of marginalized people from a deficit perspective (Bernal, 1998; Ladson-Billings, 1998; Solórzano & Yosso, 2001; Yosso, 2006). Counterstories reveal the complexities of individual experiences as well as the group as a whole. These stories provide counter spaces for women of color to add their own influences and understandings to further academic research in this area.

**Latina Participants**

The participants in this study consisted of nine Latinas who were the first in their families to earn baccalaureate degrees. Purposeful convenience sampling was used to ensure that my participants are recent graduates, have attended school (K-16) in the United States, and were the first in their family to graduate from college. All of the participants have graduated within the past five years to reflect more recent experiences through the educational pipeline. The Latina participants are a representative sample of the diversity and demographics of Latinas. Although, all of the participants are graduates of California State University, Sacramento, the students come from different socio-economic backgrounds, generational status, bilingual/monolingual, immigration patterns, and have lived in other states. See Table 1.

**Research Questions**

I used the following four open-ended questions to encourage their educational stories to unfold: What factors contribute to Latinas’ success in school? What obstacles do Latinas’ confront in their K-16 educational experiences? How do gender, race, and class impact their education? How are Latinas’ impacted by their accomplishment of being the first in their families to complete an undergraduate degree?
Results

Contrary to ideals about existing gender roles in Latino culture many of the female participants in this study recounted stories of empowerment passed on by their mothers. This is not to say there were not some gender role expectations present in their households. Most of the participants recounted stories and examples of traditional gender roles in the home, however, these constraints did not deter them. Many participants remarked on how daughters were expected to complete household chores, while their brothers were allowed to play outside. Many of the participants viewed this unequal division of labor in the home as unfair. These extra responsibilities occasionally interfered with their educational goals and expectations. Despite accounts of how Latinas’ parents sometimes enforced traditional gender roles in their families, most participants consciously rejected those ideals and developed more equitable relationships in college and beyond.

They were able to counter these traditional roles through their mothers’ influence and advocacy. Not all of the participants’ parents held onto traditional sex roles; some participants recalled how their mothers were modern and liberal in their ideas of gender roles. Gabriela gives an example of how her mother defied traditional gender role stereotyping:

My mom, for her generation and her age, I would say she’s very open-minded (laughs), a very open-minded Latina! For example, one situation, Nintendo came up, when I was growing up, and my dad’s thinking was that Nintendo was for boys, not for girls, we were all young too, my sisters and I. My mom went over his head and bought the Nintendo for us and said, “They are going to learn!” (laughs) So, the way she approached things like that, my dad tried to put those types of sex roles in our lives, but our mom kind of squashed them (laughs), depending on the situation. (Leslie Shaw, 2012, p. 129)
Furthermore, Lori and Sophia grew into independent, college educated women in an effort to not replicate the obstacles their mothers faced. Lori felt motivated to do better in school and life by watching her single mom struggle to raise children on her own. Lori describes her feelings growing up in a single headed household:

And then the divorce that my mom went through, I saw her struggle and then I think according to her, she told me that I used to tell her that I didn’t want to end up like her, I wanted to do more, and be more, so part of that was I guess going to college and wanting to do more with myself versus struggling with going to work. Because I remember seeing her struggle to get up to go to work and then come home ridiculously tired, then trying to raise kids and manage the house and it’s just such a struggle and I didn’t want to see myself go through that. So I think that was something that also pushed me to do that. (Leslie Shaw, 2012, p. 94)

Sophia faced similar experiences growing up with a single mom and she was motivated to continue her education through her mom’s own life experiences:

I think a lot had to do with my parents getting separated, so she was a single mom, I think she wanted me to not be a single mom, but to be able to provide for myself and not depend on any man or anything like that. (Leslie Shaw, 2012, p. 94)

These findings were consistent with previous research on mothers’ influences on their daughters (Ceja, 2004; Gándara, 1995; Garcia, 2004; Garza, 1998; Gonzalez, Stoner, & Jovel, 2003). Ceja (2004) looked at first generation college-bound Chicana students and found that their mothers’ storytelling was key in developing their college aspirations and stressing the obstacles of their current occupation or economic struggles as a way to motivate their daughters to move beyond their current economic status. Most of my participants’ families worked as migrant farm workers or blue-collar jobs due to their lack of opportunities in education. Despite their own obstacles with education and work, mothers continued to place a high value on schooling for their daughters. Latina mothers emphasized education in an effort to influence their daughters to strive for a better life.
Participants recalled early parental nurturing of their academic success in school throughout the educational pipeline. Participants’ mothers proved that they valued education and consistently pushed the importance of education by making it a priority in their children’s lives in a variety of ways. Gabriela’s mom emphasized the importance of education over everything else, including family:

So, my mom was really big about us completing school and stuff and getting further ahead……she always pushed us to the point where we never went to Mexico in December or visited. We never went on vacations during school time. She was really big about not getting us out of school, and making sure we went to school. (Leslie Shaw, 2012, p. 95)

Gabriela’s mom also stressed the importance of reading at a young age:

Well, I thought it was the norm, until I found out it’s not very common for people to get a library card at five years old (laughs). She used to work her 12-hour shifts, and you know have her long days, but whenever she had a break, she would walk us, we didn’t have a car, we only had one car at the time, she would walk us to the library. That was her free time and a free event for us for the time. (Leslie Shaw, 2012, p. 96)

Kristina’s parents similarly made education a top priority in her and her brother’s lives, providing a structured routine for homework early on. Kristina remembers:

It was never an option to not go to college. When I was little, my parents always sat us down for homework time, like as soon as we got home. Before we could do anything fun, it was like did you get your homework done. Whenever we needed help, they would help us, they really pushed education on us a lot. My parents always pushed me for it. They always wanted me to do better, and just have a life where I wouldn’t have to struggle. (Leslie Shaw, 2012, p. 96)

The idea of going to college as a non-negotiable priority was reinforced in Lori’s household by her mother and grandmother in two different ways. Lori recounts:

I would say a huge motivational factor was my mother. She was really a pusher into you are going to go to college, kind of like I was just destined to do. And then I remember my grandmother taking English classes, when I was probably in high school; she was about 70 years old.
She would walk to the church to take her English classes, and then come home and I would see her practicing, still trying to learn English, so I think that also kept me thinking about how it’s important for grandma to educate herself so it’s important for me to educate myself as well. (Leslie Shaw, 2012, p. 96)

Several of the participants conveyed through their stories that this emphasis towards education made the difference between dropping out of education after high school and continuing on to college. All of the participants mentioned their parents as being main sources of inspiration and motivation to obtain a higher education and more than half of the participants specifically mentioned their mothers as the person who was most influential to them in completing a baccalaureate degree.

Mothers also extended their advocacy in their children’s education. Some participants recounted instances where their mothers advocated for their children in school, further emphasizing the importance of education. Sophia discusses how her mom continually had to go to her school throughout her education when Sophia was placed into ESL (English as a Second Language) classes:

S: My mom put me in preschool for two years instead of one because I didn’t know that much English, my first language was Spanish, so she kept me in there longer. When I got older, when I was in elementary school, they were trying to put me in those (ESL) classes, so my mom went to go talk to them. “No she doesn’t need to be in those classes, because she already knows English really well.” Because it was for kids who just came from Mexico and really didn’t know any English. My friend and my mom’s friend; both of our moms had to go to the school and actually like argue that we don’t need to be in ESL. It kind of was a big issue, you know, because they just automatically put them in there. I was just like so annoyed, because I know English.

A: Did you have any of those experiences in middle school and high school?

S: In high school, they tried to place me in those classes. My mom was like “She doesn’t need to go there, you can test her.” By that time, I knew full-blown English, so it had been awhile. That was an issue, them trying to put us in ESL classes. I didn’t need ESL. (Leslie Shaw, 2012, p. 98)
Some participants recognized the social injustices of tracking and resisted these challenges by advocating for themselves or enlisting the assistance of their mothers to dispute these inequities. Isaura remembers:

I think, ever since middle school, was when my mother talked to my counselors to tell them I want her to get in honors classes. Someone had told her that those classes would help get her children to college. So, right there it already started the changes, because I was in a regular class then I went to an honor class. Then from middle school to high school, that’s what happened, those students already in honors classes, the academic college path, continued on and I was there in honors classes. (Leslie Shaw, 2012, p. 98)

This advocacy was undoubtedly important in setting up Isaura for success in high school and also in preparing her for scholarly work in college.

Mothers also consistently praised their daughters’ academic accomplishments, inspiring daughters to live up to these high expectations. Isaura’s mother repeatedly boasted about Isaura’s educational achievements in middle school and high school, which Isaura found to be highly affirming. Isaura says:

My mom would always tell her friends, oh, she’s doing really good in school and I’m really proud of her, so that motivated me. (Leslie Shaw, 2012, p. 99)

After graduating from college, Isaura recalls how her mother would reveal her pride for her accomplishments when talking to friends or clients:

My mom, who cuts hair now, will be talking to people there and she’s like, “I’m pretty proud of my daughter, she didn’t run away with a boyfriend, she didn’t get pregnant, she got her degree already, she’s working, I am a pretty happy mom.” My mom was really proud of me, I’ll always remember graduation day. It’s awesome, because I’m a girl and the first to graduate. (Leslie Shaw, 2012, p. 99)

Participants revealed that their mothers’ constant verbal support and advocacy influenced their abilities to overcome academic obstacles throughout the educational pipeline.
In college, daughters continued to rely on maternal support to nurture and guide them throughout the college going process. Kristina describes how her mom, provided much needed emotional support to keep her motivated in college:

I wanted to make my parents proud, I think, and I wanted to do better for myself. Constantly having my parents’ support, like I would call my mom sometimes so stressed out and she would be, “I know you will get it done”. It was good having someone to talk to. (Leslie Shaw, 2012, p. 97)

Mothers’ verbal encouragement and emotional support was vital for many participants’ incentive to attend college and graduate. This research complements other studies that show how mothers were highly influential in their daughters’ academic success. Villenas and Moreno (2001) captured these nuances of Latina mother-daughter pedagogies in their study. The researchers describe the delicate balance of mothers’ stories and life experiences used as strategies to combat societal racism and sexism as a way to impart independence, while maintaining ideologies of being good, traditional wives.

**Female Advocacy**

Throughout conversations with the participants, it became clear that the role of female mentors, besides their mothers, were also invaluable. Participants frequently recalled certain teachers, school counselors, or programs that facilitated their educational success. Most of their examples were from their high school experiences, which is important to note, since this appears to be a crucial time in development and identity. Influential teachers and helpful counselors during high school were mentioned most often throughout education, reinforcing their vital role in student’s lives. Furthermore, the majority of these influential mentors, were female and Latina, emphasizing the need for more Latina teachers, counselors and administrators.
Isaura remembers one teacher in elementary school who was responsible for a turning point in her education and future academic goals:

The only thing I can think of is the teachers were motivational. At one point in fourth grade, and I still didn’t know English that well, this teacher told my mom, “You need to put her in English classes because you want her to succeed and you want her to go to college, and be on that track.” I feel like if I didn’t learn English at that early age, then I would have been in regular classes, and wouldn’t have succeeded in honor classes. (Leslie Shaw, 2012, p. 103)

Other participants, Bianca and Isaura specifically mentioned Spanish language teachers who inspired them to perform better in school. Isaura’s teacher motivated her to go to college by sharing personal stories of her own college success. Similarly, Bianca’s Spanish teacher encouraged the girls in class to prioritize education over relationships with boys. Two teachers in particular inspired Lori in high school for different reasons:

There was a math teacher that I had that was really influential in that she wanted me to sign up to go to a different high school that was more technology based and the high school itself was on a college campus. But it was too much pressure and I didn’t want to apply. I didn’t want to leave where I was at and start something new. But she really influenced me in thinking farther outside of where I was at motivating me into seeing I could do more. Someone actually believes that I can do more and be somewhere else, so that did help. Also, my art teacher was really passionate. What she did as an art professor and then she was really awesome, she spoke to us one on one and made you feel, “I know you are here and I know what’s going on with you.” So, that helps too. Having teachers that kind of just cared a little bit, took the time to say, “Oh, how are you doing today” or “Thanks for being in class today”, or just remembering your name, calling you by name made a big impact as well. (Leslie Shaw, 2012, p. 103-104)

As the above stories signify, the role of caring teachers positively impacts students’ lives and educational experiences. The importance of female mentors as sources of inspiration and motivation cannot be overstated in its role in school retention rates. Furthermore, a cycle of female empowerment only leads to further resiliency amongst communities since future generations of females are uplifted and will strive to be successful, which then leads to strong, successful Latinas giving back to their families and communities.
Giving Back To Families And Communities

The idea of supporting their family financially or helping their communities was a common theme that resonated with all of the participants. Some participants earned college degrees to gain earning potential, so they could help their families out financially. Giving back has been established in other research on Latinas’ motivation in education, where researchers found that many Latina women emphasized commitments, not only towards their own peers or families, but also to the community in which they came (Bernal, 2001; Rosas & Hamrick, 2002).

Sometimes, participants gave to their parent’s newfound knowledge regarding social issues that changed parents’ lives in unexpected ways. For example, Bianca became educated on human and labor rights through her college classes, and this information was then passed on to her parents who began to advocate for themselves. Bianca discusses these issues:

But now my father prefers to stay out of the field now. He’s been in it for over 20 years of his life. Now he’s working inside in an egg factory in Delano. My mother is a sorter, a fruit sorter, an almond sorter, so she’s also working in a shed. We still consider each other migrants, but my dad has standards, no more working in the fields, it’s too hot. It’s too much. My mom is still open to anything; however, now she’s working inside, in a little shed. They have AC, conditions have changed a lot. Now, they have AC, they can sit down, they don’t have to worry about dehydration, health concerns, sun protection, and stuff like that. It’s a big change. Through being educated, as we are going to school, and us educating them, it brings about a different view, for them too. (Leslie Shaw, 2012, p. 102)

Through their mutual education on larger social issues, Bianca and her parents were able to improve their quality of life through their collective knowledge.

Other participants became increasingly empowered by their college education and
experiences, influencing their households in various ways. Some participants empathized with their mothers who had to work physically demanding jobs and then come home to complete their domestic roles at home. Alejandra remembers:

Because my mom, I would see my mom working long hours, she has to sleep, she wakes up and has to cook something, and then she has to try and clean as much as she can, and then she has to get ready for work. And then on her days off, what does she have to do, laundry, grocery shopping, and cleaning the entire house, like completely, where is her resting time? (Leslie Shaw, 2012, p. 125)

She recalls being enlightened about the disparity in these gender roles increasingly later in her life, especially after she moves away from home to attend college. Alejandra recalls becoming increasingly incensed over the inequities of household chores in her family, and her defiance slowly started changing her brothers’ behaviors:

Through time, they (brothers) started to change. Like now, when I am there, if I’m in the house, they will pick up their plate. If my mom’s there, and I’m not there, they won’t do it. I told my mom you need to tell them. They know if I am going to clean, I don’t want them around because it’s very uncomfortable to see them just sitting down and me having to clean around them, it just gets me really mad. My brothers and my nephew like, I was always having them do stuff. I asked my nephew if he wants to help wash dishes. He’s barely three years old. And he likes doing it. I told my mom we need to start at a young age, people need to start doing it. Now, my mom tells my brother to do it. (Leslie Shaw, 2012, p. 126)

Alejandra’s advocacy for fairness in her families’ gender roles has had lasting influences on her mother who has separated from Alejandra’s father and her brothers who are now doing more around the house as well as the encouragement to create more equitable relationships for her nephew by expecting him to learn how to perform household chores.

**Giving Back To Their Communities**

This sense of advocacy was also reflected in the career choices with all of the participants in this study. The majority of the participants expressed interest in returning home to work in their respective Latino/a communities. The majority of participants
were currently enrolled or applying to graduate school programs to achieve these goals. Additionally, they planned on using their bilingual skills and cultural knowledge to assist Latino/as in their hometowns. Lori felt that helping others succeed in education would be important. Gloria chose a career in law enforcement to help the families of crime victims from her own community. Elizabeth hopes to give back to her community by becoming a bilingual nurse. Additionally, Gabriela, who majored in Deaf Studies/American Sign Language and is trilingual (American Sign Language, English, Spanish), wishes to assist Latino/a hearing impaired children with community resources and education. Isaura graduated with a teaching credential in bilingual/multicultural education. And Alejandra recently graduated with her Master’s degree and hopes to assist other Latino/as as a Vocational Counselor.

**Inspiring Other Family Members’ Education**

Isaura and Bianca mentioned being proud that they could be role models for their younger siblings to follow in their footsteps in achieving a collegiate degree. These findings are consistent with conclusions from a study by Gloria and Constellanos (2012), where first generation Latinas were generous with their time and stories in influencing other Latinas on the path to college. Sometimes these past experiences can prove invaluable in the navigation of institutional tracking and college admission practices. This research reveals how Gabriela was able to inform her mom about tracking practices when she realized her younger sister was unfairly placed in ESL classes. Gabriela discusses her role in helping her sister:

When I was in high school, the same thing was going to happen to my younger sister, she was actually put in second language English, ESL classes. She had been taking English classes since you know, kindergarten, first grade. She can pronounce and write better than I could because she had me to practice with. So,
I told my mom, you need to take her out of those classes, so I was the first one to advocate for my sister, to tell my mom I don’t think she should be there, she’s smarter than that and this is what they did to me when I was there. For me, pushing my mom, she did end up taking my sister out of those classes and putting her in the English class she was supposed to be at. (Leslie Shaw, 2012, p. 101)

Sharing information and resources to help others continued to be a common thread throughout the participants’ counterstories. These findings are aligned with Yosso’s (2005) theories of familial capital where valuable knowledge is passed on to family members, extended family, or communities to increase individual or collective empowerment. These ideas permeated the participants’ stories where Latinas expressed their achievement of a collegiate degree more as a team effort, not an individual accomplishment. They recognized and acknowledged all of the people that supported them throughout the educational pipeline.

DISCUSSION

The counterstories document an intricate web of female support that collectively contributed to Latinas’ academic success. The following diagram highlights the gendered influences that are tied to participants’ identities and shaped them in their academic efficacy throughout the educational pipeline. It also demonstrates the fluidity of collective responsibility. Each participant and the people who influenced them share this cycle of support, a reciprocal relationship, to ultimately uplift the individuals in this study, but also the families, friends, mentors, and communities of the participants. See Figure 1.

I offer an alternative critique on previous research of collective responsibility that can further pedagogy of how collective responsibility can be applied to understand Latinas’ success in college. Existing educational research generally focused on how
teachers and school administrators apply collective responsibility or relational trust within their school communities to increase student achievement (Bryk & Schneider, 2002; Lee & Smith, 1996; Whalen, 2012). Research by Muñoz and Maldonado (2012) on college persistence by undocumented Latina students revealed how their college experiences shaped their ideas of gender in progressive ways and incited questions of traditional gender roles. This study frames how Latinas are able to activate gendered influences and collective responsibility in their communities and in school to ensure that fellow students succeed as well.

One of the most important findings that my work reveals is that more than half of the participants talked about how their mothers in particular were their main sources of inspiration in their education. Previous studies document the importance of Latina mothers’ influences on their daughters’ educational success (Ceja, 2004; Gándara, 1995; Garcia, 2004; Garza, 1998; Gloria & Castellanos, 2012; Gonzalez, Stoner, & Jovel, 2003). Additionally, three other studies by Garza (1998), Hernandez, Vargas-Lew, and Martinez (1994), and Wycoff (1996) contend that the influence of mothers and their encouragement are key factors in fostering success for Latinas in a college setting. Mothers and other females in participants’ lives embody feminist principles by supporting the success of participants while sometimes discrediting traditional gender role expectations.

This study extends the discussion of how culture and family foster educational efficacy (Yosso, 2005) and emphasizes how gender influences Latinas in their educational success. Females’ nurturing and support of others was another vital finding throughout the participants’ counterstories. Looking at participants’ stories that inspired
them throughout the educational pipeline, their mentors are overwhelmingly female and Latina. Participants mentioned female academic advisors, counselors, teachers, professors, and friends who all contributed to the success of Latinas in this study. Same sex role models proved to be an important factor in providing the necessary support for Latinas. Additionally, many of those same mentors were Latinas, demonstrating the need for more Latina role models as counselors, teachers, and professors in the K-16 pipeline.

Latina mothers and mentors advocated for daughters/students on behalf of the participants throughout the educational pipeline. Participants learned how to be change agents from these early childhood experiences. Many participants possessed a sense of collective responsibility and female empowerment, continuing to advocate for their younger female siblings and/or other family members to succeed in college as well. This cycle of advocacy and collective responsibility reveal important unique gendered characteristic that inform how and why Latinas succeeded in the educational pipeline. The idea of females helping females is instrumental in promoting female empowerment and necessary in deconstructing limiting gender role expectations. Additional work needs to be done on the application of collective responsibility and its impact on education. These ideas can bring new gendered perspectives into how and why Latinas complete baccalaureate degrees.
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Latinas are influenced by a web of female support that foster their success throughout the educational pipeline to the culmination of their college degrees. Latinas feel a collective responsibility to support family members and peers in their educational pursuits and uplift Latinos from their communities.

**Figure 1**


Cantú, N. (2012). Getting there cuando no hay camino (when there is no path): Paths to discovery testimonies by Chicanas in STEM. *Equity & Excellence in Education, 45*(3), 472-487.


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capitalism, and patriarchy: Latina mother-daughter pedagogies in North

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1) Title: Decolonizing Higher Education: Master of Social Work based in Indigenous Knowledges

2) Topic: Higher Education

3) Format: Panel Presentation

4) Description: A new program, Master of Social Work based in Indigenous Knowledges, has been developed over the past seven years and the first course began on August 29, 2016. The program is an effort to counter the colonial processes that exist in higher education, and in turn in the field. This presentation will outline the learning stemming from developing and implementing this anti-colonial project that can offer support for other efforts at decolonizing education.

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The Master of Social Work based in Indigenous Knowledges (MSW-IK) program was initially conceptualized over seven years ago. The program was developed over the following seven years by members of the Indigenous Caucus at the University of Manitoba, Faculty of Social Work, and members of the Indigenous community in the City of Winnipeg. The need for the program was and is based on the recognition that much of post-secondary educations failure to adequately address Indigenous realities, aspirations, knowledges, and processes. Over the following seven years the program was developed in detail, including its intent, philosophy, structure, processes, courses, positions, and resourcing. The program was reviewed several committees at the University of Manitoba, and was approved by the Board of Governors and Senate. Funding for the program was provided by the Provincial Government after much discussion. These processes have taught the committee members about how colonial processes continue to exist, how to overcome these and other challenges, and the importance of creating such programs in mainstream education institutions. This presentation will outline the programs development, implementation, learning and challenges as a decolonization project. The panel presentation will demonstrate the need for and benefits of such programs, and offer support for others developing new program aimed at shifting higher education, and in turn society.
1. **TITLE:** Laborers or Intellectuals: A Theoretical Analysis of a STEM Higher Education, Workforce Development Pathways Program

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6. **ABSTRACT & PAPER:**

   The primary objective of this paper is to consider a theoretical reanalysis of higher education workforce development programs from a capitalist, hegemonic, social reproduction frame and instead as a horizontal, open system of creating organic intellectuals across socially stratified classes. Through a contrastive analysis of preliminary written discourse, images, and context of a STEM higher education pathway program, new outlooks are made visible that may have not been considered before. Beginning with a Marx-Weber-Gramsci perspective the analysis yields familiar vertical hegemonic structures. Then applying Deleuze and Guattari, Foucault and Said concepts of knowledge, power, and rhizomes as well as Gramsci’s intellectuals, a reframing of workforce as intellectuals, as opposed to labor, allows for restrategizing how to meet projected workforce vacancies of highly skilled science personnel due to eminent attrition.
Acknowledgement
“This material is based upon research supported by, or in part by, the U. S. Office of Naval Research under award number N00014-15-1-2438.”

Introduction
One winter day in December 2015 at the coastal research and development (R&D) agency in the United States southwest, this agency and a local four-year, university research institution signed an agreement that solidified the partnership to establish a higher education workforce development program. This career pathways program is an opportunity for veterans and underrepresented community college students to experience science, technology, engineering, math (STEM) design projects in a coastal setting. This program’s overarching goal is to increase the number of veterans and underrepresented community college students, who major in STEM-related subjects and wish to pursue a civil career in science and engineering. Fifteen students were chosen to participate in a paid 8-week summer in-residence engineering workforce development program and be divided into five teams with an assigned engineering graduate student, faculty advisor and a civil service engineer as mentors. Each week, four days were spent at the coastal R&D agency working on design projects, with each Friday in attendance at the local four-year, university research institution for training in an entrepreneurship and innovation course. The aim over time is to create a pool of potential candidates for civil service careers as highly skilled engineers. At first glance, this seems like a traditional industrial workforce development program that satisfy capitalist and social structures. However, this paper analyzes shifts in practice and discourse of the coastal R&D agency that show glimpses of a new direction for refocusing and training, at least in part if not whole. This discourse study makes visible what is unintentionally invisible as a new, pilot program. Additionally, one of the researchers brought first-hand, cultural knowledge to this work as a civil service career scientist.

Structure and Reproduction

For structural theorist Karl Marx, education is a method of social reproduction to maintain hegemonic structures that support economic production. In “Manifesto of the Communist Party”¹, Marx explains that education is both social and industrial reproduction. And in Capital Volume 1, that the division of labor is determined by hand labor and head labor,² and in Capital Volume 3 with large structures formed by class functions with a consensus on values and norms that provide stability.³ For the coastal R&D agency, education is also a means of transmitting skills to next generations, with a service or workforce contract, like Marx’s social contract, on its agreed values and norms. Their civil service training schools include field training camps, civil service training schools and academies. Similar to Antonio Gramsci’s


notion of schools of labor, additional tiers of schools or training exist for leadership and elite like the civil service college for top leadership, and elite training for specialized personnel. All programs instill the traditions of the coastal R&D agency’s culture, chain of command and professionalism in their personnel.

Additionally, just as Max Weber links religion to capitalism, there are characteristics of the agency that are religious-like and integrated into their hegemonic structures. Emile Durkheim would concur that all collectives have a religious element. For example, each civil service branch has its own motto that creates an ideology and cohesion such as: “Non sibi sed patriae” (Not Self, but Country), “This We’ll Defend”, “Aim High, Fly, Fight, Win”, “Semper Fidelis” (Always Faithful). Besides a motto or creed, the agency also has forms of totems that unify their members. Within the agency, examples of totems - “a symbol, a material expression of something else” – are service flags, statues, pins or badges on uniforms. Durkheim would consider these service mottos and totems as methods of bonding in kinship and all forms of social reproduction. Both Weber and Durkheim believe that division of labor creates social solidarity because everyone has a role, and job is a vocation. Also, all forms of labor are considered morally virtuous even if work is defined differently by various religions, and in this case different civil service branches. Also in Weber, division of labor or stratification of work is considered part of God’s plan or of benefit because acquiring new skills is valued. These concepts of social reproduction through class structure, division of labor, religion, totem, and work are applicable and prominent in the coastal R&D agency and all branches of civil service.

A STEM Higher Education, Workforce Development Pathways Program

Currently, in terms of operational structure, the coastal R&D agency must address a growing issue of mass vacancies within highly skilled science personnel. In the next five years, the coastal R&D agency foresees a shortage of as much as 5,000 skilled personnel, which is about 50% of its STEM professionals due to retirement or attrition. This pending personnel loss is already evident at one southwest branch with current STEM openings such as Supervisory Engineer, Structural Civil Engineer, Supervisory Technician, Electronics Engineer, Environmental Transportation Systems Specialist, and Aerospace Engineer; other science related

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positions include Interdisciplinary Fish and Wildlife Biologist/Cartographer and Psychologist. In light, a primary issue for the civil service agency nationally, and the coastal R&D agency locally, is sustainability and the agency is searching for new ways to increase and stabilize their diminishing workforce, different than they have traditionally done it before.

For example, while inequality exists with labor and intellectual classes still divided in the agency through training and education, the fragile and deteriorating infrastructure is not due to a class struggle against the proletariat, from a Marx point of view. This pending issue is due to an aging population of a scientific skilled workforce. In this new era of shifting social and professional structure of the civil service agency, it is piloting a new strategy of social and professional (re)production, A STEM Higher Education, Workforce Development Pathways Program. The program is different than the civil service agency’s traditional forms of training and educating. First, this program is funding each undergraduate student $4,000-$6,000, dependent on level of education and experience, for their 8-week summer participation, without obligation to serve in the civil service agency. Traditionally, most of those who have been funded by the civil service agency through academic or vocational training must commit to serving for the agency; if a contracted member changes their mind about serving, they must return the equivalent cost of their education and training. But now, the civil service agency seems to be modeling other government education programs like the National Institute of Health (NIH) or the National Science Foundation (NSF) who each have their summer internship components so students can experience the profession and the science field, and so the government agencies can view rising talent as potential future employees of the departments. For the participant, a summer internship is temporary and non-obligatory future employment to the funding organization but a means of academic and career exploration. This “growing your own” is not automatic as most hegemonic structures would already determine class and status.

Second, the workforce development program is seeking to replicate and expand to other locations across the nation if this pilot summer model is a success. To foreshadow this expansion for analysis in this paper, I suggest envisioning that this growth strategy no longer mirrors a centralized hegemonic structure but more decentralized and horizontal as in Deleuze and Guattari’s concept of rhizomes. Hypothetically, for a fraction of the civil service agencies that are relatively near major universities and near a community college population, rhizomes could be spreading. I hesitate to say that the civil service agency is “seeding” the rhizomes because per Deleuze and Guattari, rhizomes have no beginning and end. The agency would just be “watering” what exists – that underrepresented and veteran community college students already going to school – by giving them the opportunity for paid experiential education and training at the coastal R&D agency. Also, this growth is not necessarily a simultaneously, organized and orchestrated expansion even if policy and financing are standardized processes in the agency. On the contrary, what makes each new workforce development rhizome growth variable is the

10 USAJOBS Website https://www.usajobs.gov/

11 NIH Summer Internship Program http://www.niehs.nih.gov/careers/research/summers/


unpredictable multiplicities and assemblages that would differ per location. Each local university, R&D agency, and community colleges would have different types of actors, leaders, cultures, histories, priorities and timelines in play that would make rhizomatic growth variable; and if a workforce development rhizome is not successful in a specific area, then it would just be an asignifying rupture with no death or birth because students could just continue with schooling as before without the R&D summer training. This rhizomatic analysis would show an open system, with multiple entries into the system, as opposed to a traditional, hierarchical closed system that the agency traditionally utilizes to decide whom to include and exclude.

Language and Intellectuals

Aside from structure and reproduction, the themes of language and intellectuals are examined to show contradictions or shifts in agency discourse and representations of the workforce development program. Related to language, I reflect on discourse and knowledge presented by Edward Said in *Orientalism*. He explains that writings and discourse contributes to the political, social and cultural understanding of a group or phenomena. Also, he elaborates that “true knowledge is not political, so political and economic knowledge is not wholly true.” I merge these ideas with Foucault’s claim that knowledge has power and that discourse, or narratives are fragmented, non-linear, and discontinuous. First consider the power of representation of the workforce development participant, especially in terms of Said’s textuality, where texts exist in contexts to include social, ideological frames or meanings. In news articles about this workforce development program, participants are framed as subjects. This subjectivity alludes to hierarchy and hegemony created by the news reporter, agency and local university. Yet, a missing representation or less prominent discourse is the community college stakeholder, who was not part of the “Signed and Sealed” photograph but is a key partner in the workforce development program, with actually several community colleges in the network. Said would link this to distortion and accuracy, if text, discourse or description is either too general or too specific. To make further note, if the workforce development program is not successful and the news articles are the only two archival pieces in the public space, the community college partner over time will likely be rendered invisible in the history of higher education or civil service education and training initiatives.

Also potentially misrepresented and debatable, is the notion of the diverse or nontraditional student (i.e. underrepresented and veteran) as thinker with intellectual capital as opposed to subaltern or lower, manual labor class. A common narrative exists about minorities and veterans as subaltern, outsider, unstable, poor or homeless. But a counter narrative exists as well of minority and veteran as valued. For example, in program meetings and outreach events

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19 Said. *Orientalism*, 16.
for this workforce development program, all those at the table consistently regarded the social, cultural and intellectual capital brought by diverse students and that the diversity of students is necessary for out-of-the-box thinking and new solutions to problem solving; diverse and creative thinkers are in demand for the civil service agency. However, until preliminary analysis of inaugural participants engaged in the pilot program is completed, it is yet to be seen if this discourse is rhetoric or truly embodied by the students, partners, staff and stakeholders of the workforce development.

Another point of reflection is the program logo, see Figure 1 to the right. From a Marx-Weber-Gramsci hegemonic lens, the lightbulb atop the anchor, may be interpreted as intellectuals – represented by the lightbulb as mental, knowledgeable, brain – superseding and controlling the laborers, symbolized by the anchor as physical and closer to the ground. Yet, the creators and approvers of the logo, saw the two – lightbulb and anchor – purposefully linked as unity and integration of mind and body, a whole person or the intellectual with skills, and the laborer who can think.

Something else brushed upon by one of the news articles is the ethnographic research component of the program and operations. The project creator and lead says, "A very important component of this program is that we’re looking at this as an opportunity to help the Navy create a sustainable STEM pipeline. Using an ethnographic approach, we will investigate the factors affecting veteran and minority students’ participation and academic success in STEM, with the goal of identifying and reinforcing practices that support their success." 20

Without looking any deeper into what this actually is or means, a significant characteristic of the program is lost by readers and/or non-researchers. But this is particularly important perspective of participants as intellectuals and relevant to Gramsci’s organic intellectuals 21. First to elaborate on the educational ethnography component of the workforce development program, the research’s conceptual framework and methodology draws on educator, anthropologist, ethnographer, discourse and sociolinguistics expert, Judith Green’s et. al. work. 22 Key principles of this epistemology and method that the articles stress are:

- The methodologies of ethnographic research emphasize the importance of understanding the learning and decision-making processes from the perspectives of the study participants.

20 Logan. “All Hands on Deck.” The UC Santa Barbara Current.


• This approach provides transparency and supports the ethnographic principle of **learning with, rather than about** the participants as they develop a frame for seeing, understanding, and knowing their world.

• Based on a **cyclical process** of interpretation, application, revision, and dissemination of disciplinary work in action, the goal is to observe, record and analyze participant experiences.

• An ethnographic orientation provides students with a **guiding “map”** for interpreting their daily experiences in order to critically reflect on their capabilities, identify resources needed for advancement, and develop strategies to support their learning.

The purpose of this interactional ethnography concept and method is to make visible how, why, and what participants think and perceive of their educational experience in the program and of the system of education and schooling. With this mental training and exercise, the workforce development program participants are not viewed singularly as laborers but intellectuals.

Expanding on Gramsci’s intellectuals, and paralleling the workforce development program’s view of the participants, everyone has knowledge, intellect and mental capacity. Typically society decides who intellectuals are as a class and education reinforces those social structures. But for Gramsci, “non-intellectuals do not exist.” And interestingly the civil service agency is consciously focusing on populations that have not necessarily been their primary population base in terms of intellectual leaders – and supporting them in becoming intellectuals and leaders, via career exploration, mentorship and training. This strategy would seem counter to Gramsci’s explanation of organic intellectuals only coming from within a class or group, and not across a class or group. Yet, the civil service agency is also cognizant of *esprit de corps*, the community, comradery and connection veterans usually have for others that are military members or veterans. The conscious choice of the civil service agency to recruit military veterans supports the development of the organic intellectual science cadre with those who are familiar with government culture and environment. An inherent esprit de corps creates ease in forming a cohesive workplace. So in some ways creating intellectuals across classes i.e. minority and veterans, usually seen as labor, into the skilled science intellectuals of the agency is defying the social stratification that Weber and Gramsci view for stability and order. Also for Gramsci, the purpose for creating organic intellectuals is to reduce the reliance on intellectuals from other classes in order to challenge existing hegemonic order. This is not the case with the workforce development program; the agency is inviting those outside of normal recruitment classes to become scientific intellectuals for the agency. Additionally this seems counter to typically analysis of social class structure where physical labor is separated from mental or intellectual skill. In terms of team, Gramsci’s teams would like “a capitalist entrepreneur alongside the industrial technician, the specialist in political economy, the organizer of a new culture, of a new

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legal system etc.”26 What is yet to be analyzed in the workforce development program is how students were integrated or how they integrated themselves – either hierarchically or rhizomatically – with the actors in their designated project teams that include a civil service engineer mentor and graduate engineering mentor.

Conclusion

A STEM Higher Education, Workforce Development Pathways Program is a new initiative and partnership between a coastal research and development (R&D) agency in the United States southwest, a local four-year, university research institution and local community colleges to support underrepresented and veteran community college students with an 8-week paid summer experiential workforce development program to learn about STEM design, environments, and careers in the civil service. Initially this program can easily be viewed in a hegemonic social reproduction of the workforce needed for the agency. However, with a shift in recruitment strategy, method of training and support, discourse on participant subjects, and added ethnographic educational research component, this workforce development program is worth reexamining as horizontal, open system of creating organic intellectuals across socially stratified classes. While this is a limited analysis as a theoretical reconceptualization paper, further study may be made through an educational ethnographic analysis of the inaugural cohort groups’ participation in this summer immersion. Additionally, the potential for the workforce development program to grow to other locations can determine in time the outcome of this new education and career pathway initiative. This rethinking of STEM higher education workforce development is especially relevant to eminent attrition of highly skilled science personnel and vital to reimagining how to meet personnel needs in the next five years and beyond.

Acknowledgement

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26 Gramsci, A Gramsci Reader. Selected Writings 1916-1935, 301.
References


Goals for Teaching Healthy Behaviors

Classroom Teachers Goals Related to Incorporating Physical Activity/Movement and health behavior knowledge in the Classroom:
Does Goal Setting Make a Difference?

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Topic Area: Cross-disciplinary Areas of Education: (Teacher Education/Kinesiology & Leisure Science)

Presentation Format: Paper Session

Description. This paper describes a collaborative research project designed to support classroom teachers in including physical activity breaks/movement and healthy behaviors into their K-8 classrooms. Classroom teachers from three schools were asked to set goals related to including healthy behaviors in their classrooms and then to reflect on their progress two times over the course of an academic year. Grounded in the theoretical framework of self-efficacy, teachers’ goals were primarily focused on including physical activity/movement in the classroom, teaching health knowledge, modeling healthy behaviors and eating healthy at school. Teachers had some success in meeting their goals; although reporting was inconsistent. Come prepared to share your own successes and challenges related to teaching healthy behaviors in classroom settings.
Introduction

This study, grounded in self-efficacy theory (e.g., Bandura, 1997), sought to investigate the role of goal setting in classroom teacher behaviors related to creating healthy and active schools. Classroom teachers had professional development opportunities centered on creating healthy and active schools and participated in *Fitness for Life* Wellness Week activities (e.g., Corbin, LeMasurier, Lambdin, & Greiner, 2010) across one school year.

Goal Setting

Goal setting has long been used (e.g., Mace, 1935) in many different settings to improve outcomes. Goal setting theory is founded on Ryan’s (1970) idea that goals affect action. A goal is the intention of an action, such as attaining a higher test score. Creating a specific, difficult goal has led to increased productivity in word processors typing more words per minute (Latham & Yuki, 1976), loggers cutting more trees (Latham & Yuki, 1975), athletes improving sports performance (Kyllo, & Landers, 1995), and improved teacher and student performance (e.g., Grant & Stronge, 2013).

Academic goal setting has been used for teachers to set goals for students’ academic achievement. Academic goal setting (teachers’ goals for students) has been connected to students’ initial cognitive entry prerequisites and mastery learning practices, both of which have shown increased levels of student academic performance. Authors found that goals setting in teacher evaluation led to teacher collegiality, reflection and a collaborative atmosphere in the evaluation process (McBride & Miller, 2005). In a study of student goal setting, Hancock (2005) had students either set an absolute goal for physical activity performed in physical education classes or a relative goal based on their
goals for teaching healthy behaviors

pretest score or no goal. Hancock reported that students in both goal setting groups (absolute and relative) were significantly more active (e.g., 7,176 and 7,393 respectively vs. 5,353 steps/day) than the control group across several days. In the current study, classroom teachers set goals for themselves related to implementing healthy behaviors and healthy behavior knowledge in their classrooms and across the school setting and subsequently reported on whether or not the goals were met.

Bandura’s (1997) Social Cognitive Theory postulates that the major determinants of teacher choices are their judgements related to self-efficacy. This suggests that their confidence related to teaching about healthy behaviors and exhibiting healthy behaviors with their students is related to their self-efficacy (or situation specific confidence) in these areas. Individuals with high self-efficacy often set more ambitious goals. More efficacious individuals also tend to be more committed to their goals. Further, higher levels of self-efficacy can also translate into people responding more positively to all types of feedback from others which may lead to better goal achievement (e.g., Locke & Latham, 1990). Self-efficacy provides a foundation for goal setting. The role of self-efficacy in goal setting is assumed (as it was not measured in the current study).

While there have been many studies supporting the important role of goal setting in improving human performance and educational outcomes, we were unable to find any studies that addressed classroom teachers’ goal setting related to integrating healthy knowledge and behaviors into their classrooms. Thus, the purpose of this study was to investigate classroom teachers’ use of goal setting related to teaching healthy behaviors and promoting participation in healthy behaviors in their classrooms and across the school setting. Specifically, what types of personal goals related to teaching/exhibiting
Goals for Teaching Healthy Behaviors

Healthy behaviors did teachers set and how successful were they in meeting their goals for teaching/exhibiting healthy behaviors?

Method

Setting

This study was part of a larger three-year intervention that focused on changing the culture of three schools to be healthier and more active. The intervention included other programmatic components (beyond goal setting in classrooms,) such as new before school physical activity programming and additional healthy lunch and snack options.

Classroom teachers had been focusing on SMART goals (specific, measureable, attainable, realistic, and timely) for their classrooms with administrators. Teachers had professional development on a regular basis (approximately four times at each school) across the school year during staff meetings on implementing healthy behaviors in the classroom and were provided with grade level textbooks for the Fitness for Life curriculum model (Corbin et al., 2010).

Before Wellness Weeks one and three (of the four Wellness Weeks), teachers were asked to set, up to three SMART Goals, for their upcoming Wellness Week on a reporting sheet. After Wellness Weeks one and three, teachers at the three schools were also asked to self-report on their wellness week activities performed and if her/his specific goals were met on a post- Wellness Week reflection sheet. Pre/post Wellness Week forms were turned into a Fitness for Life mailbox at the schools by teachers using their assigned numbers and forms were collected by members of the research team.

Participants
The teacher participants in this healthy behavior goal setting study were from three rural K-8 schools in the Southwestern USA; school 1 (19 teachers) school 2 (18 teachers) and school 3 (23 teachers). The 60 teachers (51 female) had between four and 37 years of teaching experience ($M=18.42$, $SD=9.37$). The majority of teachers reported their ethnic background as Caucasian or did not report it. Teachers taught all subjects ($n=45$), or math/social studies ($n=4$), science ($n=2$), reading/language arts ($n=6$), physical education ($n=1$) or special education ($n=2$).

**Instruments**

**Wellness Week Goal Setting Sheet.** Teachers were asked to set goals for incorporating healthy behavior knowledge and activities into their classrooms on a Wellness Week Goal Setting data collection sheet that was submitted to a dedicated mailbox for Wellness Week number one in the fall and Wellness Week number three in the spring.

**Wellness Week Self-Report Sheet.** Teachers also reported on the number and type of activities taught in their classroom during Wellness Weeks one and three over the school year.

**Results**

**Teacher Goals**

Teachers reported up to three goals for the wellness weeks; although teachers were inconsistent in their reporting. Classroom teachers’ goals were categorized into the following areas: (a) teaching a daily physical activity break, (b) taking kids walking, (c) teaching healthy behavior knowledge, (d) modeling healthy behaviors in the classroom.
and with students around the school campus, and (e) teachers and students eating healthier in the cafeteria.

For Wellness Week number one, the most frequent first goal was teaching a physical activity break (91.9%), followed by the second most frequent goal of teaching healthy behavior knowledge (73%) and finally the third most frequent goal of teachers and students eating healthier in the cafeteria (100%). Similarly, for the third Wellness Week, the most frequent first goal was teaching a physical activity break (66.7%), followed by the second most frequent goal again of teaching healthy behavior knowledge (46%) with no third goals listed. Interestingly, the goal of taking kids walking only appeared twice and it is alarming that modeling healthy behaviors in the classroom was only indicated as a goal by one teacher.

**Wellness Week Activities**

**Physical Activity Breaks.** During Wellness Week one, teachers reported they included 1-5 physical activity breaks \((M=3.5\ SD=1.6\text{ for physical activity only})\). They also reported physical activity breaks tied to academics \(M=2.2, SD=1.9\text{ (e.g., skip counting with jumping jacks)})\).

The third Wellness Week results were analogous with 1-5 activity breaks reported. There was an average of 3.4 physical activity breaks done for activity purposes alone and an average of 2.6 activity breaks tied to academics.

**Wellness Week Activities.** Forty-one percent of the teachers indicated they met their first goal; while 36.4% met their first two goals, and 9.1% met all three goals; with 13.6% of teachers not reporting any goals met. For Wellness Week three, teachers also
reported meeting one goal (35.7%) and meeting both goals (53.6%) with 0.7% of teachers reported no goals met and no third goals reported.

**Discussion**

Goal setting is one strategy that may help classroom teachers increase the integration of healthy behaviors and healthy behavior knowledge into their classes. Other studies in education settings have shown that teacher goals can improve teacher performance and student outcomes (e.g., Grant & Stronge, 2013) as well as lead to other positive outcomes such as teacher reflection and collaborative efforts (McBride & Miller, 2005).

In the present study, teachers were able to create their own personal goals. These goals are thought to be mediated by their self-efficacy related to teaching healthy behavior content and promoting healthy behaviors in schools (Locke & Latham, 2002).

The results of this study are encouraging, suggesting that classroom teachers were willing to integrate healthy behavior content and experiences into their classrooms and that goal setting may support teacher driven healthy behavior changes in classrooms and across schools as one part of transforming schools to healthy and active places for children and youth.

**Conclusion**

Teachers were successful in setting one or more goals in up to five different areas related to teaching about and practicing healthy behaviors in their classrooms (i.e., daily physical activity breaks, taking students walking, teaching healthy behavior knowledge, and modeling healthy behaviors in the classroom and on campus, and teachers and students eating healthier in the cafeteria). Teachers mostly (46-100%) reported meeting
their goals related to daily physical activity breaks, teaching healthy behavior knowledge and teachers/students eating healthier in the cafeteria. Classroom teachers taught between one and five physical activity breaks during the Wellness Weeks (usually 2-3). Goal setting has been shown to improve teachers’ self-efficacy and help individuals be more committed to their goals (Locke & Latham, 1990). In the current study, goal setting led to teachers having numerous goals and some success in achieving their goals related to teaching about healthy behaviors and participating in healthy behaviors in their classrooms and at school.
References


Please include the following six items with your proceedings submission:

1. Title of the submission.
   A Bridge Over Troubled Waters: The Experiences of Counselor Education Students Participating in a Service Learning Project

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6. Abstract.
   This study seeks to address the question: What are the experiences of counselor education students engaged in a service learning project in the class-Child and Adolescent Development in the Department of Counseling? This qualitative study presents the research in two dimensions: 1) examination of data collection comprised of counselor education student experiences and reflections derived from description and analysis; 2) counselor education students enrolled in a class produced a written report reflecting on the pre-experience and post experience beliefs of low income students. Students were asked to reflect on the negative and positive aspects of the service learning experience, what they learned about themselves and the low income children, and the urban environment.

Please e-mail as an attachment to education@hiceducation.org.
An Investigation into the Experiences of Immigrant Teachers Serving in Bilingual Education Classrooms in the United States: What Can We Learn from Their Experiences?

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Description

The purpose of the study was to investigate the experiences of Spanish-speaking teachers recruited from other countries to work as bilingual education teachers in the US. They are often sought out to meet the needs of schools districts needing Spanish-speaking teachers to serve a growing student population of linguistically and culturally diverse students who often struggle to meet state standards.

Abstract

This research presents the findings from an ongoing qualitative research study that investigates the experiences of teachers migrating from Latin America and Spain, to Texas, U.S.A. Teachers are being recruited in their country of origin to serve students in bilingual education programs because there is a critical shortage of bilingual teachers due to rapid changes in the demographic composition of the school population. School districts have responded to the bilingual teacher critical shortage in innovative ways, one of which is recruiting teachers from Spanish-speaking countries. The purpose of the study was to investigate the experiences of this group of teachers to understand and the types of professional development immigrant teachers in bilingual education programs need, especially for fostering an effective acculturation process and retaining them in the classroom in this country. This process is important because bilingual teachers from Latin America and Spain are often recruited to meet the needs of schools districts needing Spanish--speaking teachers to serve a growing student population of linguistically and culturally diverse students who often struggle to meet state standards. A successful cultural, professional, and social integration of these teachers will ultimately impact the schools, students, and communities they serve. Some findings of the study include: cultural shock of a new way of life in the United States; family alienation in that the former family support, especially for child care, is nonexistent in the United States; surviving on the new higher pay scale in the US. Even though teachers earn more in the US as opposed to their native countries, it is often not enough to survive after all the new costs of living in the US are accounted for in the monthly expenses. However, the most impactful areas for the teachers coming to the US is the vastly different educational systems and teacher expectations, especially in the area of English language proficiency and student evaluations and outcomes. The teachers report not fully understanding the “best practices” for non-native students, as well as for all students in general such as differentiation. They also report having the need for a mentor during their induction year to learn about the school culture and expectations. The findings of this study can be helpful for many affected school personnel—school administrators, teachers, and community. More research in this area is needed to fully understand the unique perspectives of the teachers and to support them on their journey of professional educator in the US.
Undergraduate Research: Not Just for Research Universities

Robin Cresiski, Qingmin Shi, Sandip Thanki, Richard Yao, Tony Scinta, Janice Le-Nguyen
Mick Haney
Nevada State College

Abstract
This study examines the impact of undergraduate research participation on student outcomes drawing on 324 senior students who completed the 2015 administration of National Survey of Student Engagement and their enrollment data. The results indicate that students who have participated in undergraduate research reported higher-level of engagement, were more satisfied with their entire educational experiences, and reported higher gains than their peers who have not done undergraduate research. In addition, participation in undergraduate research improves student one-year retention, good academic standing, and graduation rates.

Keywords: Undergraduate Research, National Survey of Student Engagement, Engagement, Perceived gains, Satisfaction

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Undergraduate Research: Not Just for Research Universities

Purpose of the Study

Undergraduate research (UR) as a high-impact practice (Kuh, 2008) is increasingly gaining attention from the higher education community. The benefits of participation in undergraduate research have been well recognized (Malachowski, Osborn, Karukstis, & Ambos, 2015). Engagement in UR with faculty members not only provides opportunities for increased involvement in college activities and the development of personal and professional skills, but also allows students to directly experience the inquiry process by participating in defining and solving real problems (Kinkead, 2003). It also allows students to put knowledge and theory that have been learned in the classroom into practice. Research shows that participation in a research project as an undergraduate student is associated with a host of desirable student outcomes, such as persistence, degree completion, and career inspiration (Gilmore, Vieyra, & Timmerman, 2015; Pascarella & Terenzini, 2005). Lopatto (2009) asserts there are four benefits of engaging in UR: skills acquisition, personal development, professional development, and professional advancement, particularly for underrepresented students (Kuh, 2008; Lopatto, 2006, 2009; O'Donnell, Botelho, & Brown, 2015). Other studies have also indicated that participating in undergraduate research strengthens inquiry skills (Alexander, Foertsch, Daffinrud, & Tapia, 2000; Bauer & Bennett, 2003; Kardash, 2000; Lopatto, 2006, 2009; NSSE, 2007; Seymour et al., 2004), and improves interpersonal communication and language skills, critical thinking, and reflective judgment (Bauer, 2001).

Despite well documented positive impacts of UR on student outcomes, “its practice is still far from universal” (Malachowski et al., 2015, p. 1). The literature on undergraduate research is not extensive, “especially in the area of student outcomes” (Kuh, 2008, p. 32). Other than persistence and graduation, student outcomes related to student learning have not been well established (Kuh, 2008). As a result, a significant gap in the literature exists, especially regarding undergraduate research at small teaching colleges as opposed to larger research universities. Due to the different mission and vision of a research university and a teaching college, it is assumed that students at research universities may be advantaged and more likely engage in UR experiences than their peers who attend teaching-focused colleges (Hu, Kuh, Gayles, 2007; Marwick, 2012). In addition, the impacts of UR have not been widely examined among senior students (Gardner et al., 1998). Through years of studying at the institution, senior students may provide valuable feedback on students’ academic and campus experiences to a variety of stakeholders in the campus community leading to actionable knowledge that can improve college teaching, student assessment activities, program self-study, campus planning, as well as relevant decision making (Franke, Ruiz, Sharkness, DeAngelo, & Pryor, 2010).

Situated in a comprehensive public four-year state teaching college that serves a largely underrepresented, first-generation student population, and drawing on National Survey of Student Engagement (NSSE) 2015 senior students’ data and institutional data, this study aims at addressing three research questions:

1. Are there any differences in seniors’ engagement indicators, overall satisfaction, and perceived gains if senior students have participated in undergraduate research relative to their peers who have not participated in undergraduate research?
2. How does participation in undergraduate research relate to seniors’ perceived gains and satisfaction?
3. To what extent does participation in undergraduate research make a difference in senior students’ one-year retention, academic standing, and graduation rates?

It is our hope that answers to these questions not only shed light on the benefits of participation in UR on student outcomes, but also contribute to the knowledge base of undergraduate research in teaching-focused institutions. This study inspires leaders and administrators in teaching-focused institutions to revisit their programs and courses and rethink how teaching institutions can include more opportunities for undergraduate research. In addition, it also encourages faculty at teaching colleges to include research opportunities or components in the curriculum.

**Theoretical Framework**

Several conceptual frameworks were employed to guide design of this study and interpretation of the results. Astin’s (1984, 1999) student involvement theory and Kuh’s (2003) engagement perspective assert that the more a student is involved/engaged in the educational experience, the more he/she could gain intellectually and socially. These perspectives also suggest that student involvement/engagement is positively associated with desired student outcomes, such as retention, cognitive learning, and perceived gains in practical, personal, and social development. Following this line of thinking, we hypothesize that if students participate in UR, they will have more opportunities to work with faculty and their peers, these opportunities in turn promote higher-levels of engagement, overall satisfaction, and perceived gains.

Astin (1999) also proposed a model depicting how academic programs, student-faculty interaction, student peer groups, and other variables impact students’ college experience. Over time, these theories have fostered development of recommended practices. Chickering and Gamson (1987) propose seven broad principles for good practice in undergraduate education, which have extensively influenced research and teaching practices in higher education. Kuh (2008) advocates that participation in high-impact practices, including undergraduate research, could be “life changing” for students. Therefore, we hypothesize that if students participate in undergraduate research, they will have more opportunities to interact with faculty and peers and engage more deeply in their educational experiences, both of which will lead to increased positive learning outcomes and perceived gains.

Studies support the effectiveness of high-impact practices on student outcomes, including service-learning and undergraduate research (Lopatto, 2006, 2009; Kardash, 2000; Kuh, 2008; O’Donnell et al., 2015; Pascarella & Terenzini, 2005). The undergraduate research opportunities benefit all students, and particularly underrepresented students (Lopatto, 2006, 2009; Kuh, 2008). However, the literature on undergraduate research is not extensive, especially in regards to teaching-focused institutions. It is often assumed that research universities may provide more opportunities to engage undergraduate students in research projects and university faculty may have more funding to support undergraduate research. As a result, students at research universities may be advantaged and more likely engage in undergraduate research experiences than their peers who attend teaching-focused colleges (Hu, Kuh, Gayles, 2007; Marwick, 2012). Although it might be held true, this assumption and the benefits of participation in UR on student outcomes has not been closely examined in the context of teaching college. Therefore, it is imperative that researchers and scholars in the higher education community deepen our understanding of students’ UR experiences at teaching institutions.
Methods

Context of the Study

This study is situated in a comprehensive four-year public state teaching college with a deep commitment to fostering educational opportunity and enriching educational experiences for a largely underrepresented, first-generation student population. As a highly diverse campus, 77% of the students are female, 56% are an ethnic/racial minority, and above 60% are first-generation college going students. The campus has a large portion of low-income, Pell-eligible students (74% in fall 2015).

To meet the needs of such a diverse student population, the Institution starts with providing supportive services and inclusive practices that open doors for a diverse and largely under-served student population (such as bridge programs, stretch courses that combine remediation with college level work, and peer course assistants). This opportunity, in turn, creates a path to educational enrichment – the personal and professional growth shaped by learning experiences that challenge and inspire students to achieve their potentials. The Institution offers a wide range of student support initiatives to assist all students academically, as well as to enrich and enhance their general experiences on campus, especially for those underserved first-generation, ethnic minority, and low-income students.

Data Sources and Participants

Two types of data served as the data sources of this study: senior data from the 2015 administration of NSSE and institutional enrollment data. NSSE data were retrieved from the NSSE institutional interface specifically designated for the Institution. NSSE administered its survey to first-year and senior-year students in the Institution through a specific online survey link directly sent to eligible students enrolled in spring 2015. The 2015 NSSE data allowed us to explore all interested variables of student experiences with undergraduate research, overall satisfaction, and perceived gains. In addition, NSSE data included student ID, through which we linked NSSE data to student enrollment data. To do so, our data analyst in the Office of Institutional Research accessed and downloaded NSSE data and matched data with student enrollment data using student ID. After matching, the data were de-identified so that no individual student record was identifiable in the dataset.

Participants in this study were senior-year students who completed the 2015 NSSE. Among the 1154 eligible seniors, a total of 374 students returned their responses, which leads to a response rate of 32.4% and a sampling error of 4.2% (NSSE, 2016). The response rate was relatively acceptable, which was higher than the average response rate of Far West Public (21%, Far West Public is the default comparison group for this Institution) and NSSE 2015 (25%), and similar to that of the Carnegie Class institutions (33%). The final sample included 324 senior students who completed NSSE the undergraduate research question item and other targeted questions of this study. Of these students, the majority were female (76%), first-generation (67%), non-minority (57%), non-traditional (75%), and part-time (63%; see Table 1). The sample of this group of NSSE seniors is similar to the campus senior population enrolled in spring 2015 in terms of gender, ethnicity, first-generation status, age, low-income status, and enrollment status (see Table 1). Therefore, it warrants the generalizability of the results to the campus senior population.
Table 1

**Characteristics of seniors enrolled in spring 2015 and seniors participated in NSSE 2015**

<table>
<thead>
<tr>
<th></th>
<th>Seniors Enrolled (1154)</th>
<th>Seniors in NSSE (324)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Percentage</td>
</tr>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Female</td>
<td>872</td>
<td>76</td>
</tr>
<tr>
<td>Male</td>
<td>270</td>
<td>24</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
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<tr>
<td>Minority</td>
<td>534</td>
<td>46</td>
</tr>
<tr>
<td>Non-Minority</td>
<td>620</td>
<td>54</td>
</tr>
<tr>
<td>First-Generation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Generation</td>
<td>761</td>
<td>66</td>
</tr>
<tr>
<td>Non-First-Generation</td>
<td>393</td>
<td>34</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-24</td>
<td>288</td>
<td>25</td>
</tr>
<tr>
<td>25 and up</td>
<td>866</td>
<td>75</td>
</tr>
<tr>
<td>Low-Income</td>
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<tr>
<td>Low-Income</td>
<td>555</td>
<td>48</td>
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<tr>
<td>Non-Low-Income</td>
<td>599</td>
<td>52</td>
</tr>
<tr>
<td>Enrollment Status</td>
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<tr>
<td>Full-Time</td>
<td>430</td>
<td>37</td>
</tr>
<tr>
<td>Part-Time</td>
<td>724</td>
<td>63</td>
</tr>
</tbody>
</table>

**Measurement and Variables**

The 2015 National Survey of Student Engagement main survey was utilized to measure three variables of this study, which were seniors’ participation in undergraduate research, overall satisfaction, and perceived gains. First, regarding UR, unlike most questions on the NSSE survey, the undergraduate research question was not limited to the current school year. Therefore, seniors’ responses include participation from prior years. NSSE asked students about their participation in undergraduate research with one item, “which of the following have you done or plan to do before your graduate?” The item was followed by four possible responses – 1: “have not decided”, 2: “do not plan to do”, 3: “plan to do”, and 4: “done or in progress”. Based on students’ responses, we recoded the number of 1, 2, 3, and 4 into a dichotomous measure, accordingly, as 1 for “done or in progress”, meaning students have participated in undergraduate research, and 0 for “have not decided, do not plan to do, or plan to do”, indicating students have not participated in any UR activities.

Second, student engagement indicators (EI) were estimated by 10 indicators. These indicators were measured by 47 questions, which asked students indicating how often they have done the related activities. One question reads, for example, “during the current school year, about how often have you done the following?” and then provided a list of activities such as “combined ideas from different courses when completing assignments.” NSSE 2015 designated each question with four response options (e.g., never, sometimes, often, and very often). In order to facilitate comparisons over time, as well as between groups of students within or between institutions (NSSE, 2015), engagement indicators were expressed on a 60-point scale. Student responses of “Never”, “Sometimes”, “Often”, and “Very often” were recoded with values of 0, 20, 40, or 60. Thus an engagement indicator score of zero means that the student chose the lowest response option for every item in that item, while a score of 60 means that the student chose the highest response to that item. Then, the recoded values for each component item on each EI were averaged and weighted at the student-level scores for gender, full-time and part-time, first-year and senior students, and were expressed on a 60-point scale. The 10 Engagement Indicator scale scores were pre-calculated directly derived from the NSSE dataset created for the Institution. Each engagement indicator score and the score on each component items ranges from 0 to 60. The higher scores mean higher-level engagement (NSSE, 2015).
Third, student perceived gains were measured by and generated from 10 items asking student self-reported gains in personal, practical, and general education competency areas as a result of their undergraduate education. The question asks “how much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?” and then lists areas such as writing clearly and effectively, speaking clearly and effectively, or thinking critically and analytically. Students were asked to indicate the gains on a four-point scale with four response options, which were: 1 “very little,” 2 “quite a bit,” 3 “some,” and 4 “very much.” Similar to the calculation of EI, based on the SPSS syntax provided by NSSE (NSSE, 2014b), each of the ten items were recoded with values of 0, 20, 40, or 60. Therefore, perceived gains score and the score on each component items ranged from 0 to 60. The higher scores mean more perceived gains.

Fourth, overall student satisfaction about their entire educational experience was measured by two NSSE items: “how would you evaluate your entire educational experience at this institution?” and “if you could start over again, would you go to the same institution that you are attending?” both of had four response options (e.g., poor, fair, good, and excellent; or definitely no, probably no, probably yes, and definitely yes). Following NSSE recommended SPSS syntax (NSSE, 2014b), we recoded the aforementioned four options with values of 0, 20, 40, or 60, and expressed them on a 60-point scale. We also calculated overall satisfaction score averaging the scores on the two items, which ranged from 0 to 60. The higher score means higher-level satisfaction.

Outside of the NSSE survey, retention, academic standing, and graduation rates were examined using institutional research data. Student one-year retention was measured by fall to fall retention and were coded as 0 if a student was not retained, and 1 if they were retained. Academic standing was measured by student letter grade. If a student earned a letter grade of A, B, or C for the semester, he/she was coded as 1 for being on good academic standing, and otherwise the student was coded as 0 for not being on good academic standing. Graduation was measured by college graduation status, and was coded in a similar pattern as one-year retention.

**Data Analysis**

The quantitative method was adopted, with several analytic approaches, to address the three research questions of this study. First, the General Linear Model (GLM) was performed to address the first research question by comparing means and standard deviations of engagement indicators, perceived gains, and satisfaction by UR participation status. A univariate analysis of variance was conducted on perceived gains because only one composite perceived gains score was involved in this study (Stevens, 2002). Additionally, a multivariate analysis of variance was performed on overall satisfaction and its two composite items: evaluation of entire educational experiences and whether a student goes to the same institution he/she is now attending if he/she started over again. The reason of employing GLM rather than other procedures is because GLM allows the inclusion of sample weight when calculating means and standard deviations of the targeted variables due to the complexity and weighting of NSSE data (Chen et al., 2009; NSSE, 2014a).

Two conditions presented in NSSE data, which require that weight must be taken into account when analyzing data. One condition that triggers weighting is when the proportion of respondents within a particular demographic variable (e.g., gender, full-time/par-time, adult students) differs substantially from their population percentages, and the other condition is when students within the subgroups differ substantially in the variables of interest (e.g., full-time and
part-time students show different patterns of engagement). For each participating institution, two sets of weights were pre-computed separately for first-year and senior students using gender and enrollment status information taken from submitted population files and were included in the files released to the institution (NSSE, 2016). In this study, weights for gender and full-time/part-time status for first-year and senior students were used for calculating means and standard deviations of engagement indicators, perceived gains, and satisfaction.

Second, to address the second research question of this study, the Point-Biserial correlational analysis was performed to examine the relationships between participation in undergraduate research and overall perceived gains and its 10 composite items, and overall satisfaction and its two composite items. Due to the categorical nature of UR participation variable and continuous nature of perceived gains and satisfaction, the Point-Biserial correlations were chosen to examine the relationship between participation in UR and perceived gains, and participation in UR and satisfaction.

Lastly, due to the categorical nature of one-year retention (retained, not retained), academic standing (on good academic standing, not on good academic standing), and graduation (graduated, not graduated), as well as UR participation (participated, not participated), chi-square tests were utilized to address the third research question, examining the proportional differences between students who have and have not participated in undergraduate research because of its applicable for independence and homogeneity (Franke, Ho, & Christie, 2012). In this study, we compared the proportional differences in one-year retention, academic standing, and graduation between students who have and have not participated in undergraduate research.

**Limitation**

This study has its limitations in several ways. First, although the sample of this study was demographically representative of senior enrollment of this Institution, the small sample size of students who have participated in UR limits the generalizability of this study. Second, participation in undergraduate research was measured by one single item. This item can only indicates the participation status. Future studies need to develop more reliable measurement to ensure measuring the whole picture of undergraduate research. Third, this study only focuses on one institution. Cross-similar sister institutional examination of student engagement in undergraduate research is necessary. And lastly, this study relies on self-reported measures of undergraduate research, overall satisfaction, and perceived gains. Future studies may collect data from other sources and/or collect more qualitative data to triangulate with quantitative measures.

**Results**

The data analyses lead to several salient findings. Overall, senior students at the Institution participated in undergraduate research at a relatively lower rate; about 12% of seniors (38 out of 324) have participated in undergraduate research by the time of responding NSSE. However, if senior students have done or in progress of undergraduate research, the positive impacts were evident from this study.

First, for those senior students who have participated in undergraduate research, their engagement, satisfaction, and self-reported gains were statistically higher than their peers who have not participated in undergraduate research (see Table 2). As shown in Table 2, regarding engagement indicators, senior students who have participated in undergraduate research reported significantly higher scores on engagement indicators of reflective and integrative learning ($M =$
48.56 vs. 42.45), quantitative reasoning ($M = 35.74$ vs. 28.12), collaborative learning ($M = 39.56$ vs. 29.12), and student-faculty interaction ($M = 29.64$ vs. 19.09), than their peers who have not participated in UR, $p < .01$, $p < .05$, $p < .01$, and $p < .01$, respectively. For senior students who have participated in undergraduate research, their evaluation of their entire educational experience ($M = 52.49$ vs. 44.94), assertion that they would go to the same institution if they could do so again ($M = 52.40$ vs. 45.31), overall satisfaction ($M = 52.44$ vs. 45.13), and self-reported gains ($M = 44.87$ vs. 36.40) were statistically significant higher than their peers who have not participated in undergraduate research, $p < .01$, $p < .05$, $p < .01$, or $p < .05$, respectively.

Table 2
Means and Standard Deviations of Student Outcomes by UR Participation Status$^a$

<table>
<thead>
<tr>
<th>Undergraduate research</th>
<th>M</th>
<th>SD</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher-Order Learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have not done</td>
<td>44.91</td>
<td>13.74</td>
<td>.513</td>
<td>ns $^e$</td>
</tr>
<tr>
<td>Done or in Progress</td>
<td>46.75</td>
<td>10.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective and Integrative Learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have not done</td>
<td>42.45</td>
<td>12.08</td>
<td>7.35</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Done or in Progress</td>
<td>48.56</td>
<td>9.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Strategies</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Have not done</td>
<td>45.05</td>
<td>14.30</td>
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<td>17.48</td>
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<td>Discussions with Diverse Others</td>
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<tr>
<td>Effective Teaching Practices</td>
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<td></td>
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<td></td>
</tr>
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<td>43.21</td>
<td>14.43</td>
<td>.001</td>
<td>ns</td>
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<tr>
<td>Done or in Progress</td>
<td>43.28</td>
<td>12.64</td>
<td></td>
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</tr>
<tr>
<td>Quality of Interactions</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>13.38</td>
<td>.458</td>
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<td>10.63</td>
<td></td>
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<tr>
<td>Supportive Environment</td>
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<tr>
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<td>27.68</td>
<td>15.23</td>
<td>3.61</td>
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<td>Done or in Progress</td>
<td>33.21</td>
<td>15.04</td>
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<td></td>
</tr>
<tr>
<td>Evaluation of Entire Educational Experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have not done</td>
<td>44.94</td>
<td>14.88</td>
<td>8.25</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Done or in Progress</td>
<td>52.49</td>
<td>11.58</td>
<td></td>
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<tr>
<td>Would go to the Same Institution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have not done</td>
<td>45.31</td>
<td>16.84</td>
<td>5.90</td>
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</tr>
<tr>
<td>Done or in Progress</td>
<td>52.40</td>
<td>9.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have not done</td>
<td>45.13</td>
<td>14.54</td>
<td>8.30</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Done or in Progress</td>
<td>52.44</td>
<td>9.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Gains</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have not done</td>
<td>36.80</td>
<td>16.17</td>
<td>7.86</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Done or in Progress</td>
<td>44.87</td>
<td>11.48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^a$ Weighted Least Squares Regression - Weighted by Gender, FT/PT weight for FY, SR within an institution; $^b$: ns means not significant.

Second, correlational analysis indicated that participation in undergraduate research was significantly associated with perceived gains and satisfaction (see Table 3). Participation in undergraduate research was found significantly associated with a variety of the perceived gains items in practical, personal and social development, including “thinking critically and analytically”, “analyzing numerical and statistical information”, “acquiring job- or work-related knowledge and skills”, “working effectively with others”, “developing or clarifying a personal code of values and ethics”, “solving complex real-world problems”, and total score of perceived gains (see Table 3). Correlation coefficients between UR participation and perceived gains...
ranged from 0.119 to 0.189, indicating a small effect size. Similarly, participation in undergraduate research was also found significantly correlated with evaluation of entire educational experience, assertion that they would go to the same institution attending now if start over again, as well as overall satisfaction, \( p < .01 \), \( < .05 \), and \( p < .01 \), respectively.

Table 3

**Correlation Coefficients between UR Participation and Perceived Gains and Satisfaction**

<table>
<thead>
<tr>
<th>Perceived Gains</th>
<th>Participation in UR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing clearly and effectively</td>
<td>0.097</td>
</tr>
<tr>
<td>Speaking clearly and effectively</td>
<td>0.122**</td>
</tr>
<tr>
<td>Thinking critically and analytically</td>
<td>0.189**</td>
</tr>
<tr>
<td>Analyzing numerical and statistical information</td>
<td>0.161**</td>
</tr>
<tr>
<td>Acquiring job- or work-related knowledge and skills</td>
<td>0.130</td>
</tr>
<tr>
<td>Working effectively with others</td>
<td>0.119</td>
</tr>
<tr>
<td>Developing or clarifying a personal code of values and ethics</td>
<td>0.134</td>
</tr>
<tr>
<td>Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)</td>
<td>0.104</td>
</tr>
<tr>
<td>Solving complex real-world problems</td>
<td>0.171**</td>
</tr>
<tr>
<td>Being an informed and active citizen</td>
<td>0.109</td>
</tr>
<tr>
<td><strong>Total Score of Perceived Gains</strong></td>
<td>0.164**</td>
</tr>
</tbody>
</table>

**Satisfaction**

- Evaluation of entire educational experience: 0.159**
- If start over again, would you go to the same institution you are now attending?: 0.136*
- **Overall Satisfaction**: 0.160**

Third, results from chi-square tests revealed that students who have participated in undergraduate research performed better on student success metrics such as one-year retention, academic standing, and graduation when compared to peers who have not participated in UR (see Table 4). Senior students who have participated in undergraduate research were being retained at a higher rate than that of their peers who have not participated in UR (92.1% vs 85.3%), and more of them were in good academic standing (97.4% vs 94.4%). However, the proportional differences were not significant, \( \chi^2(1) = 1.29, p > .05 \) and \( \chi^2(1) = 0.59, p > .05 \), respectively (see Table 4). In terms of graduation rate, students who have participated in undergraduate research graduated at a significantly higher rate than that of their peers who have not participated in UR (73.7% vs 39.5%), \( \chi^2(1) = 15.94, p < .01 \).

Table 4

**Undergraduate Research Participation and Student Outcomes**

<table>
<thead>
<tr>
<th>UR Participation</th>
<th>One-Year Retention</th>
<th>Good Academic Standing (GAS)</th>
<th>Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Not Retained</td>
<td>Retained</td>
</tr>
<tr>
<td>No</td>
<td>284</td>
<td>42 (14.7%)</td>
<td>244 (85.3%)</td>
</tr>
<tr>
<td>Yes</td>
<td>38</td>
<td>33 (89.7%)</td>
<td>5 (10.3%)</td>
</tr>
<tr>
<td>Total</td>
<td>322</td>
<td>45</td>
<td>279</td>
</tr>
<tr>
<td>Statistical test</td>
<td>( \chi^2(1) = 1.29, p &gt; .05 )</td>
<td>( \chi^2(1) = 0.59, p &gt; .05 )</td>
<td>( \chi^2(1) = 15.94, p &lt; .01 )</td>
</tr>
</tbody>
</table>

Note: a. Due to the small sample size (less than 5), the results should be interpreted with caution.

**Discussion and Conclusion**
The current study revealed the positive associations between participation in undergraduate research and student engagement, overall satisfaction, and perceived gains in practical, personal and social development. Students who have participated in UR reported significantly higher-level engagement in “reflective and integrative learning”, “quantitative reasoning”, “collaborative learning”, and “student-faculty interaction” relative to their peers who have not participated in any undergraduate research activities. Students participated in UR also indicated higher-level satisfaction and perceived gains. The findings not only were consistent with prior studies, showing the benefits of undergraduate research on student outcomes (Kardash, 2000; Kuh, 2008; Lopatto, 2006, 2009), but also confirmed the assumptions of Astin’s (1984, 1999) student involvement theory and Kuh’s (2003) engagement perspective, and supported our hypothesis. If students participate in undergraduate research, they will have more opportunities to interact with faculty and peers and engage more deeply in their educational experiences, both of which will lead to increased positive learning outcomes and perceived gains.

Undergraduate research as one of the high-impact practices that has been well-recognized and widely adopted by research universities, especially since the National Leadership Council for Liberal Education and America’s Promise (LEAP) identified the effectiveness of high-impact practices in the Association of American Colleges and Universities (AAC&U)’s 2007 report (other high-impact practices include first-year seminars and experiences, learning communities, undergraduate research, service learning, internships, community-based learning/service learning, and senior capstone courses and experiences). According to National Survey of Student Engagement (NSSE, 2007), these high-impact practices, including UR, are marked by several traits that effective educational practices share, which involve demanding students devote considerable time and effort, requiring meaningful interactions with faculty and peers, encouraging collaboration with diverse others, facilitating learning outside of the classroom and challenging students to develop critical thinking, and providing frequent and substantive feedback (NSSE, 2007). As a result, the positive impact of participating in these high-impact practices could be life-changing (Kuh, 2008). Therefore, institutions should create opportunities for research and encourage all students, especially underrepresented students, to actively participate in at least two HIPs over the course of their undergraduate experience—one during the first year and one later in the context of their major (Kuh, 2008; NSSE, 2007).

The findings of this current study are encouraging regarding the positive impacts of UR on student engagement, overall satisfaction, and perceived gains in teaching-focused institutions. The positive impacts of UR on student outcomes are significant, however prior to this study there was little research that had been done to examine the relationship of UR on outcomes at teaching colleges. This study deepens our understanding by providing empirical evidence. The findings of this study indicated that UR participation significantly correlated with a variety of perceived gains and evaluation of entire educational experiences, and overall satisfaction. In addition, students who have participated in UR also have higher one-year retention and good academic standing rates, as well as significantly higher graduation rates than their peers who have not participated in UR. Therefore, we assert that providing additional opportunities for undergraduate students to engage in research projects with faculty members will benefit students and promote student success metrics regardless of institution classification. Undergraduate research is not just for research universities, and teaching institutions must think creatively about how to build greater in-class and extracurricular opportunities for students to access this high-impact practice.
Significance of the Study

This study contributes to the knowledge base of higher education by exploring the impacts of undergraduate research on student outcomes in the context of teaching institution, which has not been closely examined yet in the field of higher education. The results are encouraging, indicating that students who have participated in UR are more satisfied with entire educational experiences and reported significantly higher gains than their peers who have not done undergraduate research. In addition, participation in UR also improves other student success metrics, such as one-year retention, good academic standing, and graduation rates. This study deepens our understanding of impacts of undergraduate research on student outcomes beyond the context of research universities. It also inspires other sister teaching institutions that undergraduate research is not just for research universities. Given the positive impacts of undergraduate research, however, since only a small proportion of seniors have participated in undergraduate research activities, the administrators need to invest more to encourage faculty to include students in their research projects and be creative about how to do so when scholarly expectations or facilities may be limited. It might be fundamental to incorporate research components at the course level to give students access to research.
References


Does Financial Aid Matter? An Examination of Pell Grants and Underrepresented Students’ Performance

Abstract

This study examines the impact of financial aid on underrepresented students’ performance drawing on institutional data from 3549 students enrolled at a comprehensive four-year state college. The results of this study are encouraging that Pell Grants matter for persistence, especially for underrepresented first-generation and SSS eligible students. It is also hold true that Pell Grants significantly increased student one-year retention regardless their race and ethnicity.

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Does Financial Aid Matter?
An Examination of Pell Grants and Underrepresented Students’ Performance

Purpose of the Study

Underrepresented students in higher education are those who come from low-income, first-generation, or ethnic and racial minority backgrounds (Green, 2006). These students have been historically underserved in post-secondary education and may encounter more difficulties than their peers in persistence, retention, and graduation (Carter, 2006; Kuh et al., 2006; Pyne & Means, 2013; Smedley, Myers, & Harrell, 1993). However, research has shown that institutional efforts such as student support services including financial aid may enhance underrepresented students’ persistence in college, regardless of the obstacles they face (Beck, Cresiski, Scinta, Thanki, & Shi, 2016; Hurtado, Carter, & Spuler, 1996).

The Pell Grant program is the largest need-based financial assistance provided by the U.S. federal government available to postsecondary students across the United States. The number of students receiving Pell Grants increased from 3.7 million in 1994-95 to 5.3 million in 2004-05, and to 8.2 million in 2014-15 (The College Board, 2015). With the introduction of the Guaranteed Student Loan program and the Pell Grant, along with other merit-based grant, state grant, and institutional scholarships, there is evidence of an increase in college access, choice, and affordability (Long, 2008). As observed by Coria and Hoffman (2016), studies have consistently supported the positive relationship between the availability of financial aid and college attendance (De La Rosa, 2006; Long & Riley, 2007; Wei & Horn, 2002).

However, the impacts of financial aid on retention and attainment have not been as extensively investigated as on attendance ((DesJardins et al., 2002; Kerkviet & Nowell, 2005), and associations between financial aid and persistence seem unclear compared to associations between financial aid and access to higher education (Coria & Hoffman, 2016). As the largest source of need-based federal financial aid available to low-income students in the United States, The Pell Grant, created in 1972, has been the focus of such examination. However, the results of impacts of Pell grant on student persistence was also inconclusive due to the difficulty to establish the cause impact relationship of Pell Grant on persistence (Long, 2008).

Some studies demonstrated a weak, statistically significant relationship between financial aid and persistence (Bettinger, 2004; Ishitani & DesJardins, 2003; Wei & Horn, 2002). Studies suggest that the relationship between financial aid and persistence are generally positive (e.g., Herzog, 2005; St. John, 1998; St. John, Kirshstein, & Noell, 1991; Terkla, 1985). Some studies indicated the positive effect of aid may not last beyond the first term of attendance (Herzog, 2005), and may also depend on family income and types of aid (Chen, 2008). Still a noticeable number of studies have indicated that financial aid is no longer adequate to promote persistence (e.g., St. John & Starkey, 1995; St. John, 1998; DesJardins, Ahlburg, & McCall, 2000), especially in public institutions. Using institutional data, Herzog (2005) suggests that students from middle income families with greater levels of unmet need face increased departure risk, while academically well-prepared first-year students with unmet need are more likely to transfer to other institutions. Therefore, it might be possible that future studies disaggregate financial aid based on student demographics to closely investigate financial aid and student success metrics, which could warrant a solid proclamation of such a relationship.
Drawing on data from 3549 college students enrolled in a comprehensive four-year state college, this study examines the impacts of Pell grants on underrepresented students. Two research questions guided this study:

1. Does financial aid matter for students’ performance?
2. Do Pell Grant recipients performed better than their non-Pell recipient peers based on first-generation status, SSS eligibility, race and ethnicity?

Methods

Context of the Study

This study is situated in a comprehensive four-year public institution with a deep commitment to fostering educational opportunity and enriching educational experiences for a largely underrepresented, first generation student population. The institution had a student enrollment of more than 3500 and was classified by the Carnegie Foundation for the Advancement of Teaching as a Baccalaureate College with Diverse Fields. As a highly diverse campus, 77 percent of the student body in this institution is female, 56 percent is an ethnic/racial minority, and above 60 percent are first-generation college going students. The campus has a large portion of the students (74% in fall 2014) who are eligible for the Student Support Services (SSS) program, which is designated for helping disadvantaged low-income, first-generation students, and students with disabilities successfully complete their postsecondary education.

To meet the need of such a diverse student population, the Institution starts with providing opportunities for underrepresented students, as well as all students – the supportive services and inclusive practices that open doors to a diverse and largely underserved student population. This opportunity, in turn, creates a path to educational enrichment – the personal and professional growth shaped by learning experiences that challenge and inspire students to achieve their potentials.

Data Source and Participants

Data of this study were drawn from the institutional data of 3549 undergraduate students who enrolled in fall 2014 in a comprehensive four-year public institution in southwest of USA. We select fall 2014 enrollment data because the data sources provide us a better understanding of enrollment pattern of one cohort in the whole academic year.

Participants of this study were 3549 students. Table 1 presented the demographics of these participants. A large of proportion of the students enrolled in fall 2014 were female (76.5%), ethnic minority (53.4%), part-time (66.2%), first-generation students (61.6%), and students who are eligible for the Student Support Services (SSS, 73.7%). This Institution represents a very diverse campus, like other intuitions which serve a diverse population of students. It is our hope that through this case we will provide empirical evidence of how student support services make a difference in student success for the higher education community.

Table 1
Demographics of the Participants

<table>
<thead>
<tr>
<th></th>
<th>N = 3549</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>2715</td>
<td>76.5</td>
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<tr>
<td>Male</td>
<td>834</td>
<td>23.5</td>
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<tr>
<td>Ethnicity</td>
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<tr>
<td>White</td>
<td>1562</td>
<td>44.0</td>
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<tr>
<td>Hispanic</td>
<td>829</td>
<td>23.4</td>
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<tr>
<td>Black or African American</td>
<td>407</td>
<td>11.5</td>
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### Enrollment Status

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<th>Category</th>
<th>Count</th>
<th>Percentage</th>
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<tr>
<td>Full time</td>
<td>1200</td>
<td>33.8</td>
</tr>
<tr>
<td>Part time</td>
<td>2349</td>
<td>66.2</td>
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</table>

### First-Generation Status

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2186</td>
<td>61.6</td>
</tr>
<tr>
<td>No</td>
<td>1363</td>
<td>38.4</td>
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</table>

### SSS Eligibility

<table>
<thead>
<tr>
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<th>Percentage</th>
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<td>2616</td>
<td>73.7</td>
</tr>
<tr>
<td>No</td>
<td>933</td>
<td>26.3</td>
</tr>
</tbody>
</table>

### Data Analysis

One of the exploratory variables of this study was the Pell recipient status measured by whether a student received Pell Grants or not. If a student received Pell in the academic year of 2013-2014, he/she was coded as 1, otherwise 0. We disaggregated the data by student demographic information, including first-generation status and SSS eligibility. These two variables were categorical in nature and were coded as 1 if any, otherwise as 0. In addition, the variable of race/ethnicity was grouped into four racial and ethnic groups, which are White, Hispanic, African American or Black, and Asian.

Outcome variables in this study consisted of students’ one-year retention and academic standing. One-term and one-year retention were measured by whether a student was retained in the following term or academic year. If a student received an average GPA above 2.0 on a 4 point scale for the courses taken during that semester, which means the student received a letter grade of A, B, or C, he/she was categorized as on good academic standing; otherwise, he/she was not on good academic standing. These outcome variables are categorical in nature, and thus were coded as 1 if any, otherwise 0.

Chi-square test was used to address the research questions of this study, which can be applied for testing goodness of fit, independence, and homogeneity (Franke, Ho, & Christie, 2012). Due to the nature of the categorical dependent variables (one-year retention and academic standing) involved in this study, chi-square tests were performed to examine the proportional differences in one-year retention and academic standing based on Pell recipient status, first-generation and Pell grants recipient status, and ethnicity.

### Results

The data analyses lead to encouraging findings. Overall, students who received Pell Grants performed significantly better than their peers who did not receive Pell Grants. First, the results of this study indicated that students who received Pell Grants had a significantly higher proportion of one-year retention than their non-Pell recipient peers, $\chi^2(1) = 19.03$, $p < .01$ (see Table 2). Pell received students were retained at a higher rate than that of their non-Pell received peers (52.0% vs. 40.6%).

Second, when we disaggregated the data by first-generation status, SSS eligibility, and race/ethnicity, the results revealed these underrepresented students performed better if they received Pell Grants. Regarding first-generation status, if first-generation students received Pell
Grants, they were retained at a significantly higher rate in terms of one-year retention than their peer counterparts (47.4% vs. 40.0%), $\chi^2(1) = 15.51, p < .01$ (see Table 2).

### Table 2
**Pell Grants and Underrepresented Students’ Performance** (Fall 2014, N = 3549)

<table>
<thead>
<tr>
<th>Pell Recipient Status</th>
<th>One-Year Retention</th>
<th>Good Academic Standing (GAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Retained</td>
<td>Retained</td>
</tr>
<tr>
<td></td>
<td>Not on GAS</td>
<td>On GAS</td>
</tr>
<tr>
<td>Did not Receive Pell</td>
<td>3145</td>
<td>1668 (59.4%)</td>
</tr>
<tr>
<td>Received Pell</td>
<td>404</td>
<td>194 (48.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>3549</td>
<td>2062</td>
</tr>
</tbody>
</table>

Statistical tests
$\chi^2(1) = 19.03, p < .01$
$\chi^2(1) = 0.05, p > .05$

<table>
<thead>
<tr>
<th>First-Generation Status</th>
<th>Pell Recipient Status</th>
<th>One-Year Retention</th>
<th>Good Academic Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Not Retained</td>
<td>Retained</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not on GAS</td>
<td>On GAS</td>
</tr>
<tr>
<td>Did not Receive Pell</td>
<td>2618</td>
<td>1572 (60.0%)</td>
<td>1046 (40.0%)</td>
</tr>
<tr>
<td>Received Pell</td>
<td>931</td>
<td>490 (52.6%)</td>
<td>441 (47.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>2616</td>
<td>1473</td>
<td>1143</td>
</tr>
</tbody>
</table>

Statistical tests
$\chi^2(1) = 13.39, p < .01$
$\chi^2(1) = 0.387, p > .05$

<table>
<thead>
<tr>
<th>SSS Eligible Students</th>
<th>Pell Recipient Status</th>
<th>One-Year Retention</th>
<th>Good Academic Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Not Retained</td>
<td>Retained</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not on GAS</td>
<td>On GAS</td>
</tr>
<tr>
<td>Did not Receive Pell</td>
<td>2212</td>
<td>1279 (57.8%)</td>
<td>933 (42.2%)</td>
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<tr>
<td>Received Pell</td>
<td>404</td>
<td>194 (48.0%)</td>
<td>210 (52.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>2616</td>
<td>1473</td>
<td>1143</td>
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Statistical tests
$\chi^2(1) = 7.79, p < .01$
$\chi^2(1) = 0.075, p > .05$

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<th>Good Academic Standing</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>Total</td>
<td>Not Retained</td>
<td>Retained</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not on GAS</td>
<td>On GAS</td>
</tr>
<tr>
<td>White</td>
<td>1562</td>
<td>891</td>
<td>671</td>
</tr>
<tr>
<td></td>
<td></td>
<td>277</td>
<td>1285</td>
</tr>
</tbody>
</table>

Statistical test
$\chi^2(1) = 7.50, p < .01$
$\chi^2(1) = 0.32, p > .05$

|                        | Total                 | No                 | Yes                   |
|                        |                       | Not Retained       | Retained              |
|                        |                       | Not on GAS         | On GAS                |
| Hispanics              | 829                   | 471                | 358                   |
|                        |                       | 200                | 629                   |

Statistical test
$\chi^2(1) = 7.50, p < .01$
$\chi^2(1) = 0.32, p > .05$

<table>
<thead>
<tr>
<th>Black or African Americans</th>
<th>Pell Recipient Status</th>
<th>One-Year Retention</th>
<th>Good Academic Standing</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Not Retained</td>
<td>Retained</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not on GAS</td>
<td>On GAS</td>
</tr>
<tr>
<td>Did not Receive Pell</td>
<td>340</td>
<td>235 (69.1%)</td>
<td>105 (30.9%)</td>
</tr>
<tr>
<td>Received Pell</td>
<td>67</td>
<td>38 (56.7%)</td>
<td>29 (43.3%)</td>
</tr>
<tr>
<td>Total</td>
<td>407</td>
<td>273</td>
<td>134</td>
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</tbody>
</table>

Statistical test
$\chi^2(1) = 3.90, p < .05$
$\chi^2(1) = 0.09, p > .05$

<table>
<thead>
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<th>Asian</th>
<th>Pell Recipient Status</th>
<th>One-Year Retention</th>
<th>Good Academic Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Not Retained</td>
<td>Retained</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not on GAS</td>
<td>On GAS</td>
</tr>
<tr>
<td>Did not Receive Pell</td>
<td>328</td>
<td>206 (62.8%)</td>
<td>122 (37.2%)</td>
</tr>
<tr>
<td>Received Pell</td>
<td>42</td>
<td>17 (40.5%)</td>
<td>25 (59.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>370</td>
<td>223</td>
<td>147</td>
</tr>
</tbody>
</table>

Statistical test
$\chi^2(1) = 7.75, p < .01$
$\chi^2(1) = 0.39, p > .05$

In terms of SSS eligibility, the results also revealed that students who are eligible for SSS program if they received Pell Grants, their one-year retention was also significantly higher than
their peers who did not receive Pell Grants (52.0% vs 42.2%), $\chi^2(1) = 13.39$, $p < .01$ (see Table 2).

Similarly, Pell Grants significantly increased student one-year retention regardless of their race and ethnicity (see Table 2). Students who received Pell Grants were retained at a higher rate than their peer counterparts who did not receive Pell Grants, $ps < .05$ for White (53.6% vs. 41.8%), Hispanic (56.5% vs. 41.5%), and Asian students (59.5% vs. 37.2%), and $p < .05$ for Black or African American students (43.3% vs. 30.9%), respectively.

Third, interestingly, Pell Grants were not significantly associated with good academic standing regardless of first-generation status, SSS eligibility, and race and ethnicity. The reason deserves further investigation.

**Conclusion**

This study indicated that if a student received Pell Grants, she/he is more likely to be retained next year than their peers who did not receive Pell Grants, which is consistent with previous empirical studies in terms of the impact of the financial aid on student retention (Bean & Metzner, 1985; Bettinger, 2004; Braxton et al., 2004). The results also held true for first-generation and Pell received students. If a first-generation student receives Pell grants, she/he is more likely to be retained next year than their peer counterparts. In addition, the results suggested that Pell Grants increased students’ one-year retention regardless their race and ethnicity. This study deepens our understanding of the connection between Pell Grants and student performance for underrepresented students by providing empirical evidence to the knowledge base of higher education. The findings of this study are encouraging that Pell Grants matters for persistence, especially for underrepresented students. It also calls for campus attention about how to provide a holistic student support services system to enhance student success beyond retention. This study focused on Pell Grants only. Future studies may closely examine the association of financial aid and student performance by breaking down financial aid by unmet need status, unmet need amount, and type of aids.
References


Shared Problems of Practice:

A Cross-Sector English and Mathematics Collaboration

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Abstract

The authors report on a three-year project focusing on the development and implementation of a self-directed, regional, professional development structure for approximately 50 regional K-12, community college, and university faculty in English language arts (ELA) and mathematics. Focusing on the goals of decreasing the proportion of high school graduates placing into developmental courses and increasing the proportion of college students satisfactorily completing college-level ELA and mathematics courses, project participants address high school to college transition difficulties in both ELA and math. A professional learning project was established to target the complex and persistent problems of students’ high school to college transition. Professional learning through inquiry helped us to examine our practices in relation to the problem. This regional collaborative professional development project consisting of ELA and math faculty from Eastern Washington University, Community Colleges of Spokane, Spokane Public Schools, and area rural districts shows common problems of practice across sectors and content areas. The three main problems of practice identified are 1) independent learning, 2) critical reading and writing skills, and 3) critical thinking and problem solving skills. An important aspect of inquiry learning is in sharing results of our work, both internally and externally, which allows for collective learning about the problem and its possible solutions (Morris & Hiebert, 2011; Palmisano, 2013).
Introduction

Approximately 50 mathematics and English language arts (ELA) and math faculty members from Eastern Washington University, Community Colleges of Spokane, Spokane Public Schools, and area rural school districts began working on a three-year collaborative professional development project titled “Successful Transitions to College: Collaboration for Alignment to the Common Core State Standards” (STC) in the fall of 2014. This project strengthens the K-16 alignment of ELA and mathematics curriculum and instruction across the schools and colleges, facilitates K-12 and higher education faculty members fully implementing Washington state’s adoption of Common Core State Standards (CCSS), and ensures a smoother transition from high school to college for the region’s low-income students.

STC is a professional network allowing sustained cross-sector collaboration as regional educational leaders identify curricular and instructional alignment issues. Through providing time and resources for faculty members to develop, research, test, and apply solutions to shared problems of practice across institution, collaborative inquiry occurs through a generative process and builds instructors’ capacity to closely examine their own teaching practices. The inquiry process provides space and tools to imagine and implement potential solutions to improve student success and to gather and analyze evidence of each strategy’s efficacy (Morris & Hiebert, 2011). Informed by scholarship promoting changes to teaching practices across sectors in order to more effectively support students in the transition from high school to college (Conley, 2011), this approach is shaped by research on best practices in the development of both professional learning communities (Darling-Hammond, et al., 2009) and networked improvement communities (Bryk, Gomez, & Grunow, 2011).
Sustained inquiry learning requires the development of an inquiry stance—that instructors identify problems, realize and question their assumptions, and examine their own roles in solving the problem (Nelson, Slavit, & Deuel, 2012). STC has high but achievable high school to college transition goals for both ELA and mathematics:

- lower rates of student placement into developmental courses;
- higher student pass-rates in college-level classes; and
- the collaborative faculty development of a repository of instructional resources.

All participants attended three workshops in years one and two of the project, and content specific cross-sector cohorts met and worked between the large meetings. This same structure will continue in year three as cohorts are researching, designing, and iteratively implementing and revising specific curricular resources for use across sectors.

**Methods**

Collaborative inquiry across institutions requires consistent planning, flexibility, and adaptation. Designers and facilitators assisted in creating conditions and support for collaborative, systematic, and ongoing inquiry. Two main strands of research—professional learning communities and adult cognitive motivational learning theories—were employed to support faculty in their ongoing work. Research and methods found in the literature connected to professional learning communities grounded and informed our constructivist and collaborative approach to our work (Annenberg, 2004; Wenger 1998). In this approach, collaborators work together to 1) define a problem of practice; 2) reach agreement on goals; 3) generate solutions; and 4) systematically test and gather evidence on the efficacy of these solution. Instructors who work in different educational systems require assistance to build relationships, understand each other’s challenges and constraints, and find common areas to target. Research in adult learning
theories (Brookfield, 1988; Trivette, et al, 2009) and cognitive motivational theories
(Csikszentmihalyi, 1997) were used to create optimal conditions for educators to share expertise
and collaborate in ways that are highly productive. Through these theoretical lenses, project
leaders work to provide resources and structure to support the process; create protocols for
collective guided inquiry; find, distribute, and facilitate discussion of applicable research; and
structure meetings to help groups understand the process of inquiry.

Prior to the initial gathering of all participants, project leaders worked to understand
values, build collaboration, and develop understanding and ownership of the problems by
creating a website where they posted readings and discussion prompts. The readings included
articles on equity, on problems of transferring knowledge, and on teacher learning through
inquiry. In an online discussion of these articles, participants explored the readings before the
first meeting. This helped them to build relationships, which led to the creation of professional
learning ELA and math cohorts composed of regional high school, college, and university
faculty. At the outset of the project, content specific cohorts were developed intentionally to
include teachers from both rural and urban low-income school districts, four-year university
faculty, and two-year community college faculty. Initially, participants took part in a
collaborative protocol process focusing on evidence-based skills and content to examine the
alignment of their existing classroom practices to CCSS. Each instructor was expected to follow
through on an iterative process designed to build shared understandings of problems, generate
approaches designed to produce better results, and assess and reflect on the results (Palmisano,
2013). The inquiry process required participants to share responsibility for the high school to
college transition problems. An important part of the process, from beginning to end, is for
participants to reflectively and reflexively share their experiences, processes, and the results. In
year one, project leadership facilitated two specific opportunities to reach these ends: examination of standards and classroom observations.

**Examination of Standards**

Prior to choosing a problem of practice, project participants examined and discussed the CCSS in Mathematics and the CCSS in ELA/Literacy. In particular, they deliberated over the Standards for Mathematical Practices and the ELA portraits of college-ready students in order to create descriptions of characteristics they sought to develop in their students. Then, they identified problems of practice that affect students’ development of these ideal characteristics. Each ELA or mathematics cross-sector cohort of instructors involved in the STC project was asked to choose a *problem of practice* regarding teaching and learning that negatively affects students’ likelihood of placing into college-level classes in composition or mathematics and/or successfully completing college-level courses in English composition or mathematics within the first two years after completing high school.

**Classroom Observations**

After identifying problems of practice, project leadership designed a specific observation protocol—the “Student Experience Visit”—to visit each other’s classrooms and to determine shared issues on which to focus. Approaching these classroom visits from the student perspective helped participants avoid feeling judged on their teaching and, instead, opened conversation about the inherent challenges students face within every classroom. Teachers observed and described evidence of students’ understanding of learning objectives and expectations, as well as identified opportunities for students to gain the necessary skills to meet those objectives and expectations. The observation protocol asked participants to identify the skills and demands students face in each environment. Observations included noting how the
skills expected of students in the classroom environment they observed differed from
expectations in their own classroom environment—high school instructors visited two-year and
four-year classrooms, two-year faculty visited high school classrooms and four-year classrooms,
and so on. Through the observation protocol processes, each of the cohorts continued to narrow
to a particular focus, derived from a common problem of practice.

Results

Discussion among ELA and mathematics instructors, based on the examination of standards
and classroom observations, led to the realization that the desirable attributes and practices for
success in learning mathematics mirror the portraits in college-ready ELA students. Based on
these early discussions, a key idea arose—ELA and math cohorts identified similarly themed
cross-content problems of practice:

- Independent learning
- Critical reading and writing skills
- Critical thinking and problem solving skills

What follows is the data, in these three themed problems of practice categories, based on STC
instructor participation in the examination of standards, classroom observations, and facilitated
discussions.

Independent Learning

It was a common expectation, across sectors and content areas, that students would
independently apply concepts covered in classwork. Problems of practice identified by two math
cohorts and one ELA cohort focus specifically on independent learning:

- Algebra A Cohort—How can we observe and measure students using resources other
  than the teacher (without a prompt)?
• Algebra B Cohort—Creating a classroom environment that promotes independent learning and perseverance.

• ELA D Cohort—Develop students’ abilities to independently discover and apply applicable processes when they encounter literacy situations in various classes.

These three cohorts recognized that instructors managed issues related to students’ independence: motivation, preparedness, curiosity, and reflective questioning.

One classroom observation revealed that an instructor communicated the need for independent learning through his pedagogical actions. In certain instances, the instructor would only give guiding questions and partial answers help to students after they had made some progress on the problem on their own. He would lead them with a question or a thoughtful comment and continue to emphasize independent learning instead of showing a student how to do a problem. Another observer noted an interaction between a student and instructor focused on the value of independent learning. The student was expressing that he was ashamed and disappointed that he spent multiple hours trying to solve and understand only a few homework assignment problems. The instructor’s response was to smile and encourage the student to be proud of the work completed and in persevering through the struggle to understanding. This conversation took place in class and highlighted the emphasis on independent learning in this course.

**Critical Reading and Writing Skills**

Another common problem of practice theme identified by both ELA and math participant instructors was the need for students to read and write critically:
• Calculus A Cohort—Students need to improve their ability to read for content and think critically about what they read. Many students are not reading the text. Students who are reading are not fully comprehending.

• ELA B Cohort—Students struggle to provide an objective summary of academic texts. There is an emphasis in these identified problems of practice of students’ approaches to a variety of literacy situations, which includes both reading and writing. While there is an explicit focus on critical reading skills, writing activities like objectively summarizing, are closely connected to reading. The composing process inherently requires the ability to critically read one’s own writing. This relationship between critical reading and critical writing relates directly to results found by cohorts. Much of the concern of STC participants focused on student preparedness to effectively connect the reading of texts to their own production of texts.

Critical Thinking and Problem Solving Skills

Critical thinking and problem solving was third theme that appeared through STC participants’ examination of standards, classroom observations, and facilitated discussions. It’s important to note that instructors saw this theme as directly related to the both other identified themes— independent learning and critical reading and writing skills. Specific problems of practice focused on critical thinking and problem solving skills included the following:

• Geometry Cohort—Students don’t understand formulas well; therefore, they have a harder time applying them and applying them to novel situations. Instruction focuses too much on plug and chug, and not enough on making sense of the formulas students are using.

• ELA Cohort A—Students are challenged to both discern the relevant aspects of source material used by authors and to effectively integrate that material as authors themselves.
• ELA Cohort C—Student do not use text as a means to increase their experience/expertise. Instructors, again across sectors and content areas, showed interest in helping students to think critically about a problem or task before applying a process, procedure, or formula. They consistently asked students to reflect on processes and revise approaches through continual reflection and justification of responses. A common approach to addressing these problems of practice was discussion and group work in both ELA and math classrooms. One instructor noted, “I expect my students to self-assess and ask questions. I expect students to be able to answer questions in class, make connections to prior knowledge, and explain their thinking…On most days there is structured group work and collaborative learning. Another participant explained, “I observed students eager and interested in participating in the problem solving…I saw students using good reasoning, communicating well, and persevering in problem solving.” Instructors observed practices—asking critical thinking questions, asking students to collaborate, and engaging students in whole class discussions—to facilitate critical thinking and problem solving. These practices were valued in all classrooms, regardless of sector or content area. All instructors expected students to work on challenging problems, engage effectively at every stage of the problem solving process, strive to make sense of the concepts they were learning, and clearly describe their thinking.

Discussion

The problems of practice identified by participating STC instructors, based on their varied classroom experiences, suggest that students’ independence, critical reading and writing skills, and critical thinking and problem solving skills are of concern across sectors and content areas that lead to ongoing and shared challenges for instructors and their students in the transition from high school to college in both ELA and math. Examining the standards together
and observing each other’s classrooms encouraged instructors to question their assumptions about students’ experiences in other sectors. These experiences provided participants space to support a deeper collaboration and a clearer understanding of the range of systems, from high school to college, that students must navigate. Instructors targeted difficult, but shared, aspects of teaching and learning that helped them see student experiences in a variety of classroom settings, while initiating a process to become cross-sector partners in search of solutions (Coomes, Alvin, & Olson, in publication).

Students must, when they enter college, learn to engage with the academic discourse community, an entity with which first-year students traditionally have had little in-depth experience (Lea & Street, 2006). The shift in the CCSS to focus on the “[r]eading, writing, and speaking grounded in evidence from texts, both literary and informational,” can be understood as an effort to address this transitional challenge before students enter college (Agriss, Reid, & Young, 2016). Findings from the STC participants suggest that students struggle to effectively participate in the academic discourse community which focuses on independent learning, critical reading and writing, and critical thinking and problem solving. We argue that these problems of practice are related, and that our participants’ identification of these key problems of practice is mirrored in the CCSS themselves, and that successful implementation of those standards will require a focus on independence, reading, writing, and critical thinking in both ELA and Math. A focus on literacy across disciplines and sectors has the potential to improve student success in reading and writing, and also in the content areas themselves.

Scholarship on the implementation of the Common Core suggests that the CCSS seek to specifically address students’ critical thinking ability as key to the successful transition to college. David Conley (2011) argues that, in order to truly meet the standards of the Common
Core, and ensure that students are in fact ready for college, educators must “move classroom
teaching away from a focus on worksheets, drill-and-memorize activities” towards a pedagogy
that promotes active student engagement, through the cultivation of key “cognitive strategies” (p.
16). While pedagogies such as direct instruction may be more effective in improving short term
test scores, the teaching and learning of the cognitive strategies that constitute independence,
critical reading and writing, and critical thinking and problem solving is best accomplished with
a constructivist approach, which holds that learning can only truly occur via a process of
interaction with others and internalization of knowledge within the individual student (Hillocks,
1999). Language use and communication in the classroom is key to learning the kind of
cognitive strategies that are essential to the successful transition to college.

In other words, one way to make the kind of epistemological and pedagogical shift that
Conley suggests is to engage students in learning through discursive activity in both math and
ELA, across the K-16 continuum. Fortunately, both the math and ELA CCSS encourage a
discourse-based approach to teaching and learning. In ELA, the CCSS pushes literacy pedagogy
away from a direct instruction approach through a focus on the learning of writing as a process
and the learning of reading as an individual, contextualized experience (Calkins, Ehrenworth, &
Lehman, 2012). Additionally, the teaching and learning of math through discursive practice
(often termed “math talk”) is supported by the CCSS Standards of Mathematical Practice, as well
as by examples within the current literature on the effective teaching and learning of math
(Wagganer, 2015; Anderson, Chapin, & O’ Connor, 2011; Stein, Engle, Smith, & Hughes,
2008).

The themes of the problems of practice identified by our participants suggest that
teachers and administrators across the K-16 continuum are concerned about the relationship
between student ability to use language and think critically and readiness for the independence required to successfully transition from high school to college. Thankfully, the CCSS are designed to directly address these problems of practice, and ideally those students graduating high school will be better prepared to enter college as a result.

**Conclusion**

The STC project attempts to address issues that high school students face in their transition to college ELA and mathematics classes. While developing a culture of professional learning that asked participants to adopt inquiry stances about teaching and learning, this project created both large and small cross-sector and cross-disciplinary communities of practice where instructors engaged in inquiry-based learning to identify problems of practice. A key outcome of work done by the cross-sector, cross-disciplinary group was the realization that students in both disciplines face similarly themed problems of practice—Independence, critical reading and writing skills, and critical thinking and problem solving skills. These three main problems of practice, and the fact that all educational levels agreed on them, indicated the need for a more deliberate scaling of classroom intervention tools to help students build confidence and content competence.

In order to design effective pedagogical tools for the classroom, cohort groups needed to further narrow their focus within a particular problem of practice. As a next step, project leaders designed a protocol titled *Guidelines for Specifying a Problem of Practice and Defining Scope of Work*. This next protocol assists cohorts in transitioning from a problem of practice to planning an intervention. Currently, STC participants are engaging in the systematic study of selected research-based curriculum materials related to the identified problems of practice. They are working collaboratively in their cross-sector cohorts to gain a shared understanding of the
expectations for students’ performance as they transition from high school to college ELA and math. Research-based course activities and assignments are being jointly designed and implemented, and participants are collecting data and collaborating to review samples of students’ work from all sectors.

Faculty from high schools, community colleges, and the university are working to better understand the expectations placed on students in all sectors. Collaboration on this work will inform participants of differing expectations among sectors, facilitate identification of gaps in the curriculum within and among sectors, and allow faculty to work together across sectors to better assist students in successfully transitioning from high to college.
References


Title of Proposal:
Beyond Show & Tell: Active Learning in the Library Classroom

Topic Areas:
Libraries and Learning Commons, Higher Education, Pedagogy, Active Learning

Presentation Format:
Poster

Summary:
Engaging students with varying levels of research experience in a single class session can be a challenge for an academic librarian. This presentation will examine strategies for developing active learning research exercises at the postgraduate level.

Abstract:
Graduate and doctoral students are expected to conduct exhaustive literature reviews, yet many of them lack basic research skills. However, a traditional lecture-based library session can leave research savvy students bored and disengaged. This presentation will examine the use of problem based learning activities to engage students with varying ranges of research experience. Through a series of search challenges, the students were invited to work together and share their solutions. The active learning approach gave students the opportunity to teach each other while refining the skills they already have.

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Strategies for Struggling Readers:
Learn How to Supercharge Your Reading Instruction with Brain-Based Strategies!

**Topic:** Reading Education

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15th Annual Conference  
Honolulu, Hawaii  
January 3, 2017
Abstract

This paper is based on the most current information we have about the human brain during the process of reading. Through the advances of fMRI, PET, and EEG brain imaging, neuroscientists have begun to learn about how the brain processes new information, and transfers the new learning from short term to long-term memory. This new information regarding how the brain learns to read can help teachers to create effective, research-based lessons and activities. Traditionally, teachers have learned by trial and error which instructional methods meet the needs of their students. Current brain research can be used as a guideline when creating a preliminary brain-based reading instructional framework. Two key ideas from neuroscience pertaining to reading instruction were consistently found in the literature: 1) the brain attends to novelty, movement, intensity and contrast and 2) neural connections are built through the repetition of skills. Effective brain-based instruction requires different strategies for individuals based on such variables as prior learning, experience, and a select set of cognitive neuroscience principles.

Key Words: Reading, brain-based research, neuroscience, imaging, cognitive science, reading strategies, struggling readers, teaching ring, dyslexia, reading research.
Introduction

The ability to read well is a prerequisite skill that every student needs to succeed in school and every adult needs to be successful in their everyday life. Dehaene (2006), a leading cognitive scientist maintains, “Neuroscience today sheds indispensable light on how a reader’s brain works and what makes it more or less receptive to different teaching methods” (p, 326). The question of how to best teach students to read has been the source of heated debate for over 100 years amongst educators. Unfortunately, not all students learn to read easily, in fact, many struggle to acquire the skills to become fluent readers throughout the course of their years in school. For some students, their lack of reading expertise is due to emotional issues, which result in a lack of concentration and focus during reading instruction. Many students come from home environments that do not support the development of phonemic awareness and pre-reading skills due to constraints of time or lack of parental educational backgrounds. Finally, there are dyslexic students who receive intensive reading instruction in small groups or on a one-to-one basis who continue to struggle with becoming skilled readers.

Regardless of which instructional method is used, most educators agree that learning to read is a multi-step process. Learning to read can be compared to learning to play a musical instrument. We learn to read at increasingly higher levels of skill development or achievement with training and practice. To decode or sound out words is just a first step in the acquisition of reading proficiency. After obtaining a familiarity with the letter-sound relationships in reading, students must then learn to use this process
at an automatic level, to read with fluency. Sprenger (2013) suggests that “reading is a complete cognitive process that has five essential components built on brain development and experience” (p. 75). Reading experts have identified the five major categories of skills which are developed and used as children or adults learn to become skilled readers as: 1) phonemic awareness, 2) phonics instruction, 3) vocabulary, 4) fluency, and 5) comprehension.

Two key ideas from neuroscience pertaining to learning and reading instruction were consistently found: 1) the brain’s need for novelty, and 2) the repetition of skills builds and strengthens neurons, multisensory instruction is effective. Refer to Appendix C for a table of reading strategies supported by our current understanding of neuroscience.

**The Brain’s Need for Novelty**

The Reticular Activating System (RAS) is a structure of the brain that performs the first screening of all sensory input before it enters the brain is especially responsive to novelty. Understanding that novel or different instructional activities will be allowed through the RAS allowing your students to attend and receive these activities has important implications for teachers. Changes in the classroom, activities and strategies will catch the RAS’s need for novelty. Willis (2010) recommends that teachers use this information about the brain to inform their teaching by incorporating novelty into their daily instructional activities.
Neuroscientists believe that concrete vivid images are an important way to convey learning. According to Jensen (2008) the brain has an attentional bias for high contrast and novelty and 90 percent of the brain’s sensory input is from visual sources. (p. 56). What does that mean for reading teachers? Teachers should incorporate project-based assignments, computers, videos, books, cameras, art supplies, visual aids, posters, word walls, and graphic organizers into their reading and literature lessons.

**The Repetition of Skills Builds and Strengths Neuron**

Learning involves the activation of thousands of neurons, which make connections in order to make networks of neurons. As reading skills are practiced, neurons send dendrites to other neurons, creating denser neural connections and possibly increasing myelination. The repetition of correctly performed skills building dendrites has implications for all the components of reading. Regular practice of skills will improve phonemic awareness skills, phonics skills, vocabulary development, fluency, and comprehension by changing the architecture of your students’ brains.

**Review of the Literature**

Reading is a relatively recent cultural creation, and the alphabet itself is thirty-eight hundred years old. When viewed through a neuroscience lens, reading is the development of the brain making connections between thousands of neurons through the process of rehearsal. Neuroscientists have identified the regions of the brain devoted to hearing, vision, speech, as well as the recognition of faces and places. Situated between
the regions of the brain, which enable us to recognize faces and the portion, which we use to recognize places, is an area termed the visual word form. Deheane (2009) explains “an amazing recent discovery shows that there is a specific cortical area for written words, much like the primary auditory area or the motor cortex that exist in all our brains” (p. 51). Deheane (2009) and others have labeled the left occipito-temporal area of the brain the visual word form area or the “brain's letterbox” (p. 62). See Appendix A for a visual representation of the brain’s word form area.

Neuroscientists believe that reading involves the integration of two systems, our ability to speak with that of recognizing objects and faces. According to Dehaene (2009), “Learning to read involves connecting two sets of brain regions that are already present in infancy; the object recognition system and the language circuit” (p. 195). Dehaene and his colleagues at the Cognitive Neuroimaging Unit in Saclay France are studying how the brain processes the written word by using fMRI technology. Dehaene (2009) proposes that when a student reads a word, activation begins in the occipital or visual processing portion of the brain followed by neural activity in the left occipital temporal region (Brain's Letter-Box) that extracts the visual word form. Neuroscientists believe that as we learn to read, after numerous times of sounding out a word, the brain stores the word in the visual word form area in the form of a picture.

Deheane hypothesizes that reading hijacks portions of the brain, which were genetically hard-wired for visual recognition. To survive primates needed to have instantaneous face and place recognition to avoid danger and promote survival and that
this would account for evolutionary and genetic programming of these highly
developed recognition skills.

**Phonics**

Sousa (2010) asserts that, “Teachers have taught for centuries without knowing
much, if anything, about how the brain works” (p. 2). Recent brain research supports an
explicit phonetic approach to teaching decoding. Sally Shaywitz, a neuroscientist and
professor of pediatrics at Yale University School of Medicine, has studied the brain
mechanisms involved in the reading process using magnetic resonance imaging
technology. Shaywitz (1999) reported that reading is not a naturally developed skill as is
learning to use oral language. Shaywitz (1999) explains, “We know that whereas
speaking is natural, reading is not. Children do not automatically read. They have to
learn how to do it” (p. 26). The brain research of Shaywitz and her colleagues support a
phonics based instructional method to teach decoding. Shaywitz (1999) explains,
“Although phonics is more important for some children than for others, all children can
benefit from being taught directly how to break up spoken words into small units and
how letters represent sounds” (p. 29).

Furthermore, Shaywitz (1999) contends that, “...if we can give poor readers a
sound foundation so that they know and can decode a group of words, they will have the
phonologic skills to sound out words they’ve never seen before and will be encouraged to
read” (p. 29). For many students, whose home environment supports literacy the
decoding process can be accomplished with even poorly developed phonics programs.
For students, whose homes do not support the development of literacy, the method of beginning reading instruction is of critical importance.

Adams (1990) conducted a metanalysis of over six hundred reading studies. Two major outcomes of the Adams’ report were: (1) explicitly taught phonics resulted in improved reading achievement, and (2) phonics instruction needed to be taught within the context a balanced program which included text that contained words reflecting what the students were learning in their phonics lessons. From studying the literature regarding reading Adams (1990) concluded, “Collectively these studies suggest, with impressive consistency, that programs including systematic instruction on letter-to-sound correspondences lead to higher achievement in both word recognition and spelling, at least in the early grades and especially for slower or economically disadvantaged students” (p. 31).

**Phonics: Implicit Versus Explicit Phonetic Methodology**

Phonics is commonly defined as instruction in the relationship between letters and their sounds. The phonetic method of instruction has been used to describe a wide range of techniques, although it is comprised of two main approaches: (1) the synthetic or explicit method, and (2) the analytic or implicit method. Explicit phonics methods teach the letter-sound correspondences in isolation and insist that students blend the individual sounds to pronounce whole words. For example, students learn that the written or visual stimulus “b” to make the “buh” sound or oral response. Almost instinctually, teachers often use the techniques of the explicit approach to fill in the implicit instructional gap
for their students in the decoding process. Anderson et al. (1985) describe what happens in explicit phonics, “In explicit phonics instruction, the sounds associated with letters are identified in isolation and then “blended” together to form words” (p. 39).

Most reading educators today agree that some phonics instruction, which teaches students to decode or sound out words, is an essential ingredient in reading instruction. Anderson et al. outlined the explicit phonics methodology as the following: A critical step in explicit phonics instruction is blending the isolated sounds of letters to produce words. To help children blend the sounds in the word sit, for example, a teacher may begin by pointing to each letter and asking the children to say the separate sounds, /s/ /i/ /t/. Next the teacher may model blending by extending the sounds /ssiit/ and then collapsing the sounds together to yield sit. Blending may seem simple to an adult who already knows how to read, but in fact it is a difficult step for many children. (p. 39)

In implicit or analytical phonics instruction, the sounds associated with the letters are never pronounced in isolation. During an implicit phonics lesson, for example, the teacher would write a list of word of the board such as “Sand, soft, and slip,” and ask the children, “what do all these words have in common?” After the students, have identified the initial consonant “s” the teacher would then tell the students that the letter “s” stands for the sound that you hear at the beginning of these words. Anderson et al. stated, “A problem with implicit phonics is that it places stress on an ability called phonemic segmentation. This is the ability to identify separate speech sounds in spoken words” (p. 40). Not all children are able to hear the sounds, separate, and duplicate the sounds
without direct modeling and practice. The problem with implicit phonics is that it expects students to be able to perform what has never been formally taught.

**Vocabulary**

Hart and Risley (2003) in their gold standard research study found that somewhere between eighty-six and ninety-eight percent of children’s recorded vocabularies matched that of their parents. They also found that by the age of three, children living in professional families had a recorded vocabulary size of 1,116 words whereas children in working class families’ vocabulary size was 749 words. This difference in the vocabulary of children entering school puts children of working families in a catch-up position as they began to learn to read. However, enriched early childhood programs can help students increase their vocabulary, lessening the existing gap in vocabulary. The importance of building vocabulary and background knowledge in disadvantaged youth is critically important, as a well-developed vocabulary is key to strong fluency and comprehension skills. Skilled teachers can expand their students’ vocabularies by building background knowledge, reading rich literature out loud to their class and inspiring their students to love reading and become avid independent readers.

Deheane (2009) reminds us that, “Although decoding is essential for beginning readers, vocabulary enrichment is equally important. A child must learn the morphology of English (prefixes, suffixes, and roots of words particularly when he comes from an underprivileged background or a family where English is a second language” (p. 328).
Beck & McKeown (1985) suggest that literate people have a vocabulary consisting of three tiers. Tier 1 words are made up of sight words, nouns, verbs, adjectives such as book, girl, baby. Tier 2 words are the high-frequency words that we find in a variety of domains and these words play a major role in the vocabulary of mature language. Examples of Tier 2 words include coincidence, masterpiece, industrious, and benevolent. Tier 3 words are low frequency words that are domain specific and used during instruction in that content area. Beck advises that teachers concentrate on teaching Tier 2 words to achieve the best vocabulary benefit.

Fluency

Let’s turn our attention to reading fluency and look at some of the brain-compatible strategies that improve fluency. According to Willis (2008), “Fluent readers can decode, recognize, and comprehend the meaning of text at the same time, so their networks fire effectively and efficiently” (p. 47). Using the gradual release of responsibility model, to promote reading fluency is an accepted methodology among reading experts. In step one of this model, the teacher models reading a passage with fluency. During this time, students hear the correct pronunciation and expression for this passage. In step two, students choral read the passage with the teacher. Step three follows when students choral reading without the teacher. Finally, during step four, students read along independently after practicing the passage.
Reading Comprehension

When students have mastered the alphabetic principle, and can masterfully decode words, and read with fluency, their working memory is freed up for the task of comprehending the text. Students with strong knowledge about the world and a wide range of things bring to the reading process prior knowledge. Educational researchers maintain, “To have strong language comprehension skills, children must know about the world in which they live, and must have elaborate background knowledge that is relevant to what they are trying to understand. This knowledge is more sophisticated than mere facts or word definitions—it is a reference base for personal experiences, scripts, and schemas that help those children understand how the world works” (SEDL, 2009).

Reading teachers know that activities that activate and build prior knowledge will ultimately improve vocabulary and reading comprehension. When teachers model comprehension strategies, they show students how to break down the text to extract meaning. Visualizing, predicting, active questioning, making text connections, reading anticipation guides, story maps, creating and completing graphic organizers are just a sample of the numerous effective comprehension strategies.

Conclusion

Learning to read is not a linear endeavor because the cognitive elements r components of reading support and reinforce each other. As letters are sounded out into words, the meaning of these words comes into play. The importance of a well-developed vocabulary supports the development of decoding, fluency, and comprehension skills.
Neuroscientists from the Education Endowment Foundation in London, England propose that “fluent reading should be understood as the product of multiple contributing reading subskills.” Through the advances of fMRI, PET, and EEG brain imaging, neuroscientists have begun to understand how the brain processes new information, transfers the new learning from short term to long-term memory, and retrieves that learning at a future time. Teachers can use this information to create effective, research-based lessons, activities, and assessments. Traditionally, teachers have learned by trial and error which reading methods met the needs of their students.

Current brain research can be used as a guideline when creating a preliminary brain-based reading instructional framework. Two of the key ideas from neuroscience pertaining to reading instruction are: 1) the brain’s need for novelty, and 2) the repetition of skills builds and strengthens neurons and their connections. Interestingly varied activities appeal to the brain’s interest in novel stimuli. Focused practice over time of key reading skills builds dendrites, increases the density of neural connections, and strengthens neural myelinization which allows students to become fluent readers with a deep understanding of text. The ability to read well aids students when reading in the content which ultimately adds to background knowledge and vocabulary development the sciences and social sciences. Most importantly, the ability to read well often results in the desire to read independently which reinforces the reading components. Good readers very often become avid readers with a passion for reading that lasts a lifetime.
Brain-based teaching is based on the premise that effective instruction requires the selection of strategies based on our students’ prior knowledge and the principles of novelty and skill practice. Knowing the cognitive science principles that our brains require novelty and that skill practice facilitates the growth of dendrites will contribute to our instructional effectiveness and consequently to increased student learning for struggling readers as well as all learners in general.
References


of Child Health and Human Development.


http://www.humanbrainmapping.org
http://www.brains.org
http://www.sedl.org/reading/framework/elements.html
Appendix A

The visual word form area (VWFA)

- A **reproducible** site of activation during **reading in all cultures** (e.g. Bolger, Perletti & Schneider, 2005)

- Always located at the **same coordinates** in the left lateral occipito-temporal sulcus

- Whose lesion can cause **pure alexia**, an acquired selective disability in reading (e.g. Dejerine, 1892; Gaillard et al., 2006)

- Which activates to **known scripts** more than to other categories of visual stimuli (e.g. Boker et al., 2007)

- A high-level **visual area**, **invariant for location and case** in word identification (e.g. Dehaene et al., 2001; Cohen et al., 2002)

- An automated system, capable of activating even to **subliminal stimuli** (e.g. Dehaene et al., 2001, 2004)
Appendix B

Brain Compatible Lesson Plan Outline

1. Content/Instructional Objective(s):
2. Assessment: How will you know students have learned the content?
   a. Have students present their learning to others
   b. Encourage students to write about what they’ve learned (Journal, essay, news article, report, song, poem)
   c. Have students demonstrate learning with a project (Mural, video, newsletter, commercial)
   d. Quiz students (verbally and/or in writing)
3. Motivational strategies to gain and maintain attention: How will you capture your students’ attention. Examples: novelty, humor, relevance?
4. Activities on Day 1:
   Select two Brain-Compatible Strategies from the list below:

- Brainstorming/Discussion
- Drawing/Artwork
- Games
- Graphic organizers/Semantic maps/Word Webs
- Manipulatives/Experiments/Labs
- Metaphor/Analogy/Simile
- Mnemonic Devices
- Projects (posters, etc.)
- Music/Rhythm/Rhyme/Rap/Movement
- Reciprocal Teaching/Cooperative Learning
- Role-playing/Drama
- Storytelling
- Technology/Student created PowerPoint Presentations
- Visualized/Guided Imagery
- Writing/ Journals/Essays/Research Papers/Poems/Rap

Adapted from: Tate, M.L. (2010) *Worksheets don’t grow on dendrites.*
<table>
<thead>
<tr>
<th>Reading Strategies</th>
<th>Brain Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Reading Skills:</strong> Build novelty into your lesson. Vary instructional activities</td>
<td>“Novelty, change, and other curiosity evoking events alert the Reticular Activating System (RAS) to pay attention” (Wang, Wetmore, &amp; Furlan, 2005).</td>
</tr>
<tr>
<td><strong>All Reading Skills:</strong> Use Multisensory Channels</td>
<td>“Because the brain cross-references information in multiple categories and each sensory input has its own reception and memory storage station, it makes sense that reviewing patterns with different sensory experiences could make it easier for students to access the patterns “(Willis, 2008, p. 30).</td>
</tr>
<tr>
<td><strong>All Reading Skills:</strong> Give your students examples of how the story or book relates to their lives. Encourage students to share their own experiences. Ask questions like, “Have you ever had this happen? If so how did it feel?”</td>
<td>“Relevance is a function of the brain in making a connection from existing neural sites. Emotions are triggered by the brain’s chemistry. Context triggers pattern making which relates to the activation of larger neural fields” (Jensen, 2008, p. 180-181).</td>
</tr>
<tr>
<td><strong>All Reading Skills:</strong> Self-Selected Books increase motivation Question &amp; Discuss as you read</td>
<td>“Neuroimaging studies reflect the influence of stress and pleasure on the filtering of sensory input that enters the brain (RAS), and the next filter (Amygdala – Krashen’s Affective Filter) determines whether the information goes to the thinking brain (prefrontal cortex) or the lower, involuntary reactive brain” (Sousa, 2010, p. 49).</td>
</tr>
<tr>
<td><strong>Fluency:</strong> Have students read aloud and provide effective guidance and feedback to improve their fluency.</td>
<td>“Repetitions will become stored in long-term memory. “With repeated encounters of the same word, the child’s brain makes a neural model-called a word form-that encompasses the spelling, pronunciation, and meaning of the word” (Sousa, 2005, p. 55).</td>
</tr>
<tr>
<td><strong>Fluency:</strong> Read aloud daily to your students.</td>
<td>“By you being a good model of fluent reading, your students will learn how to read fluently” (Sousa, 2005 p. 85).</td>
</tr>
<tr>
<td><strong>Fluency:</strong> Use student-adult reading or neurological impress.</td>
<td>“In this one-on-one method, the adult provides a model of fluent reading by reading the text first. The student then reads the text with encouragement and assistance. The student rereads the passage three or four times until fluency is attained. In a variation of this method, called <strong>neurological impress</strong>, the teacher reads a passage softly into the student’s dominate ear as they both use their fingers to follow along in the text” (Sousa, 2005, p. 85).</td>
</tr>
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</table>
| **Vocabulary:** Give students an opportunity to                                      | “Different areas of the brain, including the
<table>
<thead>
<tr>
<th>STRATEGIES FOR STRUGGLING READERS</th>
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<tbody>
<tr>
<td><strong>create a personal Pictionary by illustrating the definition of new content-area vocabulary words</strong></td>
</tr>
<tr>
<td><strong>Vocabulary:</strong> Teach students to increase their vocabulary by learning the meaning of base words, word roots, prefixes or suffixes.</td>
</tr>
<tr>
<td><strong>Vocabulary &amp; Comprehension:</strong> Graphic Organizers. Create posters of vocabulary definitions, characters, setting, and main idea with your students and hang in your classroom.</td>
</tr>
<tr>
<td><strong>Comprehension:</strong> Preview Material Activate Prior Knowledge Encourage students to make connections: □ Text to Self □ Text to Text □ Text to World</td>
</tr>
<tr>
<td><strong>Comprehension:</strong> Summarize and reflect at the end of lesson after instruction</td>
</tr>
<tr>
<td><strong>Comprehension:</strong> To build comprehension use games, projects, collaborative work that requires students to move during the lesson.</td>
</tr>
<tr>
<td><strong>Comprehension:</strong> Teach using working models such as project-based assignments, a variety of information media (computers, videos, books, cameras, writing equipment, and an array of art supplies.</td>
</tr>
<tr>
<td><strong>Comprehension:</strong> Give students a chance to design a book jacket or cover that depicts the understanding of the major theme of a book or story previously read</td>
</tr>
</tbody>
</table>
Black Women’s and Girls’ Return to Joy: Addressing Trauma and Healing

Dr. Dannielle Joy Davis, Saint Louis University
Dr. Cassandra Chaney, Louisiana State University
Dr. Denise Davis-Maye, Auburn University at Montgomery
Dr. Donna Culbreth, National Girls and Women of Color Council

Abstract

The concept of thriving amidst trauma receives minimal attention when addressing negative life experiences of Black women and girls. This work examines strategies employed and recommended by Black women and girls that prompt thriving amidst traumatic circumstances as they navigate the intersecting identities of race, gender, and class. Radio broadcasts from the National Girls and Women of Color Council serve as data for the topic. Findings reveal the strength of Black women and girls in dealing with trauma, holding the potential to move beyond coping with circumstances, towards potential thriving in education and beyond.
Title:
Boosting Student Achievement and Revolutionizing Classroom Practice: A Grade 4-14 Statewide Mathematics Leadership Model

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Boosting Student Achievement and Revolutionizing Classroom Practice: A Grade 4-14 Statewide Mathematics Leadership Model

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Patty Lofgren, Director of Professional Development, Mathematics Education Collaborative (MEC)
Debbie Olson, Mathematics Instructor, Mathematics Education Collaborative (MEC) and Spokane Falls Community College

PROJECT OVERVIEW

The Mathematics Education Collaborative (MEC), Washington State Educational Service Districts (ESDs), mathematics faculty at Western Washington University (WWU), and the State of Washington Office of Superintendent of Public Instruction (OSPI) partnered to develop a next generation of mathematics teacher leaders who now work with their schools, districts and regions to support implementation of the Common Core State Standards for Mathematics (CCSSM) and the Standards for Mathematical Practice (SMP). The overall project vision was to build the capacity of each ESD to support the implementation efforts of the CCSSM in districts and schools across Washington State.

This 2½-year project developed new teacher leaders who first learned mathematics together in carefully designed rich learning environments and then were given time to transform their mathematics classrooms as the foundation for the new leadership roles they have now taken on. Project evaluation data indicates deeply and dramatically transformed classrooms across grades 4 – 14 and corresponding data suggests that students thrive in these classrooms based on SBAC scores, no matter how the SBAC data is disaggregated.

PROJECT ELEMENTS

The Content Workshops

The project provided high-quality professional learning on unifying themes centered on the Common Core State Standards for grades 4-14 future mathematics teacher leaders statewide. The MEC MSP (Mathematics and Science Partnership) developed a series of workshops and Presenters’ Guides, and prepared leadership teams of 4-6 teachers from each ESD region to offer the workshops in their geographic regions. A second generation of workshops, facilitated by these leadership teams, is now being rolled out to grades 4-14 teachers across Washington.

The summer and school year mathematics workshops referenced in the project elements that follow are content-based workshops that align fully with the content and the Mathematical Practices of the Common Core State Standards. Each 4-day workshop engages teachers and administrators as mathematics learners in an environment where the Standards for Mathematical Practice permeate everything. Workshop topics include the following:

- Year One – Ratio and Proportional Reasoning as a Unifying Theme of the CCSS;
- Year Two – Rational Numbers as a Unifying Theme;
- Year Three – Expressions and Equations as a Unifying Theme.
Future Teacher Leaders – Regional Math Support Team teachers (RMSTs)
Each ESD chose 4-6 grade 4-10 teachers who showed leadership potential. Mathematics Instructors from Spokane Falls Community College and the Northwest Indian College were also prepared as future teacher leaders. These future teacher leaders (RMSTs) attended a 4-day CCSSM-focused mathematics content workshop at least once each year as a participant learner, and an optional second time watching through the eyes of a facilitator. These RMSTs also apprenticed with their Regional Math Coordinators in each workshop. A delayed leadership model was enacted. They worked to deeply enact the workshop content and pedagogies in their own classrooms and they participated in on-line Professional Learning Communities (PLCs) with the MEC leadership team as they did so. A full year ahead of the anticipated timeline, many of these new teacher leaders began co-facilitating the MEC workshops within their districts and/or regions.

Regional Math Coordinators (RMCs)
Each ESD in Washington has a Regional Math Coordinator (RMC). RMCs provide professional development and support to mathematics educators in each region and collaborate with each other statewide. All Washington RMCs attended the content-based workshops. The role of the RMC was to provide mentorship for the RMSTs on their leadership team. RMCs connected personally with their RMSTs as they worked to implement the CCSSM and the Standards for Mathematical Practice in their classrooms. RMC participation helped to strengthen their own understanding of what it takes to implement the CCSSM in classrooms, and helped prepare them to shepherd schools and districts in their transition towards the CCSSM.

Web-based school year follow-up for RMSTs – Webinars
All RMSTs and RMCs convened monthly during the school year as a virtual learning community through a series of webinars lead by MEC. Topics addressed included:
- Building numeracy through Number Talks;
- Examining the SMP through the lens of a classroom video;
- Enacting our Theory of Action with a lens toward provoking productive cognitive dissonance;
- Providing skills practice in mathematically engaging and important contexts;
- Performance assessment;
- Working with parents.

Studio Days
Each pilot site hosted two elementary and two middle school “studio days” each year. “Studio days” were also hosted in higher education classrooms at Spokane Falls Community College and the Northwest Indian College. RMCs, teacher leaders, participating teachers, school administrator(s), and other invited guests from that school/district/college/community followed a lesson observation protocol, observed classroom teaching, and used the observation to learn how to ensure high cognitive demand for all students in mathematics lessons and teaching pedagogies.
TEACHER DATA

Note from MEC: The Reformed Teacher Observation Protocol (RTOP), a standardized means for assessing lesson design, content and classroom culture was used to measure changes in classroom practice. The RTOP was administered in spring of Year 1 prior to the start-up of the MEC MSP work. It was administered again in spring of Year 2 and in spring of Year 3.

RTOP means showed impressive annual gains over baseline each year. In fact, the mean RTOP score among 3-year RMSTs nearly doubled from Y1 to Y3 (46.18 vs. 86.82)… The Y3 mean score for RMSTs increased by nearly 41 points as compared with Y1 (86.82 vs. 46.18). One-way repeated measures of analysis of variance revealed this difference to be significant at p < .001

Note from MEC: The RTOP contains 25 items, each on a scale of 0 to 4.
STUDENT DATA

NOTE FROM MEC: This Smarter Balanced Assessment student data is from spring of 2015, just two years into the intervention. The participant group consists of students of MEC MSP teacher participants, now new teacher leaders. The data are from students of the 30 teacher participants who teach in 29 different school districts throughout the State.

The findings revealed strong SBA performance by students in participating classrooms and offered a robust conclusion to the project. Meaningful to administrators and others is the percent of students who met the standard. Differences were impressive: overall, 60% of participant students met state standards compared with 38% of their comparison counterparts.

<table>
<thead>
<tr>
<th>Chart 9</th>
<th>Chart 7</th>
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<tbody>
<tr>
<td>SBA percent students meeting standard, all grades combined</td>
<td>Mean SBA scale scores by grade/ column chart</td>
</tr>
<tr>
<td>Participant n=1,253</td>
<td>Participant n=1,253</td>
</tr>
<tr>
<td>Comparison n=7,053</td>
<td>Comparison n=7,053</td>
</tr>
</tbody>
</table>

![Percent Met Standard by Intervention Group, All Grades](chart9.png)

![Mean Scale Scores by Group and Grade Level](chart7.png)

<table>
<thead>
<tr>
<th>Chart 8</th>
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<tr>
<td>Mean SBA scale scores by grade/ line chart</td>
</tr>
<tr>
<td>Participant n=1,253</td>
</tr>
</tbody>
</table>

![Mean Scale Scores by Group and Grade Level](chart8.png)

<table>
<thead>
<tr>
<th>Table 11: Averages for Intervention Groups</th>
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<tbody>
<tr>
<td>*Difference is significant: p &lt; .001</td>
</tr>
<tr>
<td>Group</td>
</tr>
<tr>
<td>----------------</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Comparison Group</td>
</tr>
<tr>
<td>Treatment Group</td>
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</tbody>
</table>
Note from MEC: In the disaggregated data that follows, we see both success and sites for further growth and study. Remembering that this data represents students who had only one or two years at most in transformed classrooms, we are left wondering what is possible were students to have multiple years in such classrooms. Clearly an income achievement gap still exists, as well as gaps between different ethnic groups. There is much work left to be done on those fronts. Yet we are encouraged by the significant progress demonstrated across nearly all demographic groups.

Table 12: Average SBA scaled score by Income Group

<table>
<thead>
<tr>
<th>Low Income Group</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td></td>
</tr>
<tr>
<td>Not Low Income</td>
<td>2567.710</td>
<td>2.282</td>
<td>2563.236</td>
</tr>
<tr>
<td>Low Income</td>
<td>2499.858</td>
<td>2.687</td>
<td>2494.591</td>
</tr>
</tbody>
</table>

*Difference is significant; p < .001

Chart 10
SBA percent students met standard by income and intervention, all grades
Participant low income n=507
Comparison low income n=4,366

Mean SBA scale score by income within group
Comparison low income met n= 1156
Comparison low income not met n=3216
Comparison standard income met n=1545
Comparison standard income not met n=1130
Participant low income met n=205
Participant low income not met n=302
Participant standard income met n=540
Participant standard income not met n=204
Chart 11
SBA percent students meeting standard by intervention and gender, all grades combined
Male Participant n=640  Female Participant n=613
Male Comparison n=3,507  Female Comparison n=3,546

Chart 12
SBA percent students meeting standard by race and group, all grades combined

<table>
<thead>
<tr>
<th>PARTICIPANT</th>
<th>COMPARISON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native American</td>
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Percent Met Standard by Race within Groups

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Legend:
- Participant
- Comparison
Title of Submission:

Older Students and the Community College Experience

Topic Area:

Adult Education

Presentation Format:

Paper Session

Description:

Research on older community college students (age 40 and above) is scant or, in some topic areas, non-existent. Using the theoretical framework of the Lifespan Development Model, this research uncovers the behaviors, attitudes and needs of older students at community colleges. The research uses the Community College Survey of Student Engagement (CCSSE, 2015). However, findings to date have been disappointing as correlations expected to be strong have been very weak at best.

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Abstract

Older Students and the Community College Experience

Research on older students at community colleges is scant and in many topic areas, non-existent. We propose several novel research lines to better understand 1) the special behaviors, attitudes, and needs of older students and 2) the differences between older students and typical community college students, age 25 or younger, who typically comprise 70% of the student population.

As a theoretical framework, we chose the Lifespan Development Model as originally articulated by Baltes (1987). In this framework, persons are viewed as transforming their environment while the environment is concurrently transforming them (Goulet & Baltes, 1970). The main advantage of this framework is that it enables an examination of a much wider range of circumstances than other models. Although it is most frequently used in the study of intellectual abilities (Erber, 2010), it also supports examination of complex situations involving the cognitive, biological, and social abilities of individuals over time. This framework allows for the possibility of a much richer analysis of the older student’s experience at community college than is typically found in the community college literature.

The dataset to be used for the initial investigations is the Community College Survey of Student Engagement (CCSSE, 2015) public use data set. The Community College Survey of Student Engagement is an assessment tool that provides information on student engagement, a key indicator of learning and, therefore, of the quality of community colleges. The survey is comprised of items that assess institutional practices and student behaviors that are highly correlated with student learning and student retention.

Over 100,000 students completed this survey of which 6.0% were age 40-49, and 3.5% were age 50 and above. The survey contains basic demographic information about the survey participants. In addition, the CCSSE specifically asks about Internet use, level of class contribution, willingness to help fellow students, propensity to discuss course material with instructors outside of class, opinions about online instruction, and what students feel they have gained from attending classes. We would
predict significant, telling differences between the under-25 and over-40 age groups.

Possible outcomes from this research would include better tailored instructional offerings to older and non-traditional students. Also, suggestions might arise about improvements in the community college physical environment such as highly-visible signage, age-considerate furniture (such as chairs with arms), and more convenient and shorter distances between the locations older students frequent. A long-term benefit of this research is a better match to older students’ goals which would result in an environment that can enhance learning, development, and student success.

The research approach described here connects community college research to the much richer tradition of research on aging and gerontology. This approach should result in more constructive and beneficial findings than have previously been seen.

To date, research findings have been disappointing. Anticipated correlations between variables expected to be strong for older students, such as informally tutoring other students and sharing discussions outside of class, are very weak (Pearson’s r = 0.13 at best). However, we are continuing to investigate other data sources and may have better results in time for the conference in January, 2017.
References


Center for Community College Student Engagement. (2015). *Engagement rising: A decade of CCSSE data shows improvements across the board*. Austin, TX: The University of Texas at Austin, Program in Higher Education Leadership.


Growth Mindset in the Classroom: A Teachers’ Primer

by

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Abstract

This study tested the relationships between student psycho-social variables in the classroom context and the subscale reliability of the Likert-style Project for Educational Research That Scales (PERTS) survey instrument; widely used in testing mindset interventions at the classroom level. Correlations and exploratory factor analyses were performed using pre-existing data from a medium-sized, rural school district, in a large southwestern state of the U.S. including a sample of 2,908 students, in grades 3 through 8, at three elementary schools and two middles schools. Regression analyses revealed the independent variable, student belonging, showed the largest effect in explaining changes in the dependent variable, student self-efficacy mean scores. The PERTS survey demonstrated internal reliability on three of the four scales above pre-determined indices of .80 with the exception of the individual mindset scale showing Cronbach’s alpha below .80. A history of mindset theory and practical applications for the classroom are provided.

Keywords: Psycho-social factors, classroom context, PERTS scale, elementary and middle schools

1. Introduction

Mindset theory interventions involve the act of supporting students in taking autonomous action that aligns with their values and goals; such that they choose to engage and put effort into developing successful academic behaviors. This study seeks to provide the classroom teacher with additional insights into context variables contributing to student autonomy in the classroom. This study empirically tested the relationships between psychosocial variables purported to comprise an academic mindset. When classroom teachers have reliable data collection instruments and understand the factors related to student choice to engage, teachers can design classroom routines, structures, and systems that support student autonomous choice to engage the learning process.

Successful learning results in new skills that increases one’s ability to act successfully in the world. An individual must choose to engage new experiences that challenge one’s existing knowledge structures in order to develop meaningful learning that can transfer to new situations. Similarly, mindset theory builds on the theory of mind, or how one makes sense of the world (Hanson, 2015). However, learning requires personal effort and an openness to make corrections and changes in how one views his world (Novak, 2002). A growth mindset has been described as the belief that one can grow and learn through his own efforts (Blackwell, Trzesniewski, & Dweck, 2007).

Growth mindset is also a belief about one’s power over her world. A person’s sense of autonomy and control develops from experiencing a supportive social environment leading to positive experiences of individual development. Autonomy differs from independent action in that autonomous action involves an alignment with the values embedded in the actions undertaken. An autonomous person takes initiative, feels an intrinsic sense of control, and feels the tasks performed have relevance to him. A sense of belonging and social identity with supportive others is inherent in the process of reciprocal sense making. In contrast, independence is acting without help, support, or resources from others (Chirkov,
1.1 Purpose Statement

This paper proposes to test the relationship between psycho-social variables found in the literature under the description of academic mindsets in the classroom. Understanding classroom context in relationship to developing student engagement is a necessary part of successful teaching. Historically assessment measures in schools have largely focused on cognitive variables demonstrating learning outcomes of students and school effectiveness. Current research seeks to develop valid conclusions drawn from reliable data collection in the area of psycho-social variables shown to support student learning, such as individual mindset, sense of belonging in the classroom, task relevance, and self-efficacy (Bandura, 2001; Deci & Ryan, 1994; Dweck, 1986; Paunesku, Romero, Yeager, Walton & Dweck, 2014).

These variables have been operationalized on the Project for Educational Research That Scales (PERTS) survey instrument (PERTS, 2015a). Research suggests that students with high academic mindsets engage academic behaviors such as attending class, homework completion, organizing work, and studying leading to improved learning outcomes (para. 5). The PERTS research team’s mission statement and purpose for designing the PERTS scale is “to improve the equity of learning outcomes by bridging the gap between cutting-edge research and implementation practices…” (PERTS, 2015b, para. 2).

1.2 Problem Statement

Rachel Marie Herter, PERTS Lab, Dept. of Psychology at Stanford University, in a personal communication (February 7, 2016) explained the current version of the PERTS scale gives data at the classroom level, places students into different category bins, and is not useful for comparing students between surveys. For teachers who use the PERTS instrument, provided free on the PERTS website, an understanding of the relationships between the underlying constructs, purported to be quantified in the PERTS scale, is important for an accurate interpretation of the scale results, for drawing valid conclusions, and for determining classroom specific interventions. Therefore, further study of the relationships between the factors of the PERTS instrument and subscale reliabilities is warranted.

1.3 Research Questions

The overarching research questions for this study included:

Is there a relationship between the individual factors included on the Project for Educational Research That Scales (PERTS) survey instrument?

Are the scale reliability indices of the PERTS instrument within predetermined acceptable parameters?

A history of the development of the mindset theory and implications from the results of this study will be provided as a primer to develop understanding of how academic mindset theory fits into teaching practices. Practical interventions for supporting student learning and a summary and conclusion of the results will also be provided, discussing the importance of understanding the use of psycho-social factors in the social context of the
classroom. Psycho-social factors are reported to provide additional paths to help students develop personal agency to engage in academic behaviors resulting in learning and growth (Farrington, Roderick, Allensworth, Nagaoka, Seneca-Keyes, Johnson & Beechum, 2012). Following are a list of definitions of terms used on the PERTS scale and in this paper.

1.4 Definitions

Individual mindset. (Items 1-3 reversed scored) has been described as “the way in which children interpret human behavior and their beliefs about the stability of human traits;” their views affect students’ attitudes and beliefs about their ability to perform, also referred to as self-efficacy on classroom tasks (Heyman & Dweck, 1998, p. 391; 2002 & 2008).

Belonging. (Items 4-7) Goodenow and Grady (1993) in Ma (2003) defined sense of belonging as “the extent to which students feel personally accepted, respected, included, and supported in the school social environment” (p. 340).

Task relevance. (Items 8-11) “A student’s sense that the subject matter he or she is studying is interesting and holds value. Value can be variously defined as the importance of doing well on a task (attainment value); gaining enjoyment by doing a task (intrinsic value); or serving a useful purpose or meeting an end goal that is important by completing a task (utility value)” (Eccles et al., 1983 in Farrington et al., 2012, p. 10).

Self-efficacy. (Items 12-15) “A mechanism of personal agency, the belief about one’s ability to exercise control over other events that affect their lives.” Self-efficacy beliefs affect thought patterns and influence one’s choice of goals and commitment to them (Bandura, 1989, p. 1175). Self-efficacy is an expectancy theory. A student with high self-efficacy for a certain task, would expect to be able to accomplish that task within the given context. Self-efficacy beliefs are comprised of two components: first is a belief that a specific behavior will produce an outcome, and secondly, the belief in one’s personal efficacy to produce that behavior in the present context and in future situations (Goddard, 2002).

2. Literature Review

A variety of models have been developed to explain how people learn, including: Watson (1924), Skinner (1953, 1954), and Pavlov’s (1927) work in behaviorism; Piaget's (1952) theory of cognitive development using the clinical interview process; Vygotsky’s (1978) cognitive sociocultural learning model and zone of proximal development; and Bandura’s (2001) social cognitive theory. Dweck's (1986) development of the concept of individual personality theories of fixed and growth mindset was deeply rooted in the framework and history of social cognitive theory. This present study tests a Likert-style instrument purported to quantity variables found in the theory of academic mindsets; adding to the individual mindset learning theory by collecting data at the group/classroom level (Farrington, et al., 2012).

Researchers and philosophers alike have developed theories of the mind. For example, Kant (1787/1999) declared the individual’s mind constructed one’s view of reality; the beginning of the constructivist viewpoint. Hegel (1807/1967) considered individual thought to be influenced by one’s social group in a reciprocal exchange of meaning creation. Marx (1867)
described the influence of one’s context on the creation of the individual’s thought.

Theorists in the field of education, such as Dewey (1938/1997), and Vygotsky (1962), later advanced the idea that the social environment and the individual influenced each other in a reciprocal process of learning. This distinction becomes a foundation for understanding Bandura's (2001) social cognitive theory and its triadic model of reciprocal influence of; human cognition, one's environment, and the influence of social modeling on the behavior of the learner. Bandura explained, "...human functioning is rooted in social systems" (p. 15).

Organizational learning theories, resulting from research such as the Hawthorne experiments, described the reciprocal influence of the individual and organization. Variables influencing organizational learning include leader openness to change, faculty openness to change, work locus of control, goal alignment, and collective efficacy (Hanson, Ruff & Bangert, 2016). Collective efficacy has been tested and shown to explain improved organizational outcomes (Tarter & Hoy, 2004). Results of organizational learning research are integral in developing teachers’ understanding of how to support student learning in the classroom (Senge, 1990 & 2000; Hoy, Tarter & Kottkamp, 1991; Collinson & Cook, 2007).

Similarly, researchers described unconscious processes that influenced learning. These processes were considered the result of differences in one’s culture of origin; such as Western individualistic and Eastern collectivist viewpoints. The philosopher, René Descartes (1633/1999) described a distinction between the mind and the body setting the foundation for the dualistic worldview that influences Western thought to this day. The dualistic view resulted in the scientific method and in a symptomatic approach to treating illnesses.

However, this isn’t the only way to view the world. Current organizational learning theories describe an organic model as opposed to a reductionist, or mechanistic, model. The organic model is a holistic approach and can be shown to influence a cultures’ approach to medicine, research, and system organization (Hanson, 2015). Following is a discussion on the progression of learning theories’ psycho-social variables set in a framework of an integrated approach to systems.

2.1 Psycho-social Influences on Learning

2.1.1 Conscious and Unconscious Processes Influencing Learning

Some researchers are suggesting new models for thinking about the brain and new models for describing how we learn. These newer models usually include learning as socially constructed and dependent on both implicit and explicit processes of knowing. This distinction becomes a foundation for understanding Bandura’s (2001) social cognitive theory and its triadic model of reciprocal influence including: the human cognition, one’s environment, influence of social modeling on the behavior of the learner.

2.1.2 Historical Roots of Fixed and Growth Mindset

Growth and fixed mindset concepts compare favorably to the nature versus nurture debate popularized in Francis Galton’s works (1874, 1889). Current discussions revolve around
whether we are born with our abilities and traits; that is, to ask whether one’s traits, such as intelligence, cannot be changed or if one can develop the brain’s abilities over time through applying effort and with appropriate social support and resources. Many researchers consider that both nature and nurture contribute to the development of an individual’s skills and the resulting success of individuals (Hanson, 2015).

2.1.3 Behaviorism

Bandura’s experiments were among the first to report the powerful influence of nurture, or social influence, on individual learning. Prior to Bandura’s research, educational models of learning focused largely on Behaviorism. Pavlov’s experiments with stimulus response procedures to develop salivation in dogs is well known and supports the teaching models of many educational curriculum and classroom management models. Stimulus response theory suggested humans learned through a series of rewards and punishments, without reference to cognitive choice or the influence of one’s social group. The Behaviorist experiments were performed using animals, not humans. Some researchers felt studying cognition was not possible because the mind could not be seen; so they focused on researching observable behaviors.

2.1.4 Social Cognitive Theory

The social cognitive theory was developed from the results of a collection of experiments by Bandura. In his famous bobo doll experiment, he saw a child acting aggressively toward a doll after the child had observed an adult inadvertently model that behavior. Bandura developed the conclusion that imitation is a powerful social influence on individual learning (Bandura, Ross, Ross & Webb, 2013).

2.2 Mindset Theory

Carol Dweck researched and developed her model of growth and fixed mindset at Stanford University where Bandura also worked while developed the social cognitive theory. Dweck’s development of the concept of mindset is deeply rooted in the framework and history of social cognitive theory. Researchers continue to explore the concept of mindset and have expanded the concept to new models at the group level. The organizational learning models attempt to capture variables inherent in the influence of one’s social group and context. The group level mindset models are consistent with social cognitive theory explaining the reciprocal influences of the group on the development of individuals’ beliefs, choices, and behaviors. Figure 1 shows factors on three levels of mindset scales; individual, group/classroom, and school.
Figure 1. Model comparing and contrasting variables on three levels of mindset surveys

The above figure shows the categories of variable items included on the individual mindset survey, PERTS survey, and What’s My School Mindset Survey (WMSM). The Likert-style surveys are used to quantify participant self-reports of their perceptions of psycho-social variables, found in the literature, and reported to improve student engagement in the learning process.

2.2.1 Academic Mindset

Researchers described academic mindsets as ways students think of themselves that make them want to learn (Farrington et al., 2012, p. 9). The concept of academic mindset adds to the individual mindset construct. Along with an individual mindset belief, the academic mindset concept includes a student's belief that he belongs, feelings of relevance for the tasks required of him, and a belief that he can perform the tasks (self-efficacy) required of him in the classroom. Students with higher academic mindsets demonstrate greater levels academic behaviors such as study, attendance, and homework completion (PERTS, 2015a, para. 5).

Academic mindsets are associated with behaviors that have large effects on student learning. Mindset as a psycho-social construct compares favorably with self-efficacy
described as “…a mechanism of personal agency, the belief about one’s ability to exercise control over other events that affect their lives” (Bandura, 1989, p. 1175). While mindset and self-efficacy are similar in their influence on personal agency, they differ in that mindset is a belief about the malleability of one’s traits, whereas self-efficacy is a belief in one’s abilities to perform a task. One’s mindset has an indirect influence on the successful academic outcomes through the influence it has on developing one’s self-efficacy beliefs (Hanson, 2015).

2.2.2 School Mindset Culture

Mindset researchers have added variables to the individual mindset construct to create a group/classroom level construct of academic mindset. For the organizational level, researchers have developed the What’s My School Mindset? Survey (Mindset Works, 2015) to capture and quantify faculty perceptions of a school growth mindset culture. Research studies show interventions at the individual level show less potential for improving outcomes than those done at the group level (Hanson, Ruff & Bangert, 2016). For example, Osterman (2000) found variables, that can be influenced by administrators and faculty and that are within the school context and instructional methods, shown to develop academic mindsets in students (Blackwell et al., 2007). The Project for Education Research that Scales (PERTS) performs studies on the impact of mindset interventions on classroom outcomes using the PERTS scale (PERTS, 2015a). The next section provides examples of how teachers can influence the classroom context to support student academic mindsets.

2.2.3 Systems Thinking

A leader’s behavior influences an overall perception of how the organization will perform (Bohn, 2002, p. 76). One way to improve an organization, is to promote self-organizing behaviors in the participants. Viewing the classroom as a system, teachers can support the development of individual roles and team skills that enable the system to self-organize by creating common expected norms of behavior. This means students are contributing to improvements and structures that are meaningful to them. An instructor’s use of modeling, such as pacing and leading, requires a bird’s eye view of the classroom and a systems thinking perspective (Senge, 2000).

2.3 PERTS Factors

A review of the literature in the areas of mindset, meaningful learning, theories of mind, and psycho-social factors contributing to student engagement revealed a common element of autonomous action within a social context. Student autonomy develops when students feel; a sense of belonging and social identity with supportive others in the classroom; that they are an inherent part of the process of reciprocal sense making; classroom goals are aligned with their personal goals and values; there are opportunities to take initiative; and their personal values are embedded into the tasks required providing a feeling of personal and life relevance (Hanson, in press).

2.3.1 Self-efficacy
Self-efficacy develops from positive feedback in social relationships and opportunities to practice skills together. Four variables contribute to the development of self-efficacy: mastering a task, observing others successfully performing the task, being told by valued others that he can be successful, and developing one’s ability to manage her own stress states (Versland, 2009). Balancing the roles between integration (system role) and autonomy (individual role) is a key variable for developing a flexible focus that allows students to shift from one perspective to another that best fits the context at the moment and promotes autonomous functioning.

Goal alignment is a key factor in developing individual self-efficacy and group collective efficacy. The teacher can develop a classroom level social identity among the students by modeling and encouraging students to: acknowledge one another and agree on common goals and means. Differences may remain as long as a common vision is achieved. What you agree on and how to come to agreement is different from classroom to classroom (Hanson, in press).

Modeling by the classroom teacher influences the classroom system and indirectly the individual students. Modeling has been shown to be an effective way to build positive classroom culture and promote student self-efficacy (Bandura, 2001, Dweck, 2010, Hanson, 2015). An example of a teacher modeling is called pacing and leading. The teacher observes the classroom behaviors and where there is a departure from the expectations, the teacher first identifies with the students’ current focus through movement and supportive comments. Next, inviting the students to participate in the desired activity includes an opportunity for autonomous action to engage in personally relevant activities.

A teacher can embed multiple opportunities for students to master the tasks required while providing sufficient psycho-social support through positive feedback and specific tasks for improvement. Allow the students to practice the behavior over many trials until they master the behavior on their own. Where necessary, model and provide explicit instruction on how to manage one’s own stress responses.

2.3.2 Sense of belonging

In Maslow’s (1943) hierarchy of needs theory, belonging is considered a basic human need. Schwarz (1990) included sense of belonging as part of security in his model of motivational types of values. Teachers can develop a sense of belonging for students in the classroom by providing opportunities for team collaboration and identifying each student’s role in the group. Be explicit and clear. Match the students’ strengths and personal role identities with the team roles. Allow students to give feedback on their experiences in the group and then respond to their suggestions. Ensure the group activity develops positive interaction with others. Sense of belonging has been connected with developing positive relationships (Deci & Ryan, 1994). Use double loop learning strategies (Argyris & Schön, 1978).

Teacher must ensure to provide equitable and just classroom systems and processes. When the leader’s formal (position) is integrated with the informal (relational) position one develops a sense of “…moral authority on their subordinates by establishing synchrony in
their words and actions; the rest of the structure and processes of the organization also get aligned for it, thus creating a robust and transparent culture” (Sidik, 2013, slide # 25).

2.3.3 Relevance

A next step in the process of developing academic mindsets in students is to provide real world educational opportunities for students and connect these to students’ prior learning. Develop task relevance by providing a purpose for the activities that the students can understand. Connect with students to develop an understanding of their personal interests and align the classroom tasks to these values. Provide real world educational opportunities for students to develop a sense of life relevance.

2.3.4 Individual Mindset

Developing a growth mindset classroom culture and providing supportive classroom contexts with an understanding of the importance of praising effort rather than traits will contribute to student growth mindsets (Farrington et al., 2012). Well-being increases when an individual’s mindset matches the organization’s mindset (Delaney, Dweck, Murphy, Chatman & Kray, 2015). However, research suggests the individual’s mindset has little correlation with the group level mindset culture in schools. Organizational values and norms can differ from individual norms, yet, individuals can agree to participate in the overall activities of the group.

3. Methods

This study used a quantitative research design and existing data from a mid-size, rural school district in a large southwestern state. The school district collected data on the schools’ cultures and climate for use in setting Local Control and Accountability Planning (LCAP) goals.

3.1 Data Sources and Participants

The school district collected LCAP survey data during the month of April, 2016, using a variety of Likert-style surveys delivered to students, grades 3 through 8, (n=2,908; 84% response rate) in the classroom at three elementary schools and two middle schools; faculty participants included teachers, grades TK-8, (n=224), other certificated personnel (n=9), and administrators (n=11).

3.2 Instrumentation

Instruments used by the district for LCAP data collection included a brief demographic questionnaire plus 15-items of the Project for Educational Research the Scales (PERTS) survey instrument includes four scales; individual mindset (3 items), sense of belonging in the classroom (4 items), task relevance (4 items), and self-efficacy on classroom tasks (4 items). Respondents self-reported their agreement with scale items by providing ratings on a Likert-style scale ranging from 1= Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Somewhat Agree, 5 = Agree, to 6 = Strongly Agree.

No reliability data was available for the scales (Rachel Marie Herter at PERTS lab, Inc., February 8, 2016). However, this study empirically tested the scale reliabilities using the
predetermined indicator of Cronbach’s alpha > .80 as an acceptable level for internal reliability of a widely used scale (Nunnally, 1978). Loewenthal (2004) takes into account the number of items on the scale and the construct validity and suggests the alpha coefficient as low as 0.6 could be acceptable, however, Cronbach’s score this low are usually considered acceptable in pilot studies and are often the result of few items on the scale.

A variety of studies have been performed and reported in the literature demonstrating concept validity of the operationalized constructs on the PERTS scale (Farrington et al., 2012). The scale has strong face validity being currently used in large scale studies. The Appendix provides the PERTS scale items.

3.3 Analyses

The data collected in this study was evaluated for normality, skewness, and kurtosis using quantitative analytical software SPSS, 22 (IBM, 2013). The mean value of students’ perceptions on their level of individual mindset, sense of belonging in the classroom, task relevance, and self-efficacy were calculated and correlation analysis was performed between the scales. The following range of indices, as average arithmetic means in three categories, is provided to create a low, medium and high range as a method to interpret the data:

Low = 1.00 - 2.67; Moderate = 2.68 < x < 4.35; High = 4.36 - 6.0.

An exploratory factor analysis investigated the psychometric properties of the four scales including reliability statistics and other information on validity testing. The determination of model fitness was developed from factor loadings, validity, reliability and normality. These values were used to determine whether the scales were valid for measuring the level of psycho-social variables in educational settings in the population under study.

4. Results

4.1 Data Analysis

Data analyses included statistical tests using SPSS, Version 23 statistical software (IBM, 2015) to determine if the data fit a normal distribution and was considered reasonable for parametric analyses. All items tested were within acceptable limits ± 2 (Trochim & Donnelly, 2006; Field, 2000 & 2009; Gravetter & Wallnau, 2014).

4.1.1 Correlations

A bivariate correlation analysis was performed and significant relationships were found. However, results for the Bartlett’s Test of Sphericity was found to be significant indicating that the items, although correlated, were not correlated so highly as to produce an identity matrix preventing the factor analysis from successfully reducing the data into interpretable factors. This was consistent based upon their item descriptions and the theory. An exploratory factor analysis was performed using SPSS, maximum likelihood extraction and oblique rotation methods.

4.1.2 Exploratory Factor Analysis

Four scales were revealed as predicted with internal scale reliability ratings above preset indices of .80 with the exception of the individual mindset scale at .772. The EFA yielded
a four-factor solution using maximum likelihood extraction and Varimax rotation method. Each of the four scales consisted of at least three items, exhibited factor loadings < .80 and > .30 and had items that were minimally cross-loaded with items in other factors (Brown, 2009; Field, 2009; Gravetter & Wallnau, 2014). Discriminant validity between scales was shown by items loading together above .3 on the factor and no cross-loadings, with the exception of items number 8, 9, and 4; however, the difference between correlations exceeded .2. Stevens (2002) suggests that item loadings should differ by at least .200 to be interpreted as not cross-loaded with other factors. Table 1 shows results of the EFA on PERTS factors.

<table>
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<tr>
<th>Items</th>
<th>Sense of Belonging (SB)</th>
<th>Self-Efficacy (SE)</th>
<th>Task Relevance (TR)</th>
<th>Individual Mindset (IM)</th>
<th>M</th>
<th>SD</th>
</tr>
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<tbody>
<tr>
<td>6. I feel comfortable in this class.</td>
<td>.773</td>
<td>.187</td>
<td>.251</td>
<td>-.029</td>
<td>4.88</td>
<td>1.233</td>
</tr>
<tr>
<td>5. I feel respected in this class.</td>
<td>.703</td>
<td>.156</td>
<td>.204</td>
<td>-.017</td>
<td>4.62</td>
<td>1.313</td>
</tr>
<tr>
<td>4. I feel like I belong in this class.</td>
<td>.624</td>
<td>.213</td>
<td>.307</td>
<td>-.001</td>
<td>4.96</td>
<td>1.240</td>
</tr>
<tr>
<td>7. I feel like I can be myself in this class.</td>
<td>.575</td>
<td>.214</td>
<td>.212</td>
<td>.014</td>
<td>4.48</td>
<td>1.479</td>
</tr>
<tr>
<td>13. I can do well on tests, even when they're difficult.</td>
<td>.139</td>
<td>.779</td>
<td>.129</td>
<td>-.091</td>
<td>4.39</td>
<td>1.311</td>
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<td>14. I can master the hardest topics in my class.</td>
<td>.139</td>
<td>.756</td>
<td>.112</td>
<td>-.124</td>
<td>3.99</td>
<td>1.437</td>
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<tr>
<td>12. I can earn an A or top grade in this class.</td>
<td>.240</td>
<td>.649</td>
<td>.167</td>
<td>-.105</td>
<td>4.92</td>
<td>1.225</td>
</tr>
<tr>
<td>15. I can meet all the learning goals my teacher(s) set.</td>
<td>.281</td>
<td>.584</td>
<td>.270</td>
<td>-.028</td>
<td>4.73</td>
<td>1.233</td>
</tr>
<tr>
<td>11. What we learn in this class is necessary for success in the future.</td>
<td>.163</td>
<td>.121</td>
<td>.757</td>
<td>.013</td>
<td>4.76</td>
<td>1.234</td>
</tr>
<tr>
<td>9. This class teaches me valuable skills.</td>
<td>.317</td>
<td>.171</td>
<td>.631</td>
<td>-.017</td>
<td>4.95</td>
<td>1.147</td>
</tr>
<tr>
<td>8. My class gives me useful preparation for what I plan to do in life.</td>
<td>.301</td>
<td>.168</td>
<td>.589</td>
<td>.000</td>
<td>4.44</td>
<td>1.386</td>
</tr>
<tr>
<td>2. Your intelligence is something about you that you can't change very much.</td>
<td>-.010</td>
<td>-.105</td>
<td>.002</td>
<td>.787</td>
<td>2.79</td>
<td>1.579</td>
</tr>
<tr>
<td>3. You have a certain amount of intelligence, and you really can't do much to change it.</td>
<td>-.024</td>
<td>-.072</td>
<td>-.026</td>
<td>.765</td>
<td>2.56</td>
<td>1.519</td>
</tr>
<tr>
<td>1. You can learn new things.</td>
<td>.009</td>
<td>-.066</td>
<td>-.007</td>
<td>.630</td>
<td>3.06</td>
<td>1.575</td>
</tr>
</tbody>
</table>
but you can't really change your basic intelligence/how smart you are.

Percent of Variance | 31.765 | 11.563 | 7.030 | 5.051
Eigenvalue | 5.208 | 2.176 | 1.477 | 1.179
Cronbach alpha | .820 | .830 | .820 | .774

Table 1. Individual item factor loadings, significance, percentage of variance, and eigenvalues for items on the PERTS scale.

4.1.3 Cross-tabs

Statistical analysis was performed to explore the interdependence of the demographic data variables and to identify statistically significant differences ($p < .05$). One-way ANOVA analysis was used to compare the category means and determine any significant differences between groups that may affect the ability to generalize the results. Significant variations in the sample data were noted between the following categories:

Building levels. The PERTS mean for the elementary classrooms ($n=70$) was 4.6502 ($SD = .26516$) was significantly higher than for the middle schools ($n=50$) was 4.4650 ($SD=.32376$), ($F_{(1,118)}= 11.819, p=.001$). This is consistent with Blackwell et al., (2007) and Hanson, Bangert & Ruff (2016) in their research on school transition and boundary crossings effects from elementary to middle and high schools. Table 2 shows the mean, standard deviation, and sample size for elementary and middle school levels.

Table 2. ANOVA results and Pearson Correlations between school building levels.

<table>
<thead>
<tr>
<th>Factor</th>
<th>$M$</th>
<th>$SD$</th>
<th>Pearson’s Coefficient (one-tailed)</th>
<th>$N$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary**</td>
<td>4.6502</td>
<td>.26516</td>
<td>&lt;.001</td>
<td>70</td>
</tr>
<tr>
<td>Middle**</td>
<td>4.4650</td>
<td>.32376</td>
<td>&lt;.001</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>4.5784</td>
<td>.74745</td>
<td></td>
<td>2908</td>
</tr>
</tbody>
</table>

Note. ** $p = .001$, $eta^2 = .014*$, $F_{(1, 118)} = 11.819$.

Ethnic classification (self-selected by student respondents). The student self-efficacy (SE) mean scores revealed significant differences between ethnic classifications using a one-way ANOVA ($F_{(9, 2,898)} = 3.030, p =.001$).

Gender classification showed a negative relationship with student belonging and task relevance. A positive relationship existed between ethnicity and gender. Gender had no significant effect on the regression outcome and was removed from the analysis. Table 3 shows the correlations between classifications and scales of the PERTS survey instrument.

Table 3. Component correlations matrix for PERTS scale including gender and ethnicity.

<table>
<thead>
<tr>
<th>Individual Mindset</th>
<th>Individual Mindset</th>
<th>Sense of Belonging</th>
<th>Task Relevance</th>
<th>Self-efficacy</th>
<th>Gender</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Mindset</td>
<td>1</td>
<td>.043*</td>
<td>.046*</td>
<td>.183**</td>
<td>-.001</td>
<td>-.035</td>
</tr>
</tbody>
</table>
4.1.4 Regression on Self-efficacy

Significant positive relationships were found between variables of the PERTS scales as well as with gender and ethnicity. Statistically significant correlations were evaluated further using regression analysis with dependent and independent variables identified consistent with the nomological net from the theory. The independent variables (IV) of belonging, task relevance, and individual mindset, along with ethnicity (described earlier) were entered simultaneously into the regression analysis using self-efficacy as the dependent variable consistent with the literature (Bandura, 2001).

The results from the multiple regression analysis revealed the IVs explained a significant proportion ($R^2 = .276$) of the variance in self-efficacy scores ($F(3, 2,904) = 370.47, p < .001$). The strongest predictor was student belonging ($\beta = .335$), followed by task relevance ($\beta = .222$), individual mindset ($\beta = .157$), and ethnicity showing a negative effect ($\beta = -.038$). Table 4 shows $\beta$ and $p$ values for the independent variables on SE. Table 3. Regression of PERTS subscale means on self-efficacy, including Beta, Standardized Beta, and significance values.

Table 4. Regression of PERTS subscale means on self-efficacy, including Beta, Standardized Beta, and significance values.

<table>
<thead>
<tr>
<th>Variables from the literature considered to explain variations in self-efficacy</th>
<th>$B$</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belonging</td>
<td>.334</td>
<td>.335**</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Task Relevance</td>
<td>.235</td>
<td>.222**</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Individual Mindset</td>
<td>.129</td>
<td>.157**</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.013</td>
<td>-.038*</td>
<td>.020</td>
</tr>
</tbody>
</table>

Note. $R = .527$ and adjusted $R^2 = .277**$, df = 4, n=2,903; $F= 279.625$

Figure 3 shows a model of the relationships between the variables of the PERTS scales.
**Note.** **p < .001**

Figure 3. Model of PERTS subscale variables relationships

4.1.5 Discriminant Validity
A one-way ANOVA comparing the school means was run to determine the ability of the PERTS data results to discriminate between groups at the school level. Table 4 shows the mean, standard deviation, and sample size for elementary and middle school levels.

5. **Summary and Conclusion**

The results of this study have important implications for facilitating student learning as well as increasing teacher effectiveness. The results of the EFA yielded a multi-dimensional, four scale construct of academic mindset as operationalized on the PERTS instrument. The four scales met the criteria for convergent validity with item loadings above .30 for each factor and divergent validity with more than .20 difference in loadings between item loadings of other factors.

5.1 **Research Question #1**

The first research question of this study, “Is there a relationship between the individual factors included on the Project for Educational Research That Scales (PERTS) survey instrument?” was answered by correlation and regression analysis. All three IV scale factors significantly correlated with the dependent variable self-efficacy. Regression of the IV’s on the DV revealed sense of belonging had the greatest effect to explain variations in the self-efficacy mean. Together the three independent factors explained a small but significant effect ($R^2=.276$) of the overall variation in SE mean scores.

ANOVA tests on the a variety of data categories revealed significant differences between PERTS scale factor mean scores by building levels, and cultural identification. Teachers can use this information to recognize differences exist in student perceptions of the psychosocial supports they receive in the classroom at the middle school level compared to the elementary level. Students identifying as White and Asian self-scored significantly higher on the scale of self-efficacy for classroom tasks than other subcategories of students’ culture. Teachers can expect that classroom scores may improve when students perceive they are receiving
psychosocial supports leading to improved sense of belonging, task relevance, self-efficacy, and individual mindset.

5.2 Research Question #2

The study results answered question #2 revealing only three of the four PERTS sub-scales had internal reliability above the predetermined indices. The individual mindset scale was below .80 and is considered potentially unreliable for a scale that is widely used and may not provide consistently accurate measurements of the students’ self-reports of their perceptions of this construct.

5.3 Conclusion

The use of the PERTS non-cognitive survey instrument provides data to make valid decisions and to provide growth markers toward meeting annual goals to improve school and classroom cultures. The PERTS survey operationalizes student non-cognitive factors and can be used as a boundary object providing evidence of teachers’ strategies to support student psychosocial needs, shown necessary to persist in school to graduation. School leaders can use data collected from the PERTS scale to develop goals for positive school cultures that support student transitions between school levels (Hanson, Ruff & Bangert, 2016), recognizing the variable effects of non-cognitive factors on differing student demographics, and to support at-risk student populations.

5.4 Implications

Teachers may use the results of this study to identify student perceptions of their classroom environment. Having reliable survey data may provide useful information for developing new classroom interventions and for indicating areas of needed professional development. Teachers would benefit from research-based evidence that challenges their assumptions, provides sound reasons for developing new practices as a key element to good outcomes. A valid scale quantifying psychosocial factors could be used to engage faculty in productive discussions about their students’ perceptions of psychosocial supports in the classroom leading to choice to engage in academic behaviors. Following are specific suggestions for building classroom academic mindset cultures in schools.

5.4.1 Teacher Influence - on the classroom system is indirect through modeling and holding students accountable for clear expectations and rules

5.4.2 Developing Teams - allows students to develop social identities increasing a sense of belonging and promotes autonomous functioning reducing the number of decisions that must go through the teacher.

5.4.3 Aligning student individual identities with classroom roles by integrating personal interests with integrated social action increases classroom task relevance.

5.4.4 Develop social experiences of support for effort without focusing on immediate success. Teachers can provide positive feedback and frame failed learning attempts as necessary practice to develop successful outcomes over time. Providing social persuasion that the student can succeed develops individual growth mindset in students (Bandura, 1994; Claro & Dweck, 2016).
5.5 Recommendations for Further Research

Future studies might include qualitative interviews of students to develop a rich, thick, understanding of their experiences in the classroom and how they perceive the scale constructs of the PERTS survey instrument. Further exploration of the individual mindset construct is warranted as the scale does not provide internal reliability, according to the preset indices used in this study. Reliable scales are necessary to make valid conclusions from the data provided. According to the results of a calculation performed, provided by Nunnally (1978), an additional four operationalized items are necessary in order to raise the individual mindset survey scale, included on the PERTS scale, to the desired reliability indices of Cronbach’s alpha score > .80 (p. 244).

Acknowledgement

A recognition and appreciation is extended to Dr. Arthur Bangert, associate professor, Montana State University, Bozeman, for his role in reviewing the statistical results and presentation providing in the methods section of this paper.
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APPENDIX

Project for Educational Research That Scales (PERTS) survey scale

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You can learn new things, but you can't really change your basic intelligence/how smart you are.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Your intelligence is something about you that you can't change very much.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. You have a certain amount of intelligence, and you really can't do much to change it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I feel like I belong in this class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I feel respected in this class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I feel comfortable in this class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I feel like I can be myself in this class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. My class gives me useful preparation for what I plan to do in life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. This class teaches me valuable skills.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Working hard in this class matters for success in my future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. What we learn in this class is necessary for success in the future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I can earn an A or top grade in this class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I can do well on tests, even when they're difficult.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I can master the hardest topics in my class.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I can meet all the learning goals my teacher(s) set.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Validation of the Newly Developed Graphical Inventory of Ethical Leadership (GIEL) Scale: Implications for Administrator Preparation and Business Leaders

by

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Abstract
This quantitative pilot-study empirically tested the factor structure and reliability of the newly developed Graphical Inventory of Ethical Leadership (GIEL) scale, a Likert-style scale for quantifying key concepts related to ethical leadership. Correlations and principal components analyses were performed using pre-existing data as self-reports from a sample including 103 graduate students in an administrator preparation program at a private university located in a large southwestern state of the U.S. Regression analyses revealed the factor, transformational leadership explained a significant amount of the variation in the ethical leadership scale mean score. The GIEL survey demonstrated internal reliability of the four scales above the pre-determined indices of Cronbach’s alpha >.60 considered acceptable for scales in a pilot study. Potential uses of the GIEL include; as a baseline for setting and monitoring professional development goals, as evidence for recommending certification in administrator preparation programs, and as part of a 360-degree evaluation process.

Keywords: Ethical leadership, Survey validation, Administrator effectiveness

1. Introduction
The concept of virtue and integrity, as embodied in one’s values and ethics, can be traced to Aristotle (1947). Virtue has been described as the foundation from which springs “the good life” and integrity as the foundation to ethical leadership. Ethics and integrity suggest a coordination between one’s beliefs and actions, a wholeness and consistency that exemplifies moral behavior (Lawton & Páez, 2014, p. 641).

1.1 Influence of the Administrator on the Organization
Administrators, executives, and managers have positions of authority that wield considerable power and influence over the areas of distribution of resources and decision-making (Weber, 1947). Formal and informal authority over decisions and resource
distribution contributes to the development of power in the leaders’ position and influence over others. However, leaders often experience negative influences from within themselves, as well as from others, while serving in their executive roles. Lord Emerich Edward Dahlberg Acton (2016) wrote an astute, and often quoted, description of the influence of authority on one’s value base,

Power tends to corrupt and absolute power corrupts absolutely. Great men are almost always bad men, even when they exercise influence and not authority; still more when you superadd the tendency of the certainty of corruption by authority (para. 15).

The abuse of power has long been viewed as a human trait, or behavioral tendency, throughout mankind’s history and has been widely documented in many historical texts including the founding documents related to the history of the Colonies, the United States government, and the Bible. Included in the Federalist Papers is the statement,

In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself (Publius, 2016, para. 2).

Instead of ruling over others, Matthew 7:12 states, "In everything, therefore, treat people the same way you want them to treat you, for this is the Law and the Prophets."

1.2 Description of the GIEL

A variety of psychometric tools are currently available to measure attributes of leaders and constructs operationalized as factors of ethical leadership. The GIEL scale was designed in response to calls in the literature for improving the scale items and measurement method of ethical leadership in the workplace. The GIEL also responds to the call in the literature for using observed frequencies of behaviors as the measure, as opposed to followers’ self-perceptions of leader’s traits or characteristics (Lawton and Páez, 2014; Yukl, Mahsud, Hassan & Prussia, 2013).

Capturing the leader’s context is critical in developing an understanding of existing perceptual differences between the leader, followers, stakeholders, and supervisors. Administrators, managers, and the leader’s supervisors and reports complete the scale to provide a 360-degree contextual view of the leader’s ethical behaviors. This contrasts with other scales in the literature that quantify only followers’ self-perceptions of the leader. New methods for measurement and training, such as the use of technology and micro-learning strategies must be developed and implemented to address the changing needs of the upcoming generation of organizational leaders, referred to in the literature as the millennials (Loose & Marcos, 2015; Loose & Marcos, 2016; Marcos & Loose, 2014).

The GIEL captures participants’ self-reports on 35 items related to seven key variables of an effective leader including; professional development, personal development, justice and fairness, communication, ethical decision-making, transformational leadership, and role model. A primary purpose of the 3D GIEL is to assist administrators in developing goals
for growth and as a planning tool for practicing administrators, and for use in 360 evaluations. The GIEL survey results may be used as an artifact to demonstrate progress of managers in industry, as well as educational leaders in schools, toward understanding the competencies demonstrated by ethical leadership behaviors.

1.3 Use of the Scholarship for Teaching and Learning (SoTL) Design

Discussions held by the educational leadership master’s department team evolved from the need to provide a means for students in the administrator preparation programs to examine ethical and moral aspects of school leadership, as required in Standard 5 of the California Commission on Teacher Credentialing California Professional Standards for Educational Leaders (CPSEL). The development of the GIEL and testing of the construct validity has been explored through the use of a Scholarship for Teaching and Learning Design (SoTL) design described as follows:

The Scholarship of Teaching and Learning (SoTL) uses discovery, reflection, and evidence-based methods to research effective teaching and student learning. These findings are peer reviewed and publicly disseminated in an ongoing cycle of systematic inquiry into classroom practices. This work benefits students and colleagues and is a source of personal renewal (CSU, 2015, para. 1).

Students use the GIEL, develop goals, create tasks, and reflect and inquire at their work sites on their ethical practices. Anonymous and confidential data from the students’ surveys were used to empirically test the reliability of the GIEL and identify the factor structure.

1.3.1 California Professional Standards for Educational Leaders (CPSEL)

In the mid 1990’s, the Interstate School Leaders Licensure Consortium (ISLLC), composed of a variety of national stakeholder groups, was assembled and charged with the task of designing the first set of national standards for educational leaders. In 2001, California adopted the standards and formally adopted the first set of California Professional Standards for Educational Leaders (CPSEL). In 2004, the CPSEL were adopted as part of the standards-based program for the Administrative Services Clear Credential. In February 2014, a revised set of CPSEL were approved by the Commission. After reviewing the original CPSEL, research studies, professional literature, examples of national, state and district standards for administrators, as well as the newly adopted content and performance expectations for preliminary administrator certification, the CPSEL Update Panel drafted the updated set of CPSEL. Figure 1 shows the model of CPSEL Standards: core expectations for administrators.
Standard 5: Ethics and Integrity was conceptualized as the base from which the administrator’s behaviors, choices, and decisions are influenced.

1.3.2 CPSEL Standard 5: Ethics and Integrity

California Professional Standard for Educational Leaders states, “Education leaders make decisions, model, and behave in ways that demonstrate professionalism, ethics, integrity, justice, and equity and hold staff to the same standard” (CTCC, 2014, p. 9). Efforts to ensure an educational leader evidences the standard’s expectations requires the candidates continuous reflection on her personal standards and values, a commitment to continuous professional and personal growth, and a plan to execute strategies to improve. The CCTC Standard 5 describes behaviors of ethical leaders including:

- the use relevant evidence and available research to make fair and ethical decisions to guide personal and collective actions in the school,
- using their professional influence to support a trusting school climate resulting from mutual respect and honest communication. Equity and justice in operations and decisions related to staff and students provide a model for others’ actions (CCTC, 2014, p. 9-10).

1.4 Purpose Statement

This paper proposes to test the factor structure, reliability, and construct validity of the new GIEL scale quantifying administrator/manager behaviors as found in the literature under the description of ethical leadership (Brown, Treviño & Harrison, 2005, in Lawton and Páez, 2014, p. 641). Understanding the ethical leadership concept in context is necessary to developing transformational leaders who can contribute to successful organizational
outcomes. Historically, assessment measures in the area of ethical leadership have largely focused on traits, or characteristics, of the leader as followers’ perception quantified on a scale. This current research seeks to provide evidence that the GIEL scale, which uses leaders’ behaviors and self-reports from a variety of sources, is a reliable instrument for collecting data from which valid conclusions can be drawn in the area of leaders/manager’s ethical leadership behaviors.

1.5 Problem Statement

The GIEL instrument is currently used by administrator candidates in the educational leadership program at a private university in a large southwestern state of the United States. Students complete the survey about their behaviors and receive 360-degree feedback, then develop personal and professional goals for their program term. The students retake the survey at the end of the program and use their progress as an artifact to evidence growth in ethical leadership behaviors, as required under CPSEL 5: ethics and integrity.

The GIEL instrument had not undergone empirical testing to provide evidence in support of its purported factors and reliable data results. Not understanding the underlying factors purported to be quantified on the GIEL instrument may lead to misinterpretation of a candidate’s skills and to faulty conclusions about his or her progress. For those using the CPSELS to understand and evaluate a candidate’s growth and competencies in meeting CCTC standards valid measurement tools are necessary to accurately judge progress. Candidates may not fully understand the expectations of the Standards without clear constructs on reliable scales to determine a measurable level of attainment or expectations. Therefore an instrument for quantifying administrator behaviors as factors of Standard 5: Ethics and Integrity is warranted. Similarly, executives and managers in industry would benefit from a reliable scale to quantify the construct of ethical leadership in the workplace.

1.6 Research Questions

The overarching research questions for this study included:

Is there a relationship between the individual factors included on the Graphical Inventory of Ethical Leadership (GIEL) survey instrument?

Are the scale reliability indices of the GIEL instrument within predetermined acceptable parameters?

A history of the development of the ethical leadership theory and implications from the results of this study will be provided as a primer for educational leadership departments and industry administrators to develop an understanding of how ethical leadership theory fits into transformational leadership practices in schools and industry. Practical interventions for supporting student learning and a summary and conclusion of the results will also be provided, discussing the importance of understanding the use of ethical leadership factors in the social context of the workplace. Following are a list of definitions of terms used on the GIEL scale and in this paper.
1.7 Definition of Terms

360-degree evaluation process: The GIEL process includes feedback to the administrator or manager, usually anonymous and confidential, from his or her peers, supervisors, and reports for the purpose of developing goals for professional development, accountability, and providing data-based evidence to begin dialogues for addressing concerns.

Professional development: Professional learning to be up-to-date with education research, literature, best practices, and trends to strengthen ability to lead. (Kearney, 2015, p. 32).

Personal development: Examine personal assumptions, values, and beliefs to address student’s various academic, linguistic, cultural, social-emotional, physical, and economic assets and needs and promote equitable practices and access appropriate resources. This includes sustaining personal motivation, commitment, energy, and health by balancing professional and personal responsibilities. (Kearney, 2015, p. 32).

Justice and fairness: Identify personal and institutional biases and remove barriers that derive from economic, social-emotional, racial, linguistic, cultural, physical, gender-based, or other sources of educational disadvantage or discrimination. (Kearney, 2015, p. 34).

Effective Communication: Communicate expectations and support for professional behavior that reflects ethics, integrity, justice, and equity. (Kearney, 2015, p. 36)

Ethical Decision-Making: Consider and evaluate the potential moral and legal consequences of decisions. This includes the review of multiple measures of data and research on effective teaching and learning, leadership, management practices, equity, and other pertinent areas to inform decision-making. This also pertains to the leader’s identification of personal and institutional biases and their efforts to remove barriers that derive from economic, social-emotional, racial, linguistic, cultural, physical, gender-based, or other sources of educational disadvantage or discrimination (Kearney, 2015, p. 34).

Ethical Leadership: was described as consisting of “…the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers, through two-way communication, reinforcement, and decision-making” (Brown, Treviño & Harrison, 2005, in Lawton and Páez, 2014, p. 641).

Transformational leadership: Use a variety of strategies to lead others in safely examining personal assumptions and respectfully challenge beliefs that negatively affect improving teaching and learning for all students. (Kearney, 2015, p. 36)

Role model: Encourage and inspire others to higher levels of performance, commitment, and motivation by modeling transparent and accountable behavior (Kearney, 2015, p. 36).

Organizational Citizenship Behavior: Behavior that contributes indirectly to the organization through the maintenance of the organization’s social system. (LePine, Hanson, Borman, & Motowidlo, 2000; Motowidlo, Borman, & Schmit, 1997; Motowidlo & Schmit, 1999; Organ & Ryan, 1995).
**Rater Bias**: “Rater errors are errors in judgment that occur in a systematic manner when an individual observes and evaluates another. Personal perceptions and biases may influence how we evaluate an individual’s performance. What makes these errors so difficult to correct is that the observer is usually unaware that she or he is making them” (Trustees of Dartmouth College, 2016, para. 1).

### 2. Literature Review

Ethical leadership has been widely researched and discussed in peer-reviewed literature. A school leader’s personal values and ethics have been shown to influence a leader’s decisions and actions, to directly impact a school faculty’s perceptions, and to positively influence the school culture, a significant variable influencing individual choices for behaviors that contribute to the improvement of organizations. The leader’s followers make judgments about a leader’s attributes based upon the leader’s behaviors (Brown, Treviño & Harrison, 2005, p. 120; Lawton & Páez, 2014; Reed, Vidaver-Cohen & Colwell 2011; Tarter & Hoy 2004; Marzano, Waters, & McNulty, 2005; Sergiovanni, 2009; Yukl et al., 2013).

#### 2.1 Construct Validity of Ethical Leadership

Ethical leadership has been quantified, explored, and reported in the literature as both a unidimensional and multidimensional construct. Lawton and Páez suggested a model of three overlapping circles for their research study framework of ethical leadership. The three factors in their model included leadership practices, purposes, and virtues. Researchers are currently exploring meta-theories of organizational purpose based upon virtue theory including recognition of the common good and ethical leadership (p. 645). Ethical leadership has been show to explain outcomes such as trust, organizational citizenship behavior, and employee effectiveness (Kalshoven, Den Hartog & De Hoogh, 2011). This is consistent with Tarter and Hoy (2004) in their enabling school structures influenced by the ethical behaviors of the administrator. The ELS factor of interpersonal support compared favorably with the concept of OCB as well (Reed et al., 2011).

#### 2.2 Scales for Measuring Ethical Leadership Constructs

This section provides a discussion comparing and contrasting a variety of ethical leadership constructs operationalized on scales found in the literature. The scales discussed include: the Ethical Leadership Scale (ELS), Ethical Leadership at Work Scale (ELW), Executive Servant Leadership (ESLAS) Factor Scale, Ethical Leadership Questionnaire (ELQ), and a three dimensional framework for understanding and designing research on ethical leadership. A map of the constructs is provided and the items, dimensions, scales used, unit of data collection, and concepts used in correlational studies are provided. Figure 2 shows the map of comparable and contrasting concepts with ethical leadership constructs.
Lawton and Páez (2014) developed and suggested a framework for research on ethical leadership including three dimensions: virtues, purposes, and practice. Their research described the importance of considering the context in which the leader practices leadership ethics and behaviors. They suggested the appropriateness of values and roles differ under different contexts and the leader must be aware of these culture and norms of the followers. Their focus on activities of the leader is consistent with the decision to operationalize the constructs on the 3D GIEL as leadership behaviors rather than traits. The move away from a trait-based perspective of values and ethics reflects the broadening perspective that recognizes the influence of cultural, political, and social norms as unique in each context (p. 645). This framework provided by Lawton and Páez is consistent with the Hofstede and GLOBE Models (Global Leadership and Organizational Behavior Effectiveness) exploring culturally dependent views of effective leadership (Shi & Wang, 2011).

Brown et al. (2005) developed and validated the Ethical Leadership Scale (ELS). This 10-item unidimensional scale operationalizes six constructs: consideration behaviors, honesty, trust in leader, interactional fairness, socialized charisma (related to transformational leadership, role model, high standards, and cognitive moral development), and abusive supervision. The scale is completed by the followers of the subject leader. Brown used the framework of social learning theory (Bandura, 1986), to conceptualize a leader as a role...
model whose ethical conduct influences the same behaviors in his or her followers (p. 119).

Kalshoven et al. (2011) developed their Ethical Leadership at Work Scale (ELW) as a multidimensional construct including seven dimensions: fairness, integrity, ethical guidance, people orientation, power sharing, role clarification, and concern for sustainability. Subjects are employees or followers and self-reports of their perceptions are captured on Likert-style scale of 1 = strongly disagree to 5 = strongly agree. Correlation studies with the ELW revealed positive relationships with employee trust in their leader, job and leader satisfaction, organizational and team commitment, employee effectiveness, and organizational citizenship behaviors. Negative correlation was found with employee cynicism.

Reed et al. (2011) provided a description of their validated instrument and empirical studies for the Executive Servant Leadership (ESLAS) Scale including five dimensions of the sub-factor ESL: interpersonal support, building community, altruism, egalitarianism, and moral integrity. The scale was provided to adult learners and alumni from a university. The participants are asked to rate their level of agreement on items describing the top executive in their institution on a 4-point Likert-style scale from 1 = strongly disagree to 4 = strongly agree. Reed et al. framed their scale on the theory of trust as a foundation of ethical leadership. Trust supports a cohesive integration of activities, cooperation, and perception of stability. This concept is consistent with the Open Systems theory of collective efficacy and consistent with Bandura’s (1986, 2001) of trust as a necessary antecedent to collective efficacy.

Yukl, Mahsud, Hassan and Prussia (2013) reviewed several of the previously listed scales and developed a 15-item unidimensional scale titled the Ethical Leadership Questionnaire (ELQ) from a review of several of the existing ethical leadership scales. They found that some leadership scales included constructs that were not “inherently ethical, and …can be used for unethical purposes” (p. 40). Therefore they omitted constructs related to leader’s behaviors of wider social issues such as sustainability. The ELQ also excluded items related to personality traits, cognitive skills, a leader’s openness to new information, and connecting ethical leadership constructs with unit outcomes suggesting these constructs can be used either ethically or unethically. For example, some unethical leadership behaviors are described in a previous section of this paper include cheating or misrepresenting student results on accountability reports that may appear to improve unit performance in the short run.

The authors of the ELQ explained that excluding items related to these three constructs avoids confounding the results that overlap with other constructs in ethical leadership scales. The correlation and regression study revealed these confounding variables accounted for 52% of the EL construct. The domain of ELQ includes a leader’s values and behaviors reflecting the construct of integrity between espoused values and actual values in use: setting clear standards, holding others accountable, fair distribution of rewards, and transparency.

2.3 Framework for Understanding the Measurement of Ethical Leadership

The nomological net in the literature on ethics, integrity, and values as aspects of ethical
leadership provided the following frameworks with which to view and interpret the topic including; social exchange theory, social learning theory, and open systems organizational learning theory. Though an individual’s values were shown to have an indirect effect on one’s personal choice of behaviors and outcomes, research on the relationships between ethical leadership, social exchange theory, and employee commitment revealed the administrator's direct interaction effects on employee outcomes such as OCB, trust, collective efficacy, and school outcomes (Tarter & Hoy, 2004; Hansen, Bradley, Brown, Jackson & Dunford, 2013).

Further, the CCTC Standards, CPSEL 5: Ethics and Integrity provides the recommendation that principals reflect on their values, use of ethical behaviors, and demonstrate organizational citizenship behaviors to influence their school culture.

2.3.1 Variables of Ethical Leadership

The variables quantified in the GIEL scale have been shown to compare favorably with those in the literature that were malleable to administrator influence and related to improved school outcomes. School administrators can benefit from understanding the complex variables of the administrator’s ethical leadership on the organization through the use of a GIEL tool that provides research-based data for reflection and planning (Dweck, 2010; Kearney, 2007; Hansen et al., 2013; Lawton & Páez, 2014). Operationalized items on the GIEL scale included seven factors found in the CPSEL Standard 5 and in the research literature on measurement of ethical leadership.

The GIEL uses ethical leadership behaviors as the operationalized constructs for rating compared to the attitudinal dispositions of candidates. Though prior scales required by administrator candidates included self-rating of dispositions, research suggested that trait-based assessment have inherent biases and implicitly suggest a permanence, or fixedness, as enduring characteristics that works against a belief in growth through effort (Dweck, 1986; Hanson, 2015). This is of significant importance to agencies conducting program evaluation and accreditation of university programs under the auspices of the National Council for Teacher of Teacher Education (NCATE), the Council for the Accreditation of Educator Preparation (CAEP), and the California Commission on Teacher Credentialing (CCTC).

2.3.2 Outcomes of Ethical Leadership

Outcomes noted in the literature from the leaders’ use of ethical behaviors included employee commitment to the leader, openness to share work related problems, perceptions of effective leaders by the followers, accomplishing ethical organizational goals, development of new ethical leaders, collective efficacy, and organizational citizenship behaviors. Results of the use of ethical behaviors include professional growth and support for transformations of one’s workplace or school culture leading to improved organizational outcomes (Sadeghifar, Ashrafnejad, Mousavi, Nasiri, Vasokolaei, Zadeh, et al., 2014; Tarter & Hoy, 2004; Tschannen-Moran, 2003).

2.3.3 Differences between GIEL and Previous Scales
The GIEL scale includes a variety of features that differ and are considered an improvement from previous ethical leadership measurement scales. Because the GIEL collects ratings from participants about frequency of observed leader behaviors from a variety of raters including; the leader, followers, supervisors, and other stakeholders, the leader has a means of data to develop an understanding of the context in which he works. A comparison and contrast of self and others’ perceptions provides a data-based source for beginning useful dialogues for understanding differences in values and beliefs.

The recommended use of the GIEL includes pre and post ratings allowing for a means to reflect, set goals, and subsequently assess progress toward one’s ethical leadership goals. This contributes to a cycle of continuous improvement, provides quantified and research-based data as artifacts evidencing attainment of expectations and competencies set as standards for ethical leaders (Brown, et al., 2005; Collinson & Cook, 2007; Kalshoven et al., 2010; Lawton & Páez, 2014; Marzano et al., 2005; Reed et al., 2011; Sergiovanni, 2009).

3. Methods

This quantitative pilot-study empirically tested the factor structure and reliability of the newly developed Likert-style Graphical Inventory of Ethical Leadership (GIEL) scale, for quantifying key concepts related to ethical leadership. Correlations and exploratory factor analyses were performed using pre-existing data as self-reports from a sample including 103 graduate students in an administrator preparation program at a private university located in a large southwestern state of the U.S.

3.1 Data Sources and Participants

The Likert-style GIEL survey instrument was provided online at www.gisasolutions.org to administrator candidates and to other participants in 360-degree evaluations; for the purpose of developing goals and strategies for growth to meet the expectations of Standard 5: Ethics and Integrity of the CPSEL. Responses (n=103) were collected during the fall semester of the 2016/2017 school year. Respondents were graduate students in an administrator preparation program at a private university located in a large southwestern state of the U.S. The data used in the calculations for this pilot study was scrubbed of all identifying participant information and was held anonymous and confidential. Data will be destroyed after completion of the study.

3.2 Instrumentation

The survey items on the GIEL scale represent constructs of effective school leadership behaviors drawn from an extensive review of the literature on the measurement and identification of ethical leadership qualities. The scale items were reviewed by a panel of experts, including 12 active and retired public school administrators, 6 male and 6 female, with an average of 23 years’ experience in the field. Six of the expert panel reviewers had earned doctorates and six had attained the master’s degree level. The demographics for race included self-reports of four Hispanic/Latino, seven Caucasian, and one Filipino. The panel reviewed the 35 items for relevance, clarity, and comprehensiveness related to their effectiveness to communicate the qualities of ethical leadership behaviors to the survey
participants and breadth and comprehensiveness of the concept.

The 35-items purport to operationalize seven factors (5 items each); professional development, personal development, justice and fairness, communication, ethical decision-making, transformational leadership, and role model. Respondents reported frequencies of observed administrator behaviors by providing ratings for survey items on a Likert-style scale ranging from 0=behavior not evidenced; 1=behavior occasionally evidenced; 2=behavior occurs frequently.

3.3 Indices used for analyzing the Data

This pilot study empirically tested the scale reliabilities using the predetermined indicator of Cronbach’s alpha >.60 as an acceptable level for internal reliability of a scale in a pilot study; taking into account the number of items on the scale and the construct validity (Loewenthal, 2004). A variety of studies have been performed, and reported in the literature, demonstrating validity of the operationalized constructs on the GIEL scale (CCTC, 2014). The scale has strong face validity being currently used in the administrator preparation program with administrator candidates. This study exceeded the preset indices of 100 surveys as a minimum number considered acceptable for a pilot study with 103 responses. The preset indices for the ratio of number of survey respondents to survey items will be approximately 5:1 (Tabachnick & Fidell, 2001).

Issues related to normality of the data is not considered relevant when the sample size is sufficiently large (>30 or 40) and an assumption of normality would not preclude the use of parametric procedures (Ghasemi and Zahediasl, 2012, p. 487). For this study acceptable indices for skewness will be considered between ±2 and Kurtosis between ±7 (Hair, Black, Babin & Anderson, 2010; Bryne, 1998). Normality of the data would be reviewed visually, residuals checked for less than 20%, and anti-image correlations >.5 (Fabrigar, Wegener, MacCallum & Strahan, 1999; Tabachnick & Fidell, 2001).

4. Results

Data analyses included statistical tests using SPSS, Version 23 statistical software (IBM, 2015) to determine if the data fit a normal distribution and was considered reasonable for parametric analyses. All survey items were negatively skewed and this is considered normal respondent bias for self-report surveys using psycho-social factors (Trochim & Donnelly, 2006; Field, 2000 & 2009; Gravetter & Wallnau, 2014). A review of the residuals revealed < 20% of the items had residuals > .50 (14%) therefore the next step in the analysis was to evaluate the significance of the Chi-squared calculation. The indices for rejecting the null of good fit was $p < .001$. The Approximate Chi-square=152.087, $df=101$, $p<.001$. Therefore the null was rejected and the data considered sufficiently correlated and further analyses could proceed (Mulaik, James, Van Alstine, Bennett, Lind & Stilwell, 1989; Field, 2000 & 2009).

4.1 Correlations

A bivariate correlation analysis was performed and significant relationships were found. However, results for the Bartlett’s Test of Sphericity was found to be significant indicating
that the items, although correlated, were not correlated so highly as to produce an identity matrix preventing the factor analysis from successfully reducing the data into interpretable factors. This was consistent based upon their item descriptions and the theory. An exploratory factor analysis was performed using SPSS, maximum likelihood extraction and oblique rotation methods. Various EFA extraction methods were tried and yielded multiple pattern loadings and many factors (approximately 10) though most with too few items to be considered true factors. Indices for good factors included frequencies of item loadings per factor (≥ 3), magnitude of loadings on the factor (≥ .32), and low frequencies and low value loadings of the item on each of the other factors (minimal cross-loadings for a simple factor structure) (Gravetter & Wallnau, 2014; Field, 2000 & 2009; Brown, T. A., 2009; Albright & Park, 2009).

4.2 Principal Components Analysis

Therefore the most parsimonious results were found forcing three factors using principal components analysis and direct oblimin rotation in an effort to retain the maximum amount of original variance while keeping the number of variables to a minimum (Conway & Huffcutt, 2003). A review of the grouping of items descriptions and a comparison with the literature, revealed common themes among the factors and the factors were named.

Internal scale reliability ratings were above preset indices of .60 for pilot studies of measurement scales (Loewenthal, 2004). Each of the three scales consisted of at least three items, exhibited factor loadings < .80 and > .30 and had items that were minimally cross-loaded with items in other factors (Brown, T. A., 2009; Field, 2009; Gravetter & Wallnau, 2014). Discriminant validity between scales was shown by items loading together above .3 on the factor and no cross-loadings. Table 1 shows the results of the PCA.

<table>
<thead>
<tr>
<th>Items</th>
<th>Justice &amp; Equitable Decision-making (JED)</th>
<th>Communication &amp; Modeling (CM)</th>
<th>Personal &amp; Professional Development (PPD)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Works to meet the unique needs of those in the organization</td>
<td>.790</td>
<td>-.276</td>
<td>-.043</td>
<td>1.91</td>
<td>.284</td>
</tr>
<tr>
<td>11. Truthful in communication with others while respecting confidentiality</td>
<td>.743</td>
<td>-.169</td>
<td>-.036</td>
<td>1.91</td>
<td>.284</td>
</tr>
<tr>
<td>5. Seeks out new opportunities to learn</td>
<td>.738</td>
<td>-.011</td>
<td>.087</td>
<td>1.82</td>
<td>.414</td>
</tr>
<tr>
<td>19. Demonstrates proficiency in multiple forms of communication including, written, oral, interpersonal, etc.</td>
<td>.738</td>
<td>.291</td>
<td>-.061</td>
<td>1.86</td>
<td>.344</td>
</tr>
<tr>
<td>23. Demonstrates the ability to prioritize decisions based on need</td>
<td>.629</td>
<td>.135</td>
<td>.180</td>
<td>1.87</td>
<td>.334</td>
</tr>
<tr>
<td>18. Shares rationale for why decisions are made</td>
<td>.593</td>
<td>.039</td>
<td>-.031</td>
<td>1.84</td>
<td>.364</td>
</tr>
<tr>
<td>15. Seeks to understand those who are different from them</td>
<td>.549</td>
<td>.128</td>
<td>.010</td>
<td>1.86</td>
<td>.344</td>
</tr>
<tr>
<td>31. Walks the Talk</td>
<td>.534</td>
<td>.191</td>
<td>.225</td>
<td>1.83</td>
<td>.406</td>
</tr>
</tbody>
</table>
Table 1. Individual item factor loadings, significance, percentage of variance, and eigenvalues for items on the GIEL scale.

4.3 Three Factor Model

4.3.1 Justice and Equitable Decision-making (JED)

The first factor to emerge was a combination of mostly Justice & Fairness and Decision-making variables. The factor was comprised of items 4, 5, 11, 12, 15, 18, 19, 23 & 31 and contributed 26% of the total variance explained by the three factor model. The items comprising this factor all related to ethical behaviors of supportive (12), truthful (11), communicative (19), open (5), understanding (15), interpersonal (19), and fair (4). Two items included wording related to decision-making (18 & 23). A review of the items warranted a combined name of JED. Cronbah’s alpha was .850 showing good reliability.

4.3.2 Communication & Modeling (CM)

The second factor combined mostly from two varialbes of Role Modeling and Communication capturing items 16, 20, 26, 33, 34 & 35 and contributed to 10.4% of the total variance. The items included in this factor related to interpersonal skills of communication (16), listening (34), positive and likeable (34 & 35), modeling (33). One

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Factor Loadings</th>
<th>Significance</th>
<th>Variance</th>
<th>Eigenvalue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networks with colleagues</td>
<td>.503</td>
<td>.210</td>
<td>.065</td>
<td>1.15</td>
</tr>
<tr>
<td>Personable and likable</td>
<td>.154</td>
<td>.700</td>
<td>-.066</td>
<td>1.91</td>
</tr>
<tr>
<td>Facilitates ongoing two way internal external...</td>
<td>.090</td>
<td>.648</td>
<td>.133</td>
<td>1.81</td>
</tr>
<tr>
<td>Demonstrates active listening skills</td>
<td>.111</td>
<td>.639</td>
<td>-.180</td>
<td>1.89</td>
</tr>
<tr>
<td>Positive even when under stress</td>
<td>-.104</td>
<td>.639</td>
<td>-.005</td>
<td>1.82</td>
</tr>
<tr>
<td>Models servant leadership</td>
<td>-.024</td>
<td>.548</td>
<td>.178</td>
<td>1.82</td>
</tr>
<tr>
<td>Creates a sense that we are all a team</td>
<td>.006</td>
<td>.532</td>
<td>-.038</td>
<td>1.92</td>
</tr>
<tr>
<td>Recreational time and activities with family, friends,</td>
<td>-.156</td>
<td>.010</td>
<td>.743</td>
<td>1.68</td>
</tr>
<tr>
<td>church and community members</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spending time reflecting and thinking about important</td>
<td>.003</td>
<td>-.037</td>
<td>.691</td>
<td>1.59</td>
</tr>
<tr>
<td>aspects of their life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliberately explore community events with diverse...</td>
<td>-.016</td>
<td>.242</td>
<td>.686</td>
<td>1.33</td>
</tr>
<tr>
<td>Involvement with faith community</td>
<td>.054</td>
<td>-.071</td>
<td>.682</td>
<td>1.15</td>
</tr>
<tr>
<td>Is a member of professional organizations</td>
<td>.151</td>
<td>.068</td>
<td>.459</td>
<td>1.53</td>
</tr>
<tr>
<td>Goes to Conferences</td>
<td>.094</td>
<td>-.127</td>
<td>.350</td>
<td>1.72</td>
</tr>
</tbody>
</table>

Percent of Variance: 25.746, 10.336, 9.159
Eigenvalue: 5.407, 2.171, 1.923
Cronbach alpha: .850, .717, .816
item from Transformational Leader was also loaded on this factor, ”creates a sense we are all a team” (26). A name was given combining the major variables that combined. Cronbach’s alpha was .772 and could be improved although it is considered acceptable in a pilot study.

4.3.3 Personal and Professional Development (PPD)

The third factor was also a combination of two variables, Personal and Professional Development including items 1 & 2, and 7-10 and contributed approximately 9.2% of total variance explained by the three-factor model. The items were related to developing as an individual (7-10) and professional (1 & 2). Cronbach’s alpha reliability was .816.

4.4 Cross-tabs

Statistical analysis was not performed to explore the interdependence of the demographic data variables and to identify statistically significant differences (p < .05) as demographic information was not collected.

4.5 Multi-collinearity

Bartlett’s Test of Sphericity determinant was p < .0001. Bartlett’s tests the hypothesis that the correlation matrix of the data is an identity matrix. The Bartlett’s test revealed issues could result in interpretation of the factors due to multicollinearity. Further analysis showed regression correlations between two factors within the normal limits of .32 to .80 (Cohen & Cohen, 2002). Collinearity statistics tolerance should be > 0.1 (or VIF < 10) for all variables (Field, 2009). Results of regression on the IVs to test the assumption of collinearity indicated that multicollinearity was not a concern (GIEL Factors Mean Scores, Tolerance = .87, VIF = 1.12). Therefore the factors could be considered unique items with individual contributions to the overall concept of ethical leadership.

Figure 3 shows a model of the three-factor result of the principal component analysis

4.6 Multiple Regression Analysis

A multiple regression analysis using JED as the independent variable (IV) and CM and PPD as the dependent variable provided insight into the relationship between the variables. The results revealed the IVs explained a significant proportion ($R^2 = .263$) of the variance in Justice and Equitable Decision-making ($F_{(2, 102)} = 17.870, p < .001$). The strongest predictor was personal and professional development ($\beta = .365$), followed by communication and modeling ($\beta = .303$). Table 3 shows $\beta$ and p values for the independent variables on JED.

<table>
<thead>
<tr>
<th>Variables from the literature considered to explain variations in Justice and Equitable Decision-making</th>
<th>B</th>
<th>$\beta$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication and Modeling</td>
<td>.324</td>
<td>.303**</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Personal and Professional Development</td>
<td>.230</td>
<td>.365**</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note. $R = .513$ and adjusted $R^2 = .263**$, df = 2, n=102; $F$= 17.870.

Table 3. $\beta$ and p values for the independent variables on JED.
Figure 3 Proposed three-factor model of the Graphical Inventory of Ethical Leadership (GIEL)
5. Discussion of the Results

A brief discussion follows explaining the theoretical support of the three factor model and why separate factors might combine as one to represent key behaviors of ethical leaders.

5.1 Justice and Equitable Decision-making

A review of Figure 2 - Map of comparable and contrasting concepts with ethical leadership constructs reveals the literature supports the combining of ethical values with decision-making. Kohlberg’s (1958) Theory of the Stages of Moral Development as well as Rest’s Four Stages Component Model (1999) establish a relationship between the concepts of justice and equitable decision-making. For example, Rest identified four psychological components of contributed to moral maturity. These included, moral sensitivity, moral judgment moral motivation, and moral character. He implies that an awareness and sensitivity of values, such as justice and equity, are a precursor to putting moral judgement into action through ethical or equitable decision-making. Schwartz (1992), an eminent social researcher wrote, “Values are criteria rather than qualities inherent in objects” (p. 1). That is, individuals use a hierarchy of beliefs, or ordering of important beliefs, when evaluating self or others, for making choices, and for setting goals.

5.2 Communication and Modeling

Theorists in the field of education, such as Dewey (1938/1997), and Vygotsky (1962), advanced the idea that the social environment and the individual influenced each other in a reciprocal process of learning. Bandura's (2001) social cognitive theory described a triadic model of learning including human cognition, one's environment, and the influence of social modeling on the behavior of the learner. Bandura explained, "...human functioning is rooted in social systems" (p. 15). Communication and modeling fall under a common theme of interpersonal skills related to relationship, feedback, and social influence.

5.3 Personal and Professional Development

Personal development is closely aligned with professional development when the concept of autonomous learning is considered. Personal choice to engage new experiences that challenge one’s prior learning is fundamental to professional development. Hanson (in press) wrote,

A person’s sense of autonomy and control develops from experiencing a supportive social environment leading to positive experiences of individual development. Autonomy differs from independent action in that autonomous action involves an alignment with the values embedded in the actions undertaken. An autonomous person takes initiative, feels an intrinsic sense of control, and feels the tasks performed have relevance to him.

5.4 Items Removed from the Analysis

Eleven of the 35 items on the scale were removed from the analysis for the following reasons: Items 14, 17, 32 & 24 showed kurtosis exceeding ±7 and were removed. Eight items (13, 21, 22, 24, 27, 29 & 30) that crossloaded were double-barreled containing the
word “and.” Double-barreled items suggest that the loadings are not stable and could vary depending upon the weight the rater gives to either part of the sentence. For example item 24 reads, “Incorporates the use of data and research when formulating decisions.” The rater might focus on the use of data and consider research not part of the observed behaviors of the leader. Therefore this might load with decision making. However, if the rater focused on the research part of the item and did not observe the leader using data in decision making the item might load with professional development. Items 3, 6, 25 & 28 included wording related to “professional readings…outside of work…shared leadership…and shared vision…” These items cross-loaded on two factors.

6. Summary and Conclusion

This paper provided a discussion of the GIEL scale developed by the master’s department of educational leadership program at the subject university through the use of a SoTL research design.

6.1 Research Question #1

The first research question of this study, “Is there a relationship between the individual factors included on the GIEL survey instrument?” was answered by correlation and regression analysis. All three scale factors significantly correlated though not so highly they were considered multi-collinear.

6.2 Research Question #2

The study results answered question #2, “Are the scale reliability indices of the GIEL instrument within predetermined acceptable parameters?” Only all three of the GIEL scales had internal reliability above the predetermined indices of >.6 for a pilot study. The scales can be considered reliable and to provide consistently accurate measurements of the participants’ ratings of observed administrator ethical behaviors.

6.3 Conclusion

The use of the GIEL survey instrument provides data to make valid decisions and to provide growth markers toward meeting Standard 5: Ethics and Integrity and may be used to improve a leader’s understanding of the construct of ethical leadership and for setting growth goals. The GIEL survey operationalizes ethical leadership behaviors and can be used as a data source providing evidence of administrator, follower, supervisors, and stakeholder’s perceptions of their leader in this area. When leaders develop their ethical behaviors their followers perceived increased procedural justice, develop trust, leading to improved OCB and collective efficacy. Improved cultures lead to improved organizational outcomes and employee well-being (Hanson, Ruff & Bangert, 2016).

6.4 Limitations

Human-subject survey research may contribute to reporter bias resulting in a more positive self-report rating (Hoskin, 2012). The subsequent effect could provide a left-hand skew to the data which was seen in this study. Onsite observations were not performed to confirm the validity of faculty and administrator self-reports regarding their perceptions of
a growth school mindset culture in their school context. This study had a limited pool of participants that include mostly rural areas in a large northwestern state. The results may not generalize to larger more diverse populations.

6.5 Implications

Implications of the review performed in this paper suggest principals can compare their overall results from a pre assessment to the post assessment to determine growth on CPSEL Standard 5: Ethics and Integrity. If the administrator’s growth plan was developed from sound data and reflection, then growth is more likely to occur. Additionally, a valid and reliable scale can provide research-based evidence of competencies on the CPSEL Standard 5 that support university recommendations for clearing administrator credentials in CASC programs. Further, data provided by the GIEL will provide opportunities for beginning dialogues with administrators, their faculty, school board members, and stakeholders regarding their perceptions of the administrator’s behavior on the culture in their school. There are many implications for using research-based data from scales such as the GIEL Scale for quantifying administrator ethics and integrity behaviors. Survey research is just a beginning to finding realistic ways to implement growth in a candidate or practicing school administrator (Netemeyer, Bearden & Sharma, 2003).

Administrators in schools and industry can provide the research-based evidence from the GIEL scale for developing a growth plan, reassess to determine growth, and for demonstrating competencies in ethical leadership behavior standards of expectations for the accountability agencies. Principals can work to develop the three factors of ethical leadership such as being a role model, developing two-way communication channels, considering the effect on others when making decisions, participating in personal development activities, facilitating a shared vision using transformational leadership, participating in targeted professional development, and promoting justice and fairness that leads to organizational citizenship behaviors and positive employee outcomes in schools (Hoy, Tarter & Kottkamp, 1991; Kearney, 2007; Sanders & Sheldon, 2009; Sadeghifar et al., 2014).

School districts can use the GIEL instrument and the logic and theory underlying the development of the instrument to plan professional development for administrators in their districts. University administrator preparation programs may include the GIEL instrument in their candidate screening process, for developing coursework, and provide the GIEL to candidates for personal reflection. Other potential uses of the GIEL graphic organizer include; a measure for school district administrator hiring/screening processes and as part of a 360-degree survey tool.

6.6 Recommendations for Further Research

Recommendations include testing the instrument on a stratified random samples from diverse school contexts and populations to determine measurement reliability and generalizability. Another useful area for research would be to compare ethical leadership constructs with constructs from validated instruments such as the Transformational Leadership Scale, Ethical Leadership at Work (ELW) scale, Executive Servant Leadership
(ESL) scale (Kalshoven et al., 2011; Reed et al., 2011), Organizational Citizenship Behavior Questionnaire (Spector, Bauer, & Fox, 2010), Collective Efficacy Scale (Goddard, 2002), and What’s My School Mindset? Scale (Mindset Works, Inc., 2015) among others. Further corrections to the items can be made based upon; the feedback from the expert panel review; correcting all double-barreled items; and adding more items to the CM factor to raise the reliability of this factor.

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Marcos, T. A., & Loose, W. V. (2014). iPrincipals: How a California university educational leadership program is preparing the next generation of school administrators online.


15th Annual Hawaii International Conference on Education  
Proceedings Submission Proposal # 906

1. **TITLE:** Engaging Latino Middle-School Students in Literacy-based MakerSpace Activities to Enhance STEM Practices and Engagement

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6. **ABSTRACT:**
The Maker Movement, with a focus on playful experimentation, offers a hands-on approach to science, technology, and engineering, and could offer an answer to student disengagement with STEM. While traditional science classes and the narrow representation of scientists can be alienating, Maker activities offer multiple entry points and modes of engagement, especially for historically underrepresented populations. This paper attempts to address the sparse education or curriculum research on how multimodal Maker activities incorporate students’ interests and funds of knowledge, and what these practices look like. Additionally, we explore how diverse literacies including Making, reading scientific texts, writing poetry, and creating audiobooks support scientific practices (e.g. observation, problem-solving, creating new knowledge) for Latino middle school students participating in a Maker Literacies afterschool program.

   In this analysis we applied Cultural Historical Activity Theory (CHAT) to examine scientific practices during program activities within social and cultural contexts. CHAT frames how people learn, act, and negotiate meaning with others, emphasizing the centrality of culture in human activity. Currently in its third adaptation, activity triangle diagrams outline system components and relationships including norms, participant roles, and social relationships. In our research, we examine the interplay of students, tools, and rules. Tools are both physical, such as
microprocessors and light emitting diodes, and conceptual, such as the engineering design process. In this first iteration, we considered adolescent participants, undergraduate facilitators, graduate researchers, and staff as socio-cultural actors in the activity system of the afterschool program.

Over the course of the 2015-2016 academic year, we observed eight Latino students in sixth and seventh grades. In the Maker Literacies program, they learned about circuits, read about young innovators, wrote poetry about place, and created a miniature light up city on display at a local Maker faire. We explored how students engaged in multimodal approaches to learning (e.g. poetry, Making, reading text, creating audiobooks) to assess their gains in reading as measured by the Qualitative Reading Inventory (QRI).

We employed an ethnographic perspective to explore the everyday life of pre-adolescent participants. Sessions were selectively audio or video recorded. Data also include pre and post test scores of the QRI, a neighborhood tour and exit interview, as well as student designs and poetry. Tracing dialogue and multimodal practices across time, through images, audio and video records, uncovered what literacy processes mean in relation to scientific exploration and discovery.

We selected and transcribed video footage then constructed representations of sessions and learning, with transcripts to depict micro-level communication and event maps to illustrate larger-scale activity development. Next a preliminary coding scheme was created to examine scientific practices, and refined through group discussion. To support inter-rater reliability, two researchers separately used the revised coding scheme and discussed discrepancies to reach consensus in the case of disagreement.

Our results reveal that poetry sessions encouraged student socio-emotional growth, leadership development, and confidence in their reading abilities that enhanced understanding in Maker sessions and informed scientific practices. The multimodal practices allowed for alternative but complementary roles in relation to “scientist”, such as writer, storyteller, reader or teacher. There were different points of entry which allowed students diverse ways to connect with conceptual and physical STEM materials and tools. Additionally, average reading ability as measured by the QRI score, increased by two grade levels. These preliminary results show an opportunity to expand research of multimodal literacies with STEM curriculum in order to be inclusive of diverse forms of learning and diverse student populations.
Professors’ Concerns about Introducing Online Conversation Practice into College English Courses

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Japanese English education at college level needs to improve learners’ communication skills. For that purpose, lecturers can utilize current technologies to support them, in such a way as online conversation practice using Skype. However, introducing online conversation practice with outside instructors living abroad into college courses seems to have issues or concerns. Thus, we conducted a survey to find out faculty members’ concerns. We will present the results and suggest possible solutions for course designs.

1. Background

In Japan, English language education has recently more focused on communication skills, because Ministry of Education, Culture, Sports, Science and Technology (MEXT) has aimed to cultivate global human resources (2011). One of the key abilities required for becoming “global human resources” is communication abilities with people who use different languages and have different cultural backgrounds. According to MEXT’s policy, English education in Japanese schools has shifted into practical skills more and more.

In general, language learners are now able to use many kinds of ways to acquire
their target languages. Since the Internet was developed, learners have been more easily able to access extensive contents related to the target languages. For example, they can read news articles, watch video clips of news programs, and use language learning sites, etc. Those contents can include videos as well as sounds. Moreover, the recent technology allows language learners to communicate with others using social media or other tools synchronously or asynchronously. You can communicate with others, even with native speakers of your target language, without leaving your country.

Many Japanese English learners, however, have few opportunities to practice to speak English both in their daily lives and in their classrooms. Although they may have experience of being taught English by native speakers of English in school, it seemed that they did not have sufficient opportunities to practice speaking English with the native speakers. Certainly, it is beneficial to provide them with as many opportunities as possible to practice English in an effective way such as online one-to-one lessons with foreign instructors.

As such attempts to provide Japanese college students with opportunities to practice speaking English, the Institute for Service Innovation Studies of Meiji University conducted several studies in the past. In 2012, the research group conducted an online English conversation practice program with the assistance of the instructors who work in the English conversation school in the Philippines for two months. It consisted of one-to-one lessons using online communication application Skype. It was a non-credit program for students who voluntarily participate. After finishing the program, all the participants (41) answered the questionnaire. The results showed that 97.6% students were satisfied with the online conversation practice lessons with the instructors who stayed in the Philippines (51.2 % students were very satisfied and 46.3% were satisfied). Some of them wrote free comments about the one-to-one lessons. One of the comments said, “I spoke a lot during the lessons because they were one-to-one lessons. I gained confidence and I am not afraid of speaking English anymore” (Sakamoto, Handa, Shishido, & Sakai, 2014).

Moreover, the same research group examined the college students’ English learning experience, and 806 students answered the questionnaire. The study showed that 78% of the students had an experience of practicing speaking English in school. 63% had some experience of practicing English with foreign instructors in school, while 67% of the students had little experience of one-to-one English speaking practice (Sakamoto & Handa, 2016). Thus, one-to-one practice may be the type of learning that Japanese learners of English lack. If so, using one-to-one practice in credited college courses need to be considered.
2. **Purpose of This Study**

The past studies showed that Japanese students have rarely had online one-to-one English practice opportunities with native speakers of English or foreign instructors in school. Those one-to-one lessons may be worth including in college English courses. However, if those types of lessons are included, Japanese instructors need to collaborate with outside instructors such as Filipino instructors. Therefore, the purpose of this study was to find Japanese instructors’ concerns regarding providing online conversation lessons which involve the collaboration with the instructors in the Philippines.

3. **Research Methods**

The subjects of this study were professors working in Japanese colleges or universities. Nine of them were professors who teach English and nine of them were professors who teach other subjects. Eight of them had opportunities to develop English curricula, while 10 of them did not have opportunities to develop them.

The data were collected in an online questionnaire form by using mailing lists for professors working in Japanese colleges or universities. This questionnaire was available online from September to October in 2015. 18 professors answered the survey.

The questionnaire consisted of 14 questions. Two questions were about demographics. One question was the professors’ willingness of using English online communication practice, collaborating with Filipino instructors. Three questions were about how to collaborate with Filipino instructors when they instruct students together, such as what kinds of jobs the Japanese professors want Filipino instructors to do. Six questions were about the Japanese professors’ concerns when they use this type of course at college or university. Regarding the 12 questions noted above, 4-Likart scales (4.Agree, 3.Somewhat Agree, 2.Somewhat Disagree, 1.Disagree) were used, and the other two questions were free comments.

4. **Results**

The results were shown in Table 1. The average score for willingness of including this type of online conversation practice was over 3. The Japanese professors were positive about such practice. There were differences between the professors teaching English and the professors teaching other subjects in terms of collaborative teaching
work. It seemed that the professors teaching English would like to ask the Filipino instructors to have practice sessions rather than to teach together. Both the English language professors and the non-English language professors had concern about collaboration.

The free comments included the following points. The comments for Question 4 showed that some of the Japanese professors felt positive about the introduction of the online oral communication program because it would lead to the increase in students’ opportunities to use English. Some other professors represented their beliefs in the effectiveness of such a program. The comments for Question 14 included the following concerns: (1) concerns about Filipino instructors (e.g. “Students may feel negative about Filipino instructors; they may prefer native speakers of English as instructors,” and “Filipino instructors may have different levels of teaching skills or knowledge”), (2) concerns about collaboration and course design (e.g. “I am not sure how to design the course and how to collaborate with Filipino instructors to teach together”), (3) concerns about arrangements regarding learning environments (e.g. “I am not sure how to deal with defects or problems about PCs in the classroom and network”), and (4) concerns about miscellaneous issues (e.g. “Japanese instructors, especially part-time instructors, may lose their teaching positions,” and “I am not sure whether university could accept this type of course or not”). These comments seemed to be reflected in the scores of the other questions.

Table 1. Results of Questionnaire

<table>
<thead>
<tr>
<th>Collaborating with instructors in the Philippines can allow students to receive more personal feedback on their speaking practice. We want to use free-online communication service Skype. Let us know your opinion about introducing this type of oral communication program into credited English courses.</th>
<th>Professors teaching English</th>
<th>Professors teaching other subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3. I would like to use this type of practice in my course.</td>
<td>3.17</td>
<td>3</td>
</tr>
<tr>
<td>Q4. Could you tell us the reasons of the answer for Q3?</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>If you answer agree or somewhat agree in Q3, please answer how you would like to introduce this type of program into your course.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Mean1</td>
<td>Mean2</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Q5. Ask only practice part online (Japanese professors design the courses, teach, and evaluate students.)</td>
<td>3.13</td>
<td>3.5</td>
</tr>
<tr>
<td>Q6. Teach courses together (Japanese professors design the courses, and evaluate students.)</td>
<td>3.14</td>
<td>2.86</td>
</tr>
<tr>
<td>Q7. Ask both teaching and practice online (Japanese professors design the courses, and receive data for evaluation.)</td>
<td>2.43</td>
<td>2.57</td>
</tr>
<tr>
<td>Q8. I have concern about collaboration.</td>
<td>3.12</td>
<td>3.33</td>
</tr>
<tr>
<td>Q9. I have concern about outside instructors’ teaching skills for Japanese students.</td>
<td>2.18</td>
<td>2.22</td>
</tr>
<tr>
<td>Q10. I have concern about their English.</td>
<td>1.71</td>
<td>1.78</td>
</tr>
<tr>
<td>Q11. I have concern about cultural differences.</td>
<td>1.47</td>
<td>1.78</td>
</tr>
<tr>
<td>Q12. I have concern about designing the course.</td>
<td>2.35</td>
<td>2</td>
</tr>
<tr>
<td>Q13. I have concern about troubles due to the time difference.</td>
<td>1.65</td>
<td>2</td>
</tr>
<tr>
<td>Q14. Any other concerns or comments.</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

5. Discussions and Possible Solutions

In order to introduce the online English practice program into college courses, it is necessary to deal with the four categories of the professors’ concerns: (1) concerns about Filipino instructors, (2) concerns about collaboration and course design, (3) concerns about arrangements regarding learning environments, and (4) concerns about miscellaneous issues.

First of all, there may be some ways to deal with concerns about Filipino instructors. When Japanese professors choose a company providing online English conversation service, the information on instructors’ educational backgrounds or training in the company should be important. Furthermore, professors should take trial lessons to see how eagerly the Filipino instructors teach, how well they answer questions, or how friendly they are. In terms of the assumptions of students’ concerns about Filipino instructors, data show that Japanese learners are relatively unconcerned about the
nationality of instructors. As described above, students were reported to be highly satisfied with and have positive impressions about the Filipino instructors (Sakamoto, Handa, Shishido, & Sakai, 2014).

Next, their concerns about collaboration and course design may be the most difficult part. It can also be related to the cost issues. The course design and how to collaborate to teach should be examined for future studies. However, it can be said that the best way to find problems in advance is to implement a trial course after finishing the course design.

In fact, several studies conducted as trial programs helped the members of our research group find problems. These findings are thought to be beneficial to solve some concerns, especially concerns about arrangements regarding learning environments. For example, even though Skype program was downloaded and installed into the computers in the university’s computer rooms in advance, the computers always changed to the default settings after being shut down. Thus, we found USBs in which Skype had already been installed convenient.

Then, it may be helpful for professors to prepare student’s Skype accounts. Actually in the past trial program, the students often forgot their own passwords and took considerable time to start Skype. In addition, professors need to let the Filipino instructors know the students’ Skype IDs in advance to start lessons.

Teaching how to use Skype is also necessary, because students may not be accustomed to how to use Skype. Although the Filipino instructors wrote messages to the students, some of them did not know how to check the message box on Skype.

Setting rules are crucial in case troubles happen. For example, students were easily in a panic when the lesson was interrupted because of networking problems. In addition, absence rules should be decided in advance. Not only students but also instructors could absent from classes (Sakamoto, Handa, Shishido, Sakai, & Aratame, 2016).

This study showed the professors’ concerns about employing online English conversation practice for credited courses and possible solutions or hints to deal with the concerns. Specifically, it is necessary for future studies to find an effective way to design a course and collaborate with outside instructors.

This is a fairly limited and small case study. Thus, the results may not be generalized. However, as one of the case, the results may be useful to deal with professors’ concerns and to implement online English practice programs.

References


Acknowledgements
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Single-sex or co-ed secondary school classrooms versus achievement in chemistry and mathematics: A case of Kisii County, Kenya

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Introduction

In majority of Kenyan public secondary schools, boys are taught separately from girls, unlike co-ed schools seen in its primary and in its higher education. Co-ed at secondary school level is debatable in all extents. It is unclear if opting for co-ed produces an all round developed graduate, say, in all spheres of life i.e. socio-emotional or not.

Does single-sex schools promote better attitudes, values, etc, toward life and career preparedness or stereotypes? (Kangethe, Karuti & Nyamanga, 2014) Does the single-sex type of school impact academic achievement at the end of secondary education or higher education in the future? (Nagengast, Marsh, & Hau, 2013). Are both boys and girls equitably instructed in single-sex schools? Do single-sex schools provide for better gender adaptations? Despite the debates, performances in standardized test in co-ed differ from single-sex schools.

Girls generally do poorly especially in STEAM subjects. For example, Table 1 shows mean score performance in Chemistry in the Kenya Certificate of Secondary Examinations (KCSE).

### Table 1: KCSE Chemistry 2010-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Gender</th>
<th>Enrollment</th>
<th>% Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Girls</td>
<td>200735</td>
<td>23.08</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>239206</td>
<td>26.30</td>
</tr>
<tr>
<td>2012</td>
<td>Girls</td>
<td>193426</td>
<td>25.95</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>237293</td>
<td>29.54</td>
</tr>
<tr>
<td>2011</td>
<td>Girls</td>
<td>155725</td>
<td>22.80</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>191653</td>
<td>26.62</td>
</tr>
<tr>
<td>2010</td>
<td>Girls</td>
<td>149755</td>
<td>17.56</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>179167</td>
<td>20.43</td>
</tr>
</tbody>
</table>

Consistently for the four years from 2010 to 2013 the girls mean scores of 17.56%, 22.80%, 25.95% and 23.08% were lower than the boys despite the increase in mean score with time.

Several studies favor co-ed schooling for many reasons, one being improved academic achievement for girls. In Kenya, overall boys’ performances in math were better and the girls improved in segregated co-ed schools (Bosire, Mondoh & Barmao, 2008). Could segregated co-ed schools environment improve performance in STEAM examinations for girls?

Research Question

Chemistry, physics, biology and mathematics are the STEAM courses offered for examination at the end of secondary school in Kenya by the Kenya National
Examinations Council (KNEC). Mathematics is a compulsory subject but chemistry, physics and biology are electives. Majority of students opt for chemistry since they think it an easier subject to do well on high-stake exam. This paper looks at how the nature of some STEAM classrooms categorized by gender influence girls’ learning achievement and performance in high-stake examinations within Kenyan secondary schools. Is single-sex school, co-ed school or co-ed school with separate sex classrooms better for girls’ performance? Aside from passing or failing Chemistry and/or mathematics, what are the implications of these learning contexts?

**Method**

Three different secondary schools from Kisii County were selected using stratified sampling.  
A: Segregated co-ed  
B: All-girls  
C: Regular co-ed  

All schools were assumed to be equal at the beginning of the four years i.e. the entering behavior at Form 1 were the same. Secondly, that there were no particular influences on achievement from different school environs. Third, that individual learner differences were minimal and finally that students’ transfer from one school type to the other were of no consequence.

Data analysis of KCSE in both mathematics and chemistry were done. Data from KNEC examination scores from 2012 until 2014 were analyzed both descriptively and inferentially using ANOVA followed by a Post-Hoc Test analysis.

**Results**

Table 2 shows mean scores of 428 participants from 2012-2014, where 251 students where from single-sex school (school B), 71 students from a co-ed school with joint girls and boys classes (school c) and 106 students from a co-ed school with separate single sex-classes (school A).

<table>
<thead>
<tr>
<th>Year</th>
<th>School</th>
<th>N</th>
<th>Chemistry</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>2012</td>
<td>A</td>
<td>32</td>
<td>5.69</td>
<td>2.05</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>94</td>
<td>3.41</td>
<td>1.88</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>22</td>
<td>3.63</td>
<td>1.76</td>
</tr>
<tr>
<td>2013</td>
<td>A</td>
<td>40</td>
<td>4.93</td>
<td>2.47</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>87</td>
<td>3.70</td>
<td>2.31</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>25</td>
<td>3.00</td>
<td>1.47</td>
</tr>
<tr>
<td>2014</td>
<td>A</td>
<td>34</td>
<td>4.73</td>
<td>1.83</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>70</td>
<td>4.74</td>
<td>1.95</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>24</td>
<td>2.75</td>
<td>1.22</td>
</tr>
</tbody>
</table>
Figure 1 compares performance in KCSE chemistry examination in the three schools for 3 years where school A outperformed the other types of school annually.

![Figure 1: Comparison of mean performance in Chemistry by year](image)

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>5.69</td>
<td>4.93</td>
<td>4.74</td>
</tr>
<tr>
<td>School B</td>
<td>3.41</td>
<td>3.7</td>
<td>4.74</td>
</tr>
<tr>
<td>School C</td>
<td>3.64</td>
<td>3</td>
<td>2.75</td>
</tr>
</tbody>
</table>

Figure 2 compares performance in KCSE mathematics examination in the three schools for 3 years where school A outperforms the other types of school annually, and school C’s is constant with no change and was the lowest.

![Figure 2: Comparison of mean performance in Mathematics by year](image)

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>5.63</td>
<td>5.7</td>
<td>3.85</td>
</tr>
<tr>
<td>School B</td>
<td>2.77</td>
<td>4.62</td>
<td>3.9</td>
</tr>
<tr>
<td>School C</td>
<td>2.54</td>
<td>2.6</td>
<td>2.38</td>
</tr>
</tbody>
</table>
Hypothesis

$H_0$: There is no statistically significant difference in girls’ performance in Chemistry at KCSE between all-girls, regular co-ed and segregated co-ed schools

$H_1$: There is statistically significant difference in girls’ performance in Chemistry at KCSE between all-girls, regular co-ed and segregated co-ed schools

Table 3 shows the summary and one-way ANOVA of results for KCSE Chemistry while Table 4 is the post-hoc analysis.

**Table 3: Analysis of Variance (One-Way): KCSE Chemistry**

<table>
<thead>
<tr>
<th>School</th>
<th>N</th>
<th>Mean score</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>106</td>
<td>5.0943</td>
<td>2.1758</td>
</tr>
<tr>
<td>School B</td>
<td>251</td>
<td>3.8845</td>
<td>2.1219</td>
</tr>
<tr>
<td>School C</td>
<td>71</td>
<td>3.1127</td>
<td>1.15170</td>
</tr>
</tbody>
</table>

ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3705.52</td>
<td>5</td>
<td>741.10</td>
<td>353.14</td>
<td>0.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1783.80</td>
<td>850</td>
<td>2.099</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5489.32</td>
<td>855</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4: KCSE Chemistry Post-Hoc Analysis**

<table>
<thead>
<tr>
<th>School (I)</th>
<th>School (J)</th>
<th>Mean (I-J)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>1.20*</td>
<td>0.000</td>
</tr>
<tr>
<td>A</td>
<td>C</td>
<td>1.98*</td>
<td>0.000</td>
</tr>
<tr>
<td>B</td>
<td>A</td>
<td>-1.20*</td>
<td>0.000</td>
</tr>
<tr>
<td>B</td>
<td>C</td>
<td>0.77*</td>
<td>0.005</td>
</tr>
<tr>
<td>C</td>
<td>A</td>
<td>-1.98*</td>
<td>0.000</td>
</tr>
<tr>
<td>C</td>
<td>B</td>
<td>-0.77*</td>
<td>0.005</td>
</tr>
</tbody>
</table>
There were statistically significant differences between all the school types. And, the segregated co-ed performed better than all the schools; the all-girls school was next and finally the regular co-ed school in chemistry.

**Hypothesis**

H₀: There is no statistically significant difference in girls’ performance in Mathematics at KCSE between all-girls, regular co-ed and segregated co-ed schools

H₁: There is statistically significant difference in girls’ performance in Mathematics at KCSE between all-girls, regular co-ed and segregated co-ed schools

**Table 5: Analysis of Variance (One-Way): KCSE Mathematics**

<table>
<thead>
<tr>
<th>School</th>
<th>N</th>
<th>Mean score</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>106</td>
<td>5.08491</td>
<td>3.0020</td>
</tr>
<tr>
<td>School B</td>
<td>251</td>
<td>3.72510</td>
<td>2.9448</td>
</tr>
<tr>
<td>School C</td>
<td>71</td>
<td>2.50704</td>
<td>1.7227</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Sum of squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>3481.78</td>
<td>5</td>
<td>696.36</td>
<td>178.18</td>
<td>0.000</td>
</tr>
<tr>
<td>Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>3322.01</td>
<td>850</td>
<td>3.9083</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6803.79</td>
<td>855</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Similar results noted with the schools performance with KCSE Chemistry were seen with KCSE Mathematics

**Conclusion**

In this paper we report preliminary findings on girls performance in both Chemistry and Mathematics. Results indicate that in chemistry and mathematics, girls in the co-ed, gender-categorized classroom performed statistically significantly better than the girls in the joint co-ed classroom and those in single-sex classes.

We are collecting more data for both qualitative and quantitative analysis. Mixed methods to be used to determine if there is a relationship between achievement and gender-type of the class. We will be looking at data from 2012-2016 with more STEAM disciplines using Two-Way ANOVA as well as considering all-boys school. This will enable us to make recommendations for policy changes regarding school types effect on girls’ performance in STEAM courses. The qualitative data regarding instruction in different
school types and perceptions would also help explain the statistics.

Implication of findings will be forthcoming once the newly collected data are triangulated. Hopefully the larger data set would confirm the current beginning results that indicate that girls in the co-ed, gender-categorized classroom perform statistically significantly better than the girls in the joint co-ed classroom and those in single-sex classes.

References
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TOPIC AREA: Other Areas of Education

PRESENTATION FORMAT: Student Paper in Panel Session

DESCRIPTION: The SFUSD Thurgood Marshall High “October 11, 2002 Incident” holds a place in U.S. public school history. It’s the second largest law enforcement response (127 officers) on the southeast side of town for a “non-weapon” school fight. Why are police are in public schools when years ago they weren’t? Reviewing the incident’s San Francisco Chronicle’s and San Francisco Bayview’s two-year press coverage may offer clues to why the public supports police in our public schools.
ABSTRACT

The San Francisco Unified School District’s Thurgood Marshall High School “October 11, 2002 Incident” holds a place in U.S. public school history. It is the second largest law enforcement response (127 officers) to a K-12 facility, for a “non-weapon” school fight. Since the incident at Thurgood Marshall, the school has had more than 7 different principals and the replacement of all school personnel but three original site staff from 2002. With the entire Thurgood Marshall community of educators displaced, all the while maintaining ongoing police presence, how have students attending the school been able to attain the academic heights that the student body once had and coveted: more enrolled graduates into UCs/CSUs than the nationally-renowned Lowell High School and a verified $998,000 in Senior Scholarships the year before the incident? Why are police are in public schools, today, when years ago they were not? Using a document analysis of the San Francisco Chronicle’s and the San Francisco Bayview’s press coverage of the Thurgood Marshall’s 10/11/2002 Incident over a two-year period from October 12, 2002 until September 30, 2004, may offer clues to why the public supports police in our public schools.

Regular and assigned police presence in public schools in the U.S. has increased 38% from 1997 to 2007. At the time of the TMAHS Incident, the San Francisco Unified School District (SFUSD) has had a contractual relationship, via a Memorandum of Understanding (MOU) with the San Francisco Police Department (SFPD) for more than a decade, and paid the SFPD a $10,000 stipend for managing the Incident. Hence, the discontinuation of the program proves to be unlikely as the investment by SFUSD is an ongoing one. However, within the community’s recommendations for an updated MOU, there was a call for youth input and culturally relevant training for SROs working directly with youth at schools and in communities of color (Lee, 2004; OCC, 2003). Furthermore, the SFUSD’s Board of Education has implemented its own restorative justice and practice policies (based in part on the Incident) that support youth monitoring and policing themselves with the support of adult allies in the classroom and at their school sites, which is a more empowering way to grow and exist.
Defense of Practice: Teacher Leaders and Administrators’ Articulation of Continuous Improvement to Increase Students’ Mathematical Thinking

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Abstract

This study describes the effects of a partnership between an urban district and a math instructional leadership program; the partnership seeks to build schools’ problem-solving capacity and a continuous improvement culture for student learning. District math leaders integrate a peer coaching system, which gives educators a common language and a common ground for identifying, collecting, and analyzing students’ mathematical thinking. To understand the leaders’ problem solving process, we examine “Defense of Practice” presentations by teacher leaders and site and district administrators. A defense is a process to articulate leaders’ specific decisions and the reasons why they make them; through this process, math instructional leaders develop their self-regulation skills. Results are analyzed using the self-regulation phases and subprocesses from Zimmerman and Campillo (2003). Through an examination of the defenses, we offer recommendations for using a systems thinking approach to increase schools’ problem-solving capacity in math education.
Defense of Practice: Teacher Leaders’ and Administrators’ Articulation of Continuous Improvement to Increase Students’ Mathematical Thinking

In the United States, students are underperforming in mathematics as demonstrated by low performance on assessments of skills, procedures, applications, and critical thinking (Trends in International Mathematics and Science Study [TIMMS], 2011; Organisation for Economic Co-operation and Development [OECD], 2013). Internationally, the United States ranked eleventh of fifty-seven countries in fourth grade math and ninth of fifty-six countries in eighth grade math in the 2011 Trends in International Mathematics and Science Study (TIMMS). While TIMMS assesses traditional mathematics content, the Programme for International Student Assessment (PISA), another international assessment of mathematics, examines students’ application of knowledge to real-world problems. The United States ranked twenty-seven out of thirty-four Organisation for Economic Co-operation and Development (OECD) countries and performed below OECD average in mathematics in 2012 (OECD, 2013).

Improving math education to increase student achievement is a complex problem with multiple elements and relations in the system, which are likely interdependent (Funke, 1985 as cited in Fisher, Greiff, & Funke, 2012). Educators at the local, state, and federal levels have different approaches and plans for addressing this issue. Some argue for more money to fund programs, others focus on hiring the best personnel, and still others want laws and policies to hold educators accountable for reaching the goal of improving math education for all students (Fowler, 2009).

Educational policies of the past two decades have centered on external accountability for teachers, schools, and districts. In 2002, No Child Left Behind (NCLB) required states to yearly assess students in math and reading in grades three through eight and once in high school, report
the results by subgroups, and ensure “highly qualified” teachers were evenly distributed between poor and wealthier schools (Klein, 2015). In 2009, the Race to the Top grants favored states that permitted the use of student test scores in teacher evaluations, and many districts revamped their evaluations of schools and teachers by utilizing state data systems, aggressively implementing school turnaround strategies, and adopting common standards (The White House Office of the Press Secretary, 2009). Now with the Every Student Succeeds Act (ESSA), fully implemented in 2017-2018, states can pick their short- and long-term goals around standards proficiency, English-language learners, and graduation rates and are required to submit accountability plans to the Department of Education. States must continue to assess elementary and secondary school students in math and reading, but they can choose their own rigorous academic standards and standardized tests, i.e. SBAC, PARCC, or state-created exams (Klein, 2016).

The federal government, states, and districts provide guidelines and requirements in an attempt to hold educators responsible for student learning and increasing math achievement. These external accountability systems are “a complex arrangement of policies, created by actors and interests outside of schools, who are in position to reward and punish schools, aimed at impacting practices inside schools, and requiring reporting to diverse external audiences” (Knapp & Feldman, 2012, p. 667). These measures aim to affect professional accountability in schools by defining what effective instruction and high student achievement looks like and thus, bringing everyone to a consensus. However, the implications of accountability include standardization, control from authorities, external auditing, focus on political goals, and compliance with administrators’ or politicians’ decisions (Solbrekke & Englund, 2011). External accountability “demands can be experienced as onerous, punitive, intrusive, and de-skilling,” negatively affecting teacher practice while also increasing the inequities between schools (Knapp &
Feldman, 2012, p. 668). Although external standards-based accountability measures are meant to improve teacher practice and student achievement, accountability systems may be having the opposite effect. Therefore, external accountability measures alone are not the solution to the complex problem facing math education in the United States.

Although district and school leaders are held accountable to external measures, such as standardized tests and evaluations, many are focusing their attention on internal accountability and taking a public learning stance to make instructional practices and outcomes transparent (Knapp & Feldman, 2012). Carnoy, Elmore, and Sisken (2003) describe three tiers of internal accountability: “the individual’s sense of responsibility; parents’, teachers’, administrators’, and students’ collective sense of expectations; and the organizational rules, incentives, and implementation mechanisms that constitute the formal accountability system in schools” (p. 4). Thus, accountability lies within schools’ relationships among students, teachers, and administrators because “the logic of internal school accountability typically assumes that those who work closest to teaching and learning interactions are in the best position to judge each others’ work” (Knapp & Feldman, 2012, p. 673). The school culture and interactions between stakeholders are critical. Instead of solely focusing on external accountability, leaders work towards professional responsibility by building trust, engaging in internal evaluations, thinking proactively, and having more autonomy but yet still feel a moral obligation to students and peers (Solbrekke & Englund, 2011). The commitment is not through formal certification and accreditation but peer obligation (Gonzalez, 2012).

However, Hult and Edstrom (2016) cautions educators about internal accountability: it is challenging to observe teacher and student actions taken and their results, which make reporting and accounting difficult. One teacher in the study by Hult and Edstrom (2016) commented, “Our
own reflexive evaluations that we do after every lesson or teaching segment, they are hard to show [in external evaluations]. That knowledge stays with us, as our experience instead.” Others supported reflection and dialogue as critical ways to improve teaching and learning and emphasized that teachers needed more time with colleagues to engage in these reflective discussions. One option is a written self-reflection, but teachers worried about the additional effort to document without dialoguing with peers (Hult & Edstrom, 2016).

As with any complex education problem, there are no quick solutions. Pink (2009) states the “carrots and sticks” approach may work for mechanical tasks, but a different approach is needed for problems that require ingenuity and commitment (as cited in Fullan, 2016). Therefore, leaders are charged with strengthening a school’s internal accountability system “by bolstering collective expectations and installing a mechanism for exposing practice to scrutiny – while at the same time aligning practice with external expectations” (Knapp & Feldman, 2012, p. 686). Although developing internal capacity and accountability from within are recommended, literature provides few suggested processes or structures to facilitate such accountability.

The purpose of our research project is to describe how K-12 math instructional leaders, including district and site administrators and teacher leaders, engage in problem solving, using an internal accountability process called the “Defense of Practice.” Specifically, we want to explore the instructional leaders’ ability to use data, identify a root cause of a problem, and solve a complex problem. Because we value engaging in this problem solving process routinely, we chose to analyze our data using social cognitive theory, specifically focusing on the “process by which learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of learning goals” (Schunk & Zimmerman, 2008, p. vii).
Theoretical framework

Social Cognitive Theory

Perhaps best known for developing social cognitive theory is psychologist Albert Bandura, who was among the first to consider an individual’s self-beliefs in addition to behaviors and environmental factors. By 1986, Bandura designed a model of triadic reciprocity: “behavior, cognition and other personal factors, and environmental influences all operate as interacting determinants that influence each other bi-directionally” (Bandura, 1989, p. 2). Reciprocity and self-efficacy, or “beliefs about one’s capabilities to learn or perform behaviors at designated levels,” were two key concepts of Bandura’s social cognitive theory (Zimmerman, 2001, p. 126). Learners with high self-efficacy take action and continue to improve their understanding, but leaders with low self-efficacy do not take productive steps to further their learning. Learners with low self-efficacy do not think highly of their capabilities to successfully perform the task and, thus, are not proactive. While Bandura’s social cognitive theory offered a more complete model of learning than previous behaviorist theories, other social cognitive theorists, such as Zimmerman and Pintrich, argued that there were more influential factors, including motivation and self-regulation.

Self-regulation

There are many theoretical perspectives of self-regulation, but all emphasize several critical elements: learners are proactive and exert control on their learning processes and environments; learners actively develop their skills and strategies; and motivation is important (Schunk, 2005). Gitomer and Glaser (1987) see self-regulation as roughly equivalent to metacognitive awareness or metacognition (as cited in Schunk, 2012). Engaging in metacognition, learners monitor, direct, and regulate actions toward goals (Paris & Paris, 2001).
According to Bandura (1986), self-regulation processes include self-observation, self-judgment, and self-reaction through which learners need to closely watch their own behavior (observation), compare and evaluate their behavior to the standard and/or goal (judgment), and respond to the comparison and feedback provided (reaction). Zimmerman (1998) supported Bandura’s (1986) model of triadic reciprocity: personal, behavioral, and environmental factors, and he saw these interacting in a cyclical process that changes and needs to be self-monitored. Zimmerman and Campillo’s (2003) self-regulation cycle phases in Figure 1 include: forethought, performance, and self-reflection.

Figure 1

Phases and subprocesses of self-regulation

In the forethought phase, the learner determines a goal of a behavior within a set time period. Setting a goal is critical because later the learner will self-evaluate his or her learning and performance from this standard. During this phase, the learner also creates a strategic plan to identify specific strategies, behaviors, or thoughts that will be used during the performance phase. While goal setting and planning, the learner considers self-motivation beliefs, including self-efficacy, outcome expectations, intrinsic interest/value, and goal orientation. The learner asks, “Can I do it?” and “Why is this important?” In the performance phase, the learner is engaging in self-generated actions and self-observation. While performing, the learner is self-
monitoring as he or she is meta-cognitively aware of the quality of his or her competency and skill levels. Throughout this phase, the learner asks, “Do I think I have performed a flawless process thus far or have I made any mistakes?” In the self-reflection phase, the learner self-judges his or her learning and self-reacts to the performance. The learner self-evaluates based on his or her goal for performance and notes perceived causes of success or failure. The learner also reflects on his or her satisfaction with the performance (Cleary, Callan, & Zimmerman, 2012).

Methods

Context

The Math Leadership Corps (MLC) is a collaborative partnership between a university School of Education, private funders, and school districts. MLC works with districts to strengthen their leadership and internal problem solving capacity in math education. District math leaders, including teacher leaders and administrators, integrate a peer coaching system, which gives educators a common language and a common ground for identifying, collecting, and analyzing students’ mathematical thinking. Teacher leaders and administrators create a culture of continuous improvement and shared leadership, which allows them to build and implement a coherent math program that promotes student learning and results in high levels of student equity, access, and success. Teacher leaders continually utilize coaching and student data to improve practice and attain the vision where all students have the mathematical reasoning and procedural skills to design creative solutions to complex problems.

The K-12 math instructional leaders present semi-annual “Defense of Practice” presentations, during which each leader articulates his or her specific decisions and the rationale for those decisions. Each participant has ten minutes to defend. These presentations are an
opportunity for participants to move from collaboration to internal accountability for their district’s shared vision. The defenses provide opportunities to maintain quality instruction.

MLC describes a defense as the process in which math instructional leaders articulate their specific decisions and the reasons why they make them. The purpose is to analyze the intentional decisions necessary for all math instructional leaders within a K-12 district to become self-regulating learners who seek continuous improvement. Leaders analyze progress toward goals, build colleagues’ will and skill for increasing student self-regulation and achievement in math, and continuously develop as instructional leaders to influence student learning.

**Sample**

In 2015-2016, MLC partnered with two urban K-12 school districts, District A and B, to begin two years of intervention followed by one-year sustainability. District A serves 3,876 students, 85% underrepresented minorities, 45.1% qualify for free and reduced lunch, and 8.7% English Language Learners. District B serves 3,415 students, 45.7% underrepresented minorities, 11.5% qualify for free and reduced lunch, and 5.7% English Language Learners. This study analyzed K-12 math leaders’ defenses from May 2016. The eighteen participants included two district administrators, seven site administrators, and nine teacher leaders in Figure 2. In District A, one district administrator, four site administrators, one elementary teacher leader, and four secondary teacher leaders presented their defenses; two co-principals presented together for a total of nine District A defenses. In District B, one district administrator, three site administrators, two elementary teacher leaders, and two secondary teacher leaders defended.

**Figure 2**

<p>| MLC Participants for Defense of Practice Presentations |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>District</th>
<th>District Administrators</th>
<th>Site Administrators</th>
<th>Elementary Teacher Leaders</th>
<th>Secondary Teacher Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>District A</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>District B</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Design

The purpose of our research project was to describe how K-12 math instructional leaders engage in problem solving, using an internal accountability process called the “Defense of Practice.” Specifically, we want to explore the instructional leaders’ ability to use data, identify a root cause of a problem, and solve a complex problem. The research question is: How do math instructional leaders solve complex math education problems related to student learning? Because the study concentrated on describing the math education instructional leaders’ problem solving process, a qualitative design was used.

Data Generation

We collected the math instructional leaders’ defense PowerPoint presentation slides. Document analysis was used to learn about the leaders’ problem-solving capacity and self-regulation skills. Audiotapes and notes from the defense sessions were not available to analyze but are recommended in future studies. The MLC director and colleagues created a recommended structure for the defenses, including state a goal that elicits teacher and/or student actions during rigorous mathematics and aligns to the school site focus, provide rationale for actions and evidence of student engagement and achievement over time, articulate next steps based on data, and provide a self-reflection on the process of continuous improvement and how feedback has supported students and teacher learning.

Prior to beginning the study, the Institutional Review Board at Loyola Marymount University approved the study procedures. The MLC director collaborated with the participating district leadership to schedule the defense presentations. MLC faculty members, who support the secondary teacher leaders, analyzed the presentation slides from the district administrators, site administrators, and teacher leaders.
Data Analysis

Data analysis began after the defenses were completed. Participants emailed their presentations to the MLC director for document analysis. Prior to the document analysis, a guide was created to capture the participants’ information (school, grade level, instructional leader title) and specific issues aligned with the research question and theoretical framework (ability to use data, ability to identify root cause of a problem, ability to solve complex problems, metacognitive ability, and ability to self-regulate), evidence, preliminary analysis, counterevidence, and summary. For the first coding round, a MLC faculty member used closed coding with predetermined codes aligned with problem solving. After examining all defenses of practice, the researcher reviewed her notes and began to group some of the evidence together. The researcher reviewed the data a second time with the lens of self-regulation from social cognitive theory. The process of coding and developing categories helped to make sense of the data and thus the participants’ problem solving capacity and self-regulation skills.

Findings

The purpose of this study was to understand how instructional leaders solve math education problems. Through the data analysis process, three critical themes emerged: data use when goal setting and evaluating, planning for action, and motivation to defend and improve practice.

Data use when goal-setting and evaluating

All 17 defenses included two or more presentation slides with data. Types of data included student observations, photos of students and teachers, assessment data, coaching conversations, and student and teacher surveys. Although participants drew conclusions from the data presented, it was often unclear how data was used to set goals, create action plans, and
evaluate if objectives were met.

In the forethought phase, it is important to state a goal or expectation against which performance can be compared in the self-reflection phase (Cleary, Callan, & Zimmerman, 2012). Of the district and site administrator defenses, seven out of the eight defenses included a vision statement. The two district administrator defenses began with the vision while the five site administrators’ visions were towards the end of the slides. Following the vision statement, three site administrators and two district administrators provided student data, but an evaluation to a standard was not presented to understand performance so far. Thus, most of the visions appear to be future objectives for the following year and rely on the collaboration of multiple stakeholders. Three out of five site visions begin with “we” or “community,” emphasizing administrators and teacher leaders working together towards the vision.

As for the teacher leaders, all District A teacher leader defenses and three District B defenses included a goal. Goals were written from the perspective of students, teachers, and teacher leaders, and the quality of the goals varied from specific to general. A teacher leader from District B explained this specific process goal for a teacher:

By May 2016, 87% of students will be able to use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem, at the level of proficient or above, as shown on a teacher created assessment with formatted math problems and as scored by a teacher created rubric.

Other teacher leaders stated general instruction goals, including “making sense of problems” or “create goals for active practice.” Some teacher leaders provided coaching goals. A teacher
leader from District B stated a specific goal: “Asking better questions in order to get the teacher to do the thinking and get the teacher to stay on task (redirect conversation).”

All of the goals were learning oriented, but none provided clear outcome expectations for students, teachers, or the teacher leader and only one included a brief explanation of why the goal was important. The teacher reflected, “I feel that the consistency will make the students more comfortable with all aspects of solving word problems.” One teacher leader and one site administrator gathered survey data on teacher voice, asking if the program or their coach was helpful, and the teachers expressed positive experiences with their on-site coach, which might be influencing their instruction. However, the survey data was not directly tied to the teachers’ instruction, and the teachers’ values and intrinsic interests in achieving the goals were unclear.

Without beginning with a solid goal in the forethought phase, it was challenging to understand the participants’ self-reflection. All participants included student and/or teacher data in their defenses, but analysis was vague. One District A teacher leader simply stated, “[S]tudents saw growth”; he then showed achievement data from three assessments in Figure 3. However, there was no timeline or description of a progression for the assessments. It seems that this was a final analysis and used for evaluation as opposed to monitoring throughout and making instructional changes during the performance phase.
None of the participants compared their data to a standard or benchmark, which made it difficult to determine whether the participants had met their goal. Without this critical step in the self-reflection phase, it is also challenging to attribute success or failure, understand reactions to the results, and inform cyclical adaptations.

**Planning for action**

Another critical component of the forethought phase is creating a strategic plan prior to action in the performance phase. As recommended by MLC faculty, all District B site administrators offered “small” and “long” steps, detailing specific meetings, infrastructure for collaboration, or supports, to work towards the vision. These action steps were stated at the end of the defense, so performance data had not been gathered or evaluated yet. In District A, two out of three site administrator defenses stated focus areas, i.e. culture of trust and collective responsibility, and what on-site collaboration looked like during spring 2016. For example, one defense explained:

How we create a culture of trust:

- MLC program is viewed as a platform for coaching, rather than evaluation.
Productive and supportive communities are created and sustained by ensuring that teachers and coaches have materials and resources necessary to implement the program, as well as ample prep time for planning and coaching sessions.

The principal and coach work closely and communicate frequently about program goals.

The principal, coach, and teachers have worked together and agreed upon goals, a focus MP and NCTM, and observation/data collection sheets.

These site administrators also articulated short- and long-term steps for the following school year. Metrics for evaluating efficacy were not included in the defenses.

Three out of five District A teacher leaders and all District B teacher leaders provided their coaching cycle or actions. Two District B teacher leaders provided a visualization of their coaching in Figure 4 to demonstrate how planning, lesson observations, and debriefs relate to one another.

Figure 4
Coaching cycle

While this cycle was not tied directly to a goal, it provides details about the general support a teacher gets from a teacher leader to meet his or her goal. One District B teacher leader provided
an initial plan that focused on a specific coaching goal and, as evidence of the teacher leader’s self-monitoring, an updated plan and self-reflection.

Without a clear plan of the actions or success criteria for the performance phase, it is not easy to observe the impact of the teacher leaders and administrators on teacher and student learning. Because only the presentation slides were analyzed, the participants may have articulated their plans but not included them in the submitted materials. Lack of a plan may be due to limited time for planning, misunderstanding of the goal, a non-complex goal that does not require a plan, or pressure for a quick fix within the classroom. Future research may study why participants did not articulate and/or strategically plan for performance.

**Motivation to defend and improve practice**

Motivation elements include mood, self-efficacy, success expectancy, satisfaction/affect, intrinsic interest/value, and causal attribution (Cleary, Callan, & Zimmerman, 2012). In District A, two site administrator defenses stated their visions and next steps with research-support. It is assumed they are interested in the similar outcomes or value the researchers’ approaches, therefore, motivating the site administrators to take action. One of these administrators hopes to “co-teach at least one unit…to be truly immersed in the program,” showing she values the program and is fully invested. In District B, site administrators seemed satisfied with their current direction. One administrator stated things were “improved” and “clarified” for the next school year, and he hoped to “continue to optimize coaching.” Another site administrator shared positive feedback from her teachers about the program and provided support. It was challenging to find articulation of the motivation elements in the district administrator defenses. Their self-reflection about progress thus far was absent.
Two teacher leaders expressed motivation to continue improving their practice and noted specific steps they could take to do so. A District B teacher leader reflected on the strengths, missed opportunities, and next steps for the following year. She expressed satisfaction with her coaching relationship and talked about a recent positive shift:

Currently, I have a really good relationship with my partner coach. We both enjoy conversations about different strategies and how we can use them in our classroom. Over the past few months and even over the past few weeks, my partner teacher has really increased his willingness to try out different things in his classroom and have a positive reflection as to how his students are responding.

After listening to audio of her coaching conversations, she highlighted questions that engaged the teacher in dialogue about student learning, so she plans to use similar questions in the future. She attributed challenges to lack of time, stating, “Since timing was a big issue this year, I am hoping that next year, my partner teacher and I can set a more structured time to meet on a weekly basis.” Causal attribution and self-satisfaction/affect are highly predictive of motivation and persistence (Cleary, Callan, & Zimmerman, 2012).

One District A teacher leader shared that she knew she needed to move outside of her comfort zone, which was initially explaining instructional practices to her teachers. Her coaching practice shifted to making data driven decisions (closed questions), asking open-ended questions, and now focusing on hypothetical student centered questions. As a symbol of her own growth and success, her presentation included a small plant growing over time.

Overall, the presentations included limited evidence of participants’ motivation to engage in this form of internal accountability. This may be because the researchers analyzed only the presentation slides, not the transcripts, or participants had a short time to defend.
Discussion

Leaders are responsible for building a school’s internal accountability system around collective expectations and a method to scrutinize instructional practice (Knapp & Feldman, 2012). The defense is a process to engage educators in collaborating around instructional solutions and providing feedback to each other.

The findings of this study highlight the importance of collecting, analyzing, and using data for a purpose. Just as it is unacceptable to explain instructional or leadership actions without evidence to support one’s claims, an abundance of random data on students, teachers, or a site culture is not appropriate either. Reviewing presentations from District A and B, one might conclude that sufficient data was provided, but the participants’ articulation of their metacognition was missing. The researcher is left wondering how data-based decisions were made, what were the solution options, and why the chosen solution worked. Leaders need to collect data to adequately monitor the success or failure of a clear plan of action in order to determine if the solution is maximizing student learning. Data, specific to math education, should be collected throughout performance and over time to evaluate the solution (Cleary, Callan, & Zimmerman, 2012). Careful articulation of a need in math education, how success is defined, solution options, and the implementation and monitoring of a chosen solution allow for leaders to understand others’ solution discovery process and provide feedback to those defending.

Internal accountability systems rely on a collective effort, transparent plans and data, and dialogue about successes and challenges. All administrators’ presentations explained their school structures that allowed time for teachers, teacher leaders, and administrators to converse, sharing analyzed data, working together to plan lessons, and engaging in activities around a
common vision for student learning in mathematics. However, the metrics for efficacy were unclear. A few teacher leaders shared teachers’ compliments about their coaching and support. Yet few defenses expressed the importance of these collaborations and how interactions between participants led to improved solutions. Without these connections, solutions and individuals appear isolated instead of part of a systematic solution for math education created by a collaborative problem solving team.

**Limitations**

Because the data collection was limited to presentation slides, there were some limitations to the study. Bandura’s (1986) model emphasizes environmental and reciprocal relationships, but collaboration and context are not represented in the current presentation format. Parts of the self-regulation cycle, especially some of the motivation components, may have been verbalized but audio recordings were not obtained. Participant or observer notes would have provided context and more information about the participants’ problem solving process. Also, the presentation slides appear to be created by one person, but in actuality, they were co-created between a teacher and teacher leader or teacher leader and administrator. Data collection and analysis will be altered for the next study.

**Conclusion**

To support participants in data use and collaboration when problem solving, the Math Leadership Corps (MLC) has shifted its approach to a systems engineering and collaborative solution discovery process of defining a desired outcome, searching for solution plans, and taking actions that will maximize success in math teaching and learning. Systems engineering applies systems thinking to build and sustain complex systems, such as math teaching and learning. Systems thinking emphasizes relationships between people, processes, and systems
within the larger system (Senge, 2006); it brings together individuals’ values and learning with group learning to solve complex problems. This way of thinking breaks the traditional view that individual leaders provide solutions. When faced with a complex problem, collaborative problem solving is needed to utilize the collective intelligence of the group (Heifetz & Laurie, 1997). Using each other as resources and learning together will result in better solutions.

Therefore, the MLC partners with school districts who are interested in driving policy change within their district and beyond. MLC advocates on behalf of the school district’s policy on student equity, access, and success in mathematics, by working together, through a systems engineering design process, to create an internal accountability system for student learning in mathematics. The systems approach strengthens problem solving and leadership capacity for system accountability, not individual accountability. Looking ahead, defenses will be presented by partners that collaborate and interact frequently to solve complex problems. After these presentations, participants will do a systems check to analyze how well people, processes, and systems within the larger system are operating. By creating a strong internal accountability, the school district can focus their policy efforts on student learning in mathematics, defined as equity, access, and success.
References


Abstract

K through 12 Education has changed dramatically. The explosion of technological advancements require savvy educators, and the development of current educational leaders. Many companies which produce curriculum materials are motivated by profit margin. Emerging educational leaders must carefully examine data and professional development needs prior to making commitments.

The purpose of this research is to examine the analysis of curriculum materials through the lens of future educational leaders in a graduate education program. The candidates analyzed attributes of nine middle school curricula for effective teaching and learning strategies. The research is designed to examine the vision set forth by these emerging educational leaders. A qualitative approach will be used to compare teaching approaches; categorize methods and examine the most effective methods of engaging students. Outcomes will initiate a deep discussion concluding that the most effective strategies to engage students in learning are measured with valid, reliable, assessment tools. The success of product design is based upon the ability to understand student learning, bypass personal obstacles, which distract the learning process, and effectively assess results. This paper will determine the optimum strategies to engage student learning, perpetuate success and provide a framework for emerging educational leaders to evoke sound academic decisions.
How students problem solve after completing a DNA replication modeling activity – a pilot study

**Topic:** STEM Education

**Paper Presentation**

**Abstract:** The Next Generation Science Standards (NGSS)) has stipulated an increase in the use of scientific models and modeling in biology classes. The goal of this research is to discover how students problem solve about DNA replication after a DNA replication modeling activity. Students solved a DNA replication activity out loud and the findings of how they think through the problem will be discussed.

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How students problem solve after completing a DNA replication modeling activity – a pilot study (in progress)

**Introduction:**
As more countries are stressing the use of more authentic classroom experiences that focus on science models and modeling, it falls on teachers to develop these type of activities since few exist, especially in the area of biology. However, it has been shown in studies that teachers do not have a solid understanding of science models and modeling (Moritz & Kruger, 2016; Ware, Malone, Irving, & Mollohan, 2016). Both of these studies, one set in Germany and one in the United States, determined that teachers mostly understood models to be copies or physical models. Teachers rarely use models in the classroom nor evaluated them against other models, tested, modified or used them in a predictive sense. Thus, teacher understanding hampers the development of true modeling activities if their understanding is limited.

To alleviate limited understanding, there have been some science model-based and modeling curriculum units that have been developed for classroom use (Dukerich, 2015; Jackson, Dukerich, & Hestenes, 2008; Malone, Schuchardt, & Schunn, 2015; Passmore and Stewart, 2002; Posthuma-Adams, 2014; Schuchardt, & Schunn, 2016. However, many of these are in areas other than biology. In addition, the studies usually focus on student content gains between treatment and comparison groups (Hestenes, Wells, & Swackhamer, 1992; Malone, Schuchardt, & Schunn, 2015; Schuchardt, & Schunn, 2016), understanding of scientific models (Passmore and Stewart, 2002) or gains in scientific reasoning (Coletta, Phillips, & Steinert, 2007). There are not many studies that focus on the benefits of model based and modeling focused activities on students’ problem solving abilities in biology. This pilot study is an attempt to fill this gap.

**Research Question:** How do students solve replication problems after a modeling based activity focused on DNA replication?

**Meselson-Stahl Classroom Modeling Activity:** Prior to the Meselson-Stahl activity the students had completed an activity that allowed them to come to the consensus that daughter cells had identical copies of chromosomes. At the start of the modeling activity students are asked how they think the DNA replicates. After the students have time to develop different ideas about how DNA might replicate the instructor introduces them to the historical figures of Meselson and Stahl and explains that they had puzzled over that same question. The students are then introduced to the experiment developed by Meselson and Stahl. They are told that the experiment developed insured that cells replicated their DNA in a condition that only allowed the cells access to heavy isotopes. Therefore, they created cells with “heavy” DNA. The students are then introduced to the second phase of the experiment when Meselson and Stahl took the cells with the heavy DNA and allowed them to replicate.
in a condition where they only had normal or “light” isotopes available during the replication process.

The instructor then explains to the students that they will be using chenille sticks and pony beads to model this experiment and determine how DNA replicates. Each pair of students gets a DNA strand (chenille stick with “heavy” isotopes represented by blue pony beads) – see figure 1.

At this point the instructor can ask the students what would happen if they put heavy and light isotope strands in a solution. The majority realize it will produce a density gradient. If necessary due to the background of the students’ density gradients can be explored. Next, the students are asked to predict and justify what banding pattern they would expect to see if the heavy isotope labeled DNA they initially have was centrifuged and a density gradient was developed. The students write down their predictions and then the instructor passes out to each group the lab result strips (see figure 2).

The next step in the modeling activity is to allow the students to replicate their “heavy” DNA using the normal or light isotope/pony beads. The student groups are given a few minutes to reach consensus about how they believe the DNA might replicate. They are given two chenille stick strands and light beads represented by a different color (see figure 3). The students replicate the DNA per their consensus model. The students use a mixture of replication methods with usually dispersive, conservative or semi-conservative being represented. See figure 4 to see a semi-conservative replication, figure 5 for conservative replication and figure 6 for dispersive replication results.

After the replication the students are asked to predict where the bands would be located if a density gradient experiment were run. Finally the second strip is handed
out to the students to compare with their model’s results (see Figure 7). The instructor at this points can tell the students that the lab sent them the results of their first replication and hands out copy of Meselson-Stahl’s chart 2 strip to each group. At this point most students predictions match the chart strip in Figure 5. If their model results do not match the actual results of the density gradient the student have to reinvent their model of DNA replication and attempt the experiment again.

Once the group’s model predictions matches the data as shown on strip 2 the group can move onto the next or second replication. During the second replication the students will end up with four replicated strands of DNA. The students again predict what the density gradient would look like based on their modeling results. Then the instructor can give them the lab results or Strip 3 (see Figure 8).

These strips are copies of the actual data recorded by Meselson and Stahl. Students will need to analyze the results and determine if it matches the possible outcome of their model. If it does not they will need to change their model so that its results meet the data shown on the third chart strip. By this point students should have developed the semiconservative model of DNA replication.

Participants: Seven high school biology students were interviewed after participating in a modeling based activity focused on the Meselson-Stahl experiment. The students were from a rural school in the Midwest of the United States and had been taught using a newly designed Modeling Instruction™ course in biology. The students’ had taken part in the Meselson-Stahl modeling activity [X weeks] prior to the interviews.

Study Design: The students were asked to talk aloud as they solved a biology problem based on DNA replication. The problem designed for the talk aloud it listed below:

1. A single E. coli has a DNA strand that looks like this:

When one new strand is being made a mutation occurs at one point. This caused a bacteria with a mismatched base pair it its sequence, resulting in a G-G pair. (see the figure below).
During replication phase of one single E. coli a nucleotide substitution occurred on one strand of its DNA.

E. coli that have the point mutation are resistant to penicillin.

For the next two generations produced from this bacteria,
- Draw circles to show how many bacteria will be produced.
- Place a star in each of the bacteria that will contain the mutation.
- Place an R in each of the bacteria that are resistant to penicillin
- Under each offspring bacteria draw the DNA sequence that it contains.
- Show which first generation bacteria produced each second-generation bacteria by connecting them with arrows.

The audio of the videos was transcribed then linked back to the videos. A coding scheme will be developed to analysis the talk aloud using grounded theory (Glaser & Strauss, 1967). The coding will be checked via inter-rater reliability.

**Analysis and Results:** The findings will be discussed at the presentation. Examples of the students’ responses will be shown as well as how those responses were coded using the developed coding scheme.

**Conclusions and Ramifications:** During the presentation we will discuss our findings and how they impact on suggested changes to the modeling based curricula.

**Limitations:** This is a pilot study and has a limited number of students. Plus, there are only treatment students and no comparison group of students. Finally, there was only one problem used. The final study will contain a comparison group as well as a minimum of two problems to solve during the talk aloud.

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SIGHT LINE ANALYSIS OF WORKERS TAKING INSTRUMENT EXAMINATIONS FOR GENERAL APTITUDE TEST BATTERY

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Abstract

The General Aptitude Test Battery (GATB) is widely used as a method for evaluating cognitive ability with regard to employment selection in Japan. Moreover, results of the GATB have been used to allocate staff to departments ranging from clerical to assembly ones. However, at actual manufacturing and assembly sites, workers receive mixed evaluations of ‘slow work’ and ‘fast work’ from the site administrators even though they all have high GATB scores for their job.

This study measured ocular movements of employees taking instrument examinations for the General Aptitude Test Battery used by businesses when recruiting or reassigning personnel, in order to determine the relationship between work capacity and ocular movements in performing simple tasks.

Four types of equipment tests are performed in the GATB, using two types of equipment, the manual test board and the fingertip dexterity test board. These tests measure the "dexterity of hands and arms" (M-values) and the "dexterity of fingertips" (F-values). The dexterity of hands and arms is defined as the capacity to move hands, arms, and wrists in a skillful manner, e.g., capacity to move hands and arms skillfully as intended, lift objects, or quickly and accurately switch hands holding an object, while maintaining specified positional relationships. The dexterity of fingertips, on the other hand, is a capacity to handle small items skillfully, by quickly and accurately moving fingers. Higher scores indicate higher capacity for both measures. In this study, the participants were 10 males with the age of 20 to 24 years old. The differences between highly capable workers and less capable workers were identified by analyzing sight lines of workers.

The results of the study are expected to prove useful for businesses in conducting their work training. We need to consider implementation of this test in other business settings and investigation into whether similar results can be obtained under different experimental conditions to be important avenues for future research.

Keywords: sight line analysis, General Aptitude Test Battery

1. Introduction

While it is difficult to convey an expert’s skills to a beginner, if information about line-of-sight is shared, the beginner is able to actually perceive the expert’s point of view, which may result in effective support for learning skills that are difficult to express in words. It is proposed that beginners should be taught the expert attributes using the ACT model (Adaptive Control of Thought) [1].

This research focuses on the eye movements of high and low scorers in the General Aptitude Test Battery (GATB). It attempts to clarify the indices related to productivity improvement by analyzing the lines of sight of the high scorers.
2. Experiment and method of analysis

2.1 The General Aptitude Test Battery [2]

The General Aptitude Test Battery (GATB) is a test approved by the Ministry of Health, Labour and Welfare that measures professional aptitude via attributes such as manual and finger dexterity. This research uses two kinds of GATB boards (the manual operations test board on the right hand side of Figure 1 and the finger dexterity test board on the right hand side).

In the case of the test using the manual operations test board, Experiment 1 involved the action of holding the pole (peg) with both hands and inserting it in the designated hole (“inserting test”). Experiment 2 involved the action of turning the pole upside down using the dominant hand (“turning upside down test”).

In the case of the test using the finger dexterity test board, Experiment 3 involved the action of holding the rivet and washer at chest height, joining the rivet and washer together and inserting them (“joining together/combination test”). Experiment 4 involved the action of separating the already combined rivet and washer, returning the rivet to the designated hole, and moving the washer to the designated location (“separating test”).

2.2. Experiment method

The examinees, ten males aged 20-24 years (A-I below), carried out the tests using the two kinds of GATB boards as shown in Figure 1. Eyeball movement at the time of the test was measured using an eye movement measurement device. The marking of examinees and test guidance followed the GATB (required operations) guidance compiled by the Ministry of Health, Labour and Welfare [2].

2.3 Analysis method

In this study, we measure and analyze the duration of time spent looking at a point and the movement time of the sight line for sight line analysis. Figure 2 shows the three gaze points and three sight line movements from Experiment 3.

3. Analysis Result and consideration

The scores of the examinees in the tests using the GATB boards are shown in Table 1. Specifically, the Experiment 3 results are shown in this paper.
3.1 Gaze points and sight line movements in Experiment 3

The change in time spent looking at a point time of Examinee A, a high scorer in Experiment 3, is demonstrated in Figure 3. The proportion of time spent looking at a point for each examinee is demonstrated in Figure 4.
All examinees focused the most on the “combination.” However, it was found that Examinee A, who was a high scorer in Experiment 3, did not focus on the “washer” at times. Further, the proportion of time spent looking at the washer was small.

### 3.2 Comparison of average times spent looking at a gaze point

T-tests were carried out in order to determine whether there was a variation in the average looking time of the high scoring Examinee A and the other examinees. The results of that test are shown in Table 2.

The result was that in most combinations a significant difference was observed between the average looking time of Examinee A and the average looking times of the other examinees. In other words, it can be said that there is a difference in the average looking time of Examinee A in comparison with the other examinees.

### Table 2 T-test results of the average looking time of Examinee A and of the other examinees

<table>
<thead>
<tr>
<th>Experiment &amp; motion</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hold</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>Insert</td>
<td>0.07</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>2 Replace</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Pull out the rivet</td>
<td>0.33</td>
<td>&lt;0.01</td>
<td>0.20</td>
<td>&lt;0.01</td>
<td>0.06</td>
<td>0.13</td>
<td>0.12</td>
<td>&lt;0.05</td>
<td>&lt;0.01</td>
<td></td>
</tr>
<tr>
<td>Pull out the washer</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Combine</td>
<td>0.20</td>
<td>&lt;0.01</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.06</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>0.27</td>
</tr>
<tr>
<td>3 Separate</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td></td>
</tr>
<tr>
<td>Insert the rivet</td>
<td>&lt;0.05</td>
<td>0.50</td>
<td>0.15</td>
<td>0.45</td>
<td>0.08</td>
<td>0.10</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Insert the washer</td>
<td>&lt;0.01</td>
<td>0.07</td>
<td>0.09</td>
<td>&lt;0.05</td>
<td>0.38</td>
<td>0.42</td>
<td>0.06</td>
<td>&lt;0.01</td>
<td>0.39</td>
<td></td>
</tr>
</tbody>
</table>

: indicates a significant difference (< 0.05: level of significance 5%; < 0.01: level of significance 1%)

### 4. Conclusions

This research carried out sight line analysis of workers focusing on simple tasks. Experiment 3 made it clear that all examinees spent longer periods of time looking at the combination, and that the high scorers spent shorter periods of time looking at the washer. In most of the combinations, a statistically significant
difference was obtained between the average looking times of the highest scorer and of the other examinees.

As there is a bias in the examinees’ scores in this research, in the future there is a need to increase the number of examinees and determine whether the same results would be obtained even with other examinees.

Acknowledgement

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Productive Affix Knowledge
and its Relationship With Known Words

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Abstract

This study aimed to provide empirical evidence towards clearer understanding of the relationship between second language learners’ vocabulary size and productive affix knowledge. It also aimed to shed light on the organization of affixes in the mental lexicon through comparing test results of more and less frequently used words with affixes. In the first experiment, 270 Japanese learners of English at college level took an online test of productive affix knowledge with 30 affixes and a vocabulary size test. The results showed that vocabulary size correlated with the knowledge of affixes (r = .64), suggesting that having a larger vocabulary was indicative of better command of affixes in production. The second experiment, where an online test of 23 prefixes along with the vocabulary size test were administered to 253 Japanese university learners of English, indicated that the prefixes were stored together with root words when the combined forms were used more frequently. On the contrary, such tendency was not observed in the case of less frequent words, suggesting the organization of affixes differs depending on the frequency of affixed words.

1. Introduction

The learning of vocabulary requires both item learning and system learning. We have to learn meanings, spelling, pronunciation, and other various aspects of each word one by one. At the same time, some facets of vocabulary learning are systematic. When asked to provide an example of system learning in English, many teachers would agree that knowledge of affixes would be one such example. Due to the systematic nature of affixes, knowing affixes is considered to play a pivotal role in vocabulary learning. It is as if affixes are magic wands that transform unknown affixed words into known ones. If a learner knows the word familiar and affixes such as un- and -ity, the unknown word unfamiliarity seems suddenly dissected into word parts such as un + familiar + ity, and the meaning of the otherwise unknown word becomes instantaneously clear. As
Bauer and Nation (1993) state, the knowledge of a root (e.g., *familiar*) and its allowable affixes (e.g., *un-*, *-ity*, and/or *-lize*) help us recognize unfamiliar members of the word family. Empirical evidence has repeatedly shown that the amount of receptive affix knowledge correlates with vocabulary size (Mochizuki & Aizawa, 2000; Noro, 2002; Schmitt & Meara, 1997).

Even though the idea of systematic knowledge of affixes seems rather appealing, there has been a debate as to how affixes are stored in mental lexicon. The issue regarding the affix organization is highly important, as it relates to a question of how affixes should be taught. Are they independent of root words and stand on their own, or are they dependent and stored as parts of the derivative word, in which case, the knowledge of affixes isn’t systematic after all? Surely, answers to such questions would affect how affixes should be dealt with in language teaching. Though there have been several studies examining these issues, the findings are inconclusive (see Morita (2010) for more details).

Further, most of the previous studies have dealt with receptive knowledge of affixes and have neglected an investigation into the productive aspect of it. We all know that knowing is one thing, and being able to use the knowledge is quite another. How capable are learners of English when it comes to using affix knowledge? Do learners construct derived words from affixes and a root each time they use them? Due to lack of empirical evidence, answers to such questions remain elusive. This study, therefore, focuses on productive affix knowledge and aims to investigate if larger vocabulary size relates to better command of productive affix knowledge. Further, this study also attempts to provide information on how affixes are stored in the mental lexicon from the viewpoint of production of affixed words.

2. Literature Review

When learners encounter an unknown word, teachers, who are keen on vocabulary strategies, instruct them to carefully look at the unknown word and try to find a familiar part. If the unknown word is an affixed word, and learners already know the root and the affixes used in the word, such a strategy might be quite useful. Learners only have to combine the meaning of each part and the seemingly unknown word magically becomes a known one. Though the reality may not always be this simple, it is understandable that affix knowledge seems quite appealing to both teachers and learners.

In fact, vocabulary learning strategy surveys show that learners find affix knowledge useful. Through extensive surveys conducted in junior high and high schools, as well as universities in Japan, Schmitt (1997) reveals that just short of 60% of participants consider knowledge of affixes useful when discovering the meaning of an unknown word. Saida (2006) also reports the results of a survey, maintaining the use of affix knowledge is part of Japanese high school learners' vocabulary learning strategies. She further maintains that such a strategy is often used by learners with a vocabulary size of more than 2000 words.
Affix knowledge also benefits reading comprehension. Although unknown words are one of the factors contributing to poor reading comprehension, it is intuitively plausible that affix knowledge facilitates inferencing of word meanings, which, in turn, facilitates reading comprehension to a certain degree. By conducting a reading comprehension test and morphological awareness tests to EFL learners, Zahn and Koda (2013) demonstrated morphological awareness made limited but unique contributions to reading comprehension. Noro (2002) also investigated how morphological knowledge, the knowledge of suffixes to be exact, interacted with reading comprehension. His results show a much higher correlation coefficient with reading comprehension ($r = .66$), compared to .24 in Zahn and Koda (2013). Since the reason for such difference is not the focus of the current study, this paper will refrain from such discussion. It should be noted, however, that the above mentioned studies do not include tests of prefixes. Therefore, how prefix knowledge might play a role in reading comprehension is not yet evident.

So far, knowledge of affixes has been shown to be helpful in a receptive manner. That is, knowing affixes can facilitate decoding of unknown affixed words. Such knowledge would facilitate better inferencing of word meanings. Then, how about the actual learning of words? Does knowing more affixes help learners learn new words? After all, knowledge of affixes is considered as a means to make vocabulary learning systematic. Words can be turned into related, yet separate words by adding allowable affixes. To put it differently, mastering affixes, which are limited in numbers, and applying the affix knowledge could turn one word into a number of different ones. Therefore, at least theoretically, knowing more affixes should have a strong relationship with vocabulary size.

Mochizuki and Aizawa (2000) investigated the acquisition order of affixes, where they administered a receptive affix knowledge test. In this test, the participants were asked to choose the correct meanings of 13 prefixes, given three pseudo words with a common prefix, as well as parts of speech of 16 pseudo words with suffixes. The participants’ test results moderately correlated with their vocabulary size at $r = .58, .54, .65$ for prefixes, suffixes, and affixes, respectively. Similar results have been reported in Noro (2002) with $r = .69$ for suffixes.

Schmitt and Meara’s (1997) study is, as far as the current authors know, the sole study that investigated such relationship by looking into not only receptive knowledge of suffixes, but also productive knowledge. The observed correlations in their study are weaker than those of the aforementioned studies with the coefficient values being .41 for receptive suffix knowledge. However, their study is valuable for, among other things, reporting correlations between productive affix knowledge and vocabulary size ($r = .37$).

Upon reviewing the studies that show the relationship between affix knowledge and vocabulary size, it seems reasonably safe to conclude that receptive affix knowledge and vocabulary size are moderately interconnected. What is not clear, however, is how having a large vocabulary affects the production of affixed words.
Another question that needs to be focused is the organization of affixes in the mental lexicon. Are affixes stored dependently on root words as if affixes and root words are single units? Or are affixes stored independently and called upon when needed? If an anecdotal assumption that teaching of affixes exponentially expands learners’ vocabulary size is to be true, it could also be true that learners are able to use the knowledge of affixes to recognize and produce morphologically complex unknown words. Even so, it is not clear if such words stay as they are or are decomposed into word parts and waiting to be called on in the mental lexicon.

In a study that uses a timed lexical decision task, Morita (2010) provides evidence Japanese learners seem to process words with suffixes in two ways. In his study, words with suffix such as -er, -ly, and -ment are shown to be processed as if they are stored in a decomposed manner by learners with larger vocabulary size (approximately 6000 words, in average), whereas suffixes like -ation, -ity, and -ive are processed as part of a given word. What his study shows is the state of affix organization in the mental lexicon is mixed.

However, Morita’s (2010) study deals with limited number of suffixes and does not provide evidentiary support for prefixes. Also, more studies that investigate from various angles, such as productive use of affix knowledge, or the organization of affixes in the mental lexicon are needed for us to have better insights.

This study, therefore, attempts to provide further empirical evidence towards a clearer picture of how affixes are stored as well as the interrelationship between vocabulary size and the knowledge of affixes.

3. The Study

3.1 Research Questions

Based on the literature review, the current study focused on the following two research questions.

RQ 1: Is the accuracy rate of affixed word production related to the size of English learners’ vocabulary?

RQ 2: How are the affixes and the root words organized in language learners’ mental lexicon?

3.2 Experiment 1

The first experiment focused on the first research question by analyzing the possible relationship between receptive vocabulary size and productive affix knowledge of English. It is important to note here that productive affix knowledge is defined as the knowledge that enables learners to actively recognize a correct combination of an affix and a root word when given an L1 counterpart. This process is similar to a situation where a learner is uncertain of the correct affix-root combination and ponders which affix should be used with a given word.
To gain broader insights into the relationship between the vocabulary size and the affix knowledge, it was decided to include both prefixes and suffixes in this experiment.

3.2.1 Participants

The participants in the first experiment were 270 college level English learners majoring in engineering. Most of them were receiving a 90-minute reading-focused lesson once a week when they participated in the experiment. Their estimated vocabulary size ranged from 2600 to 6533 words with average being 4856.30 words (S.D. = 888.19) based on our original vocabulary size test which will be shown in the materials section. The participants have never been systematically taught how affixes work in English, although they were aware that certain words consisted of affixes and a root word.

3.2.2 Materials

Two independent online tests were administered in the experiment. A productive affix knowledge test was developed for the purpose of this study. For each target that consists of three root words, the participants were asked to choose a common affix from a list of eight affixes (see Figure 1 for an example question).

A total of 30 affixes to be tested were selected from Bauer and Nation (1993) with frequency in high school and junior high school text books in mind. The 15 prefixes and as many suffixes were non-, un-, dis-, re-, ex-, in-, pre-, semi-, en-, mis-, anti-, sub-, fore-, inter-, and post- for prefixes, and -(e)n, -ize, -ism, -ish, -ous, -ation, -ity, -ness, -al, -ant, -ment, -ist, -y, -ly, and -ful for suffixes. Two questions were constructed for each affix, and a total of 60 questions were included in the test.
Another test administered in the experiment was an online vocabulary size test with 120 questions in a multiple-choice format. The target words were randomly chosen from *JACET 8000*, each of which was displayed with four Japanese word choices. The participants were asked to choose the correct Japanese counterpart for each target word within 10 seconds (see Figure 2). All the target words which appeared in the vocabulary size test are found in the Appendix.

Both of the tests were set up and administered on the Internet, and the data were collected and stored on a secure server for minimum contamination and complications.

### 3.2.3 Results

After confirming that the productive affix knowledge test was highly reliable (60 items; $\alpha = .90$), the data were analyzed in terms of correlations with vocabulary size. All of the 270 participants completed the two online tests.

Table 1 shows the results of the productive affix knowledge test and the correlation coefficients for prefix section, suffix section, and two sections combined. Overall, slightly above 50% of the test items were answered correctly. As expected, the mean score of suffix section was

![Figure 2. A sample question of the vocabulary size test.](image)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>$r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefix</td>
<td>270</td>
<td>11.77</td>
<td>5.00</td>
<td>.59</td>
</tr>
<tr>
<td>Suffix</td>
<td></td>
<td>20.07</td>
<td>5.99</td>
<td>.59</td>
</tr>
<tr>
<td>Combined</td>
<td></td>
<td>31.73</td>
<td>10.05</td>
<td>.64</td>
</tr>
</tbody>
</table>

*Table 1: Descriptive statistics of the affix knowledge test and correlation coefficients between affix knowledge scores and vocabulary size*
higher than that of prefixes, indicating that words with suffixes are more easily produced.

As can be seen in Table 1, medium-strength correlations were found between vocabulary size and prefix, suffix, and affix knowledge.

3.2.4 Discussion

The results of the first experiment showed a moderate correlation between affix knowledge and learners’ vocabulary size. That is, having larger vocabulary is an indication of having a better command of affixed words, and vice versa. On closer inspection of the target items used in the vocabulary size test showed that just under 6% of the words had prefixes and 18% had suffixes, both of which appeared in the affix knowledge test. Though this might have had an effect on the difference in mean scores between the prefix and suffix sections, it did not seem to affect the correlational analyses due to the fact that almost identical coefficient values were found.

The observed correlation coefficient values in this experiment were very similar to those of previous studies, even though the affix knowledge focused in this experiment was of a productive nature. Taken together, the evidence seems to suggest that being able to recognize and produce affixed words relates moderately to knowing more words.

3.3 Experiment 2

In the first experiment, it was found that the knowledge of prefixes and suffixes both correlated with vocabulary size in an identical manner. In the second experiment, it was decided to shift our foci to prefixes and how they are stored in learners’ mental lexicon, as the shift would allow us to gain clearer picture of the affix organization due to the fact that prefixes are often used to change a given word’s meaning more drastically than suffixes, which could cause learners to store two closely-related words as separate entries. If that is the case, the knowledge of affixes can be viewed as being stored dependently, or as part of a root word.

3.3.1 Participants

The participants in the second experiment were 253 Japanese learners of English majoring in engineering. They were quite similar to those in the first experiment in terms of English learning history and the range of proficiency; however, none of them participated in the first experiment. The same vocabulary size test described in the first experiment was administered, and the range of vocabulary size was from 1666 to 6666 words with average being 4891.44 (S.D. = 864.95). The participants were deemed to have limited prefix knowledge, judged from the similar test results of vocabulary size observed in the first experiments.
3.3.2 Material

To gain further insight into the relationship between vocabulary size and prefixes as well as the organization of prefixes, a new test of productive prefix knowledge was developed. In this test, the participants were shown a root word and its Japanese meaning followed by a Japanese translation of a target prefixed word. Then, the participants were instructed to choose a correctly prefixed English word from a list of four choices, as shown in Figure 3.

The definition of “productive” was being able to choose the correct English word based on a Japanese translation, as it mimics the process of uncertain, if not unknown, prefixed word production.

There were 23 prefixes tested, which were found in levels three to six of Bauer and Nation’s (1993) list of affixes: non-, un-, in-, ante-, anti-, arch-, bi-, circum-, counter-, en-, ex-, fore-, hyper-, inter-, mid-, mis-, neo-, post-, pro-, semi-, sub-, pre-, and re-.

For each prefix, two higher frequency words and two lower ones were chosen from Corpus of Contemporary American English. This was a necessary procedure, as making a frequency-based comparison would shed light on how prefixes are stored. To be more precise, it was important to be able to determine whether correct answers were due to the familiarity to the prefixed words themselves or having both semantic and morphological knowledge of a given prefix. If higher frequency words and lower ones are answered with similar success rates, there is a strong indication that prefixes are stored independent of root words, as it would mean that learners are able to put a prefix and a root word together as needed. For this purpose, each prefix was tested on four occasions, making the number of the target items 92.

3.3.3 Results

Table 2 shows the mean scores and standard deviations as well as the correlation coefficient values for total and word frequency groups. The result of the productive prefix test was found to be
reliable enough (92 items; \( \alpha = .83 \)). The test results show that the mean score for higher frequency words were slightly higher than that of lower frequency words, and as it turned out, statistically so as well: \( t(496.48) = 9.94, p < .001, r = .41 \).

Through the correlational analysis, it was found that the result of the productive prefix test correlated with vocabulary size with medium strength \( (r = .61) \), with the higher frequency words yielding a marginally better result than the lower frequency counterparts.

### 3.3.4 Discussion

In the second experiment, which focused on prefixes, the results of the correlational analysis supported those of the first experiment and previous studies: Having larger vocabulary would suggest being able to determine correct combinations of prefixes and root words more successfully. Although a significant difference was observed in the mean scores by frequency groups, the difference in correlation coefficient values remained marginal, which would suggest that the effect of knowing more words is not very strong, even though there is an interrelationship between vocabulary size and the productive prefix knowledge.

In terms of the second research question, which deals with how prefixes are stored in the mental lexicon, the observed difference in mean scores based on frequency is meaningful. As mentioned above, if prefixes are stored separately from root words, learners should be able to produce prefixed words for as long as they know the meanings of both components. In the case of the second experiment, the participants were given the meaning of each root word. Therefore, if the participants had enough knowledge of each prefix, they were supposed to be able to choose the correct answers irrespective of the frequency. The results of the second experiment showed otherwise. What is indicated by the results are two possibilities. One such possibility, and probably a simpler one, is that prefixes are stored with root words and such combinations are differentiated from the root words in mental lexicon. This would easily explain the significantly higher mean scores of higher frequency words. As they have better chances to be already learned or seen in various media by learners, they could have already been remembered as single units. Unfortunately, this does not explain how participants in the experiment correctly answered about 30% of the lower frequency words in average.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>( r )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Freq.</td>
<td>253</td>
<td>31.23</td>
<td>4.84</td>
<td>.59</td>
</tr>
<tr>
<td>Lower Freq.</td>
<td>26.66</td>
<td>5.48</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>57.88</td>
<td>9.69</td>
<td>.61</td>
<td></td>
</tr>
</tbody>
</table>
Another possibility is that frequent prefixed words are remembered as a whole, and yet learners recognize and analyze common constituents used in those words so that they are able to build hypotheses to be tested on unknown words. This way, depending on how successful the hypothesis building is, learners are able to produce unknown combinations of prefixes and root words, which could be the case in the second experiment. This possibility also seems to be more reasonable in light of cognitive resources that are limited. That is, not having to construct an already known prefixed word each time and being able to do so when an unknown word is called for seems to be more economical as well as intuitively plausible. Although the current data is not indicative enough to make such a claim, this possibility is worth investigating in future research.

4. General Discussion

The two experiments in this study both showed that productive affix knowledge and vocabulary size correlated with medium strength. Although similar tendencies were reported in previous studies, most of them were concerned with receptive knowledge of affixes. Taken together, the evidence seems to show that the command of affixes, irrespective of productive or receptive, has a connection to learners’ vocabulary size. What was unique in this study was the cross-modal nature of the vocabulary knowledge. That is, the vocabulary size estimated in this study was receptive and the observed affix knowledge was productive. What this means is that the current study presented evidence that being able to recognize more words could mean being able to produce affixed words, albeit with a condition of passive production, or producing by choosing.

Further, the similar correlations between both receptive and productive affix knowledge and vocabulary size suggest that being able to recognize the meaning of affixed words enables learners to use such knowledge productively as well. Since there were no direct comparisons between receptive and productive affix knowledge made in the current studies, it remains as a mere speculation. Moreover, as the current study measured the productive affix knowledge in a passive manner, results could prove dissimilar in studies with active production of affixes, where participants are asked to write or say affixed words when cued with L1 words.

Another issue to consider is the items in the vocabulary size test. As briefly mentioned in the discussion section of the first experiment, there were words with affixes in the test. Although the number of such words was rather limited and thus, so would the effect to the dataset, even the slightest possibility should be eliminated in future studies, where learners’ vocabulary size is measured by a test that incorporates a word list closely based on the notion of word families.

As for the organization of affixes in the mental lexicon, the evidence found in the current study seems to show support for the mixed state of dependent and independent organization of affixes. It is interesting to point out again that the participants in the current study have not undergone any systematic teaching of affixes prior, though the teaching of their meanings and the possibilities of applications to other words could have been taught sporadically. If this is the case,
how should affixes be taught in language classes? Is the mixed state of affix organization due to the lack of systematic instruction? How would the explicit teaching of affixes affect the organization of affixes in the mental lexicon? Unfortunately, the current study alone does not provide strong enough evidence to answer such questions. Future studies, therefore, should be encouraged to draw on the findings of the current study and incorporate factors such as word frequencies as well as the effect of explicit teaching to yield more fruitful findings.

References


Appendix

The list of words in the vocabulary size test

<table>
<thead>
<tr>
<th>goal</th>
<th>west</th>
<th>seem</th>
<th>perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>progress</td>
<td>stone</td>
<td>get</td>
<td>secretary</td>
</tr>
<tr>
<td>plan</td>
<td>interest</td>
<td>present</td>
<td>exhibition</td>
</tr>
<tr>
<td>left</td>
<td>kitchen</td>
<td>personal</td>
<td>border</td>
</tr>
<tr>
<td>act</td>
<td>waste</td>
<td>last</td>
<td>taste</td>
</tr>
</tbody>
</table>
The Effectiveness of Variation Theory in Learning Combinatorics

Secondary Education

Paper Session

This study investigated the learning of students in combinatorics through the use of teaching materials designed with the consideration of variation theory. A pretest-training-posttest design was used to compare the transfer performance of the experimental group with control groups who underwent traditional teaching approach. Participates in either the experimental or the two control groups significantly improved their transfer performances; yet, the experimental group made the greatest overall improvement.

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Email Address: yickdorothy@ymail.com
The Effectiveness of Variation Theory in Learning Combinatorics

Yick Doi Pei

Abstract

Combinatorics is viewed as the pillar of elementary probability (English, 2005); however, combinatorics is one of the mathematics topics that students find it difficult (Tarlow-Hellman, 2007). Theoretical reasons support the use of concrete materials which may improve student learning in basic combinatorial notations (Abramovich & Pieper, 1996). An experiment in this study tested the effectiveness of the use of course materials designed according to the variation theory to promote students’ combinatorics reasoning. This study involved a pretest-training-posttest design, comparing participates’ transfer performance, which was the improvement between pretest and posttest. The transfer performance of the experimental group was compared with two control groups (one with similar ability and the other with higher ability) who underwent the traditional teaching approach. Participates in either the experimental or the two control groups significantly improved their transfer performances. The experimental group made the greatest improvement. Significant surges in transfer performance by the experimental group, as contrasted to the control group with similar ability, in the areas combination operation, arrangement operation, and distribution model were also found. Results suggest that teaching combinatorics with the inclusion of the variation theory help students learn more effectively.

Keyword: combinatorics, variation theory, mathematics instruction, transfer performance
Abstract

The purpose of this classroom inquiry was to implement a daily routine of physical activity for high school students with Autism Spectrum Disorder (ASD) as a pedagogical strategy for the management and regulation of anxiety in high-functioning autistic youth (HFA). It was of interest to observe if increased movement could positively affect anxiety and enhance both behaviors and learning outcomes for these students. The classroom teacher within this inquiry implemented formal strategies to learn of HFA students’ experiences within this regulation program. Regulation with these students was primarily concerned with behavior and the ability to self-control impulses, cease unwelcomed behaviors, and move towards more acceptable behaviors (autism.net, 2015).

Most of this teacher’s students with High Functioning Autism (HFA) struggle to fit in or to know the appropriate thing to say (or not say) at the appropriate time. They describe feeling out being of control, disorganized, feeling weird or not quite right. Reciprocal socialization is difficult. These students have grown used to sitting out on the periphery of most social and organizational activities because of their exceptionalities. They struggle daily with anxiety that manifests itself through a host of problems that they encounter during the day.

As a result of unmanaged anxiety, students with ASD may exhibit increased agitation, display lack of communication, or engage in refusal behaviors. Non-compliance with activities such as attending class, completing class work, or adhering to class routines with peers are apparent when youth with ASD are in an unregulated state or, more specifically, lack the ability to control their own behavior and behave properly even when they do not feel like it. Self-regulation is described as “…the ability to monitor and control our own behavior, emotions, or thoughts, altering them in accordance with the demands of the situation.” www.education.com/reference/article/self-regulation-development-skill/

Experts in the field of autism noted that one of the hallmark features of autism is anxiety and three common behaviors include impaired social interaction, repetitive behaviors, and difficulties with
communication (Bilimoria (2014); Temple Grandin (2006). The literature reflects the positive affects between exercise and behavior and there have been several studies to support the initiative of combining academics and movement opportunities (Cameron (2011); Hilton, Cumpata, Klohr, Gaetke, Artner, Johnson, and Dobbs (2014); Kalyn, Paslawski, Wilson, Kikcio, & MacPhedran (2007).

The process and findings of this inquiry were reported as part of this teacher’s Graduate Studies course work class surrounding innovations in practice and pedagogical strategies within classrooms.
Title: Bridging the Transfer Gap in Higher Education Through a Degree Pathway Program

Topics: Academic Advising and Higher Education

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Presentation Format: Poster Session

Description:
Transfer students are a population of students with unique challenges that has historically been overlooked. However, with recent mandates to improve graduation rates schools across the nation are implementing initiatives to improve the transfer process and to promote transfer student success. Of great importance
to this effort is implementing programs and policies that encourage community colleges and four-year institutions to partner together to improve transfer outcomes. As such, the Kaʻieʻie Pathway Program was developed as a partnership between the University of Hawaiʻi at Manoa and five UH community college campuses within the system. This poster session will provide an overview of some of the unique challenges (i.e. psychological stress) that transfer students experience as well as highlight the Kaʻieʻie Program.
Title: Experiential learning during counsellor education: The primacy of practica

Topic: Counsellor Education

Format: Paper

Description: Counsellor education programs contain course work in several foundational knowledge areas, often with an emphasis of the practice of professional skills. This paper will elucidate these areas with a focus on the critical learning that arises during the practicum interval for counsellor education trainees.

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Abstract: Counsellor education programs contain course work in several foundational knowledge areas, often with an emphasis of the practice of professional skills within each domain. Completing a practicum in school, health, or community based organizations is also a critical component of counsellor education, but the goals and experience of this training interval are not well understood by those in positions peripheral to this student experience. This presentation will 1) elucidate how foundational the graduate practicum is to counsellor education; 2) describe how graduate practica facilitates the professional identity development of new career counsellors; and 3) suggest ways others more peripheral to this learning interval (i.e., administrators, managers, colleagues from other professional disciplines) can offer support and encouragement to those learning to become counsellors.
Title: Digital storytelling: An effective anti-violence education-as-intervention method?

Abstract: Research in the anti-violence area suggests the primacy of early intervention, particularly education, to interrupt patterns of intimate partner violence in early dating relationships, yet there is a paucity of information on how this is best accomplished. Young women who have experienced dating violence often hesitate to reach out for support for fear that their experiences will not be heard, respected, or appropriately responded to by friends, family and the organizations tasked with helping them and holding perpetrators accountable. Hence, being abused in an intimate relationship is often a private, isolating experience, with grave consequences for personal (i.e., mental health, educational attainment) and relational well-being and quality of life. Even more concerning is that exposure to one incident of abuse often leads to a cycle where young women repeatedly seek out relationships that include abuse. This paper highlights the application of digital storytelling as education-as-intervention for young women exposed to dating violence. Digital storytelling emerged as an aspect of human rights-based education, serving as a way of raising awareness and critical consciousness towards social justice (Lambert, 2013). Digital storytelling uses multimedia to tell stories (Marshall & Rossman, 2016) and has potential to connect those who are isolated and educate broadly about the importance of healthy relationships.
The paper is about reasons why we need to change dramatically our traditional approach of teaching Introductory Economics. Numerous evidences suggest that the current method of teaching with emphasis on technique has failed in two very important aspects. First of all, students at all levels show the lack of understanding of Economics. Secondly, Economics profession seems to have very little influence on the social media, parliament, courts. In general, we have failed in disseminating the essential, powerful truths of our discipline. If students do not learn the fundamental concepts of Economics and have no idea how to apply these concepts to the real world problems it is time to change our current approach to teaching Introductory Economics.

The traditional method that still dominates the field of Economics does the emphasis on technique. As you flip through the pages of the classic textbooks written by G.Mankiv, P.Krugman, R.Lipsey, M.Parkin you will see graphs or mathematical formulas practically on every page. At the end of such a course the students learn how to calculate equilibrium prices and quantities, different types of elasticities and multipliers, how to draw indifference curves. But they have no idea how to apply any of the concepts to real world problems.

The Economic Way of Thinking as an alternative to the traditional method of teaching Introductory Economics concentrates on a few elementary concepts that students could usually figure out for themselves. These concepts will help them think
more coherently about the wide range of social and economic problems they face in the real world. The teaching of a concept must take place in the context of a problem. We emphasize the two-steps approach. In step one we identify a problem. In step two we say: “Here is how economists think about the problem. We need to employ such and such concepts”.

One of the most fundamental concepts that many of us want our beginning students to master is the cost-benefit principle. Perhaps, only few who teach Introductory Economics would disagree that the cost-benefit principle is the pillar of Microeconomics. But, surprisingly, the classic textbooks do not discuss this fundamental concept at all. As far as my teaching experience goes, the only textbook that dedicates the whole chapter to the cost-benefit principle is Frank/ Bernanke’s “Principle of Microeconomics”. I have been using this textbook for many years and I really appreciated the way how this concept was presented to the students.

Due to my personal persuasion about the value of the cost-benefit principle to the beginning economics students I have made a genuine contribution to the methodology of teaching it. I was able to design a general algorithm of how to apply the cost-benefit principle to the problem of optimal allocation of resources. Typically, I use this algorithm in two chapters of my Introductory Economics course – “Basics of the Cost – Benefit principle” and “Demand : The Benefit Side of the Market”. Let me invite you to my Introductory Economics class and share with you that stuff.

First of all, students are introduced to the general idea behind the algorithm. It consists of the following steps:

**Step 1.** Pick up RANDOMLY any allocation A.

**Step 2.** Look forward to another allocation B reallocating your resources just a little bit.

**Step 3.** Standing on allocation A ask yourself a question: ”Should I move from A to B? “

To answer the question you have to compare two things: Additional Benefits from “Moving from A to B” with Additional Costs of “Moving from A to B”.

**Step 4.** Let us assume that the Additional Benefits from “Moving from A to B” is bigger than Additional Costs of “Moving from A to B”. In this case the cost – benefit principle advises you to move from A to B.

Now you are standing on allocation B and you look forward to another allocation C reallocating your resources in the same direction as you did in step 2.
Step 5. Standing on allocation B ask yourself a question:

"Should I move from B to C?"

To answer the question you have to compare two things: Additional Benefits from "Moving from B to C" with Additional Costs of "Moving from B to C".

Step 6. Let us assume that the Additional Benefits from "Moving from B to C" is bigger than Additional Costs of "Moving from B to C". In this case the cost–benefit principle advises you to move from B to C.

And so on..... If moving from allocation X to allocation Y you find out that Additional Benefits from "Moving from X to Y" is less than Additional Costs of "Moving from A to B". Then you have arrived at the optimal allocation which is X.

Let us demonstrate how this algorithm works solving the following two problems:

Problem 1

Assume you can either work as an Economics tutor on campus for $16 per hour or work in your own business making university t-shirts. Your working day is 8 hours. You must decide how much time each day to spend on each activity. Use the information in the table below to determine how you will allocate your time between two activities if you earn $5 for each t-shirt.

Table 1: Productivity in making t-shirts

<table>
<thead>
<tr>
<th>Hours per day</th>
<th>Quantity of t-shirts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
</tr>
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<td>4</td>
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<td>6</td>
<td>23</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>8</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: own data

Table 1 above presents information about number of t-shirts your business make in different time. For example, if you work 4 hours doing your business you will make 18 t-shirts.

Now we are going to apply the general algorithm specified above to this specific problem:
Step 1. Pick up RANDOMLY any allocation A:

Assume that initially you are thinking to work \textbf{1 hour} making t-shirts and the rest of your time – \textbf{7 hours} dedicate to tutoring.

Thus, \textbf{allocation A : [1 hour making t-shirts, 7 hours tutoring]}

Step 2. Look forward to another allocation B reallocating your resources just a little bit:

Now, you want to reallocate 1 hour from “tutoring” to “making t-shirts”

Thus, \textbf{allocation B : [2 hours making t-shirts, 6 hours tutoring]}

Step 3. Standing on allocation A you ask yourself a question:

"Should I move from A to B?" To answer the question you have to compare two things: Additional Benefits from “Moving from A to B” with Additional Costs of “Moving from A to B”. Additional Benefits from “Moving from A to B” are associated with extra (additional) hour you spend at your business which will bring you an Additional Revenue. Therefore, Additional Benefits from “Moving from A to B” = Total Revenue you generate from making t-shirts for 2 hours – Total Revenue you generate from making t-shirts for 1 hour = $11 \times 5 – 6 \times 5 = 55 – 30 = 25. That extra (additional) hour spent on making t-shirts will bring you extra $25 in total revenue. But when you reallocate one hour from “tutoring” to “making t-shirts” you lose also your revenue associated with that move. Therefore, Additional Costs of “Moving from A to B” are associated with the Loss of your Revenue as a tutor - $16.

Step 4. As we see, Additional Benefits from “Moving from A to B” = $25 are bigger than Additional Costs of “Moving from A to B” = $16. Thus, the cost – benefit principle advises you to move from A to B.

Now you are standing on allocation B [2 hours making t-shirts, 6 hours tutoring] and you are looking at allocation C [3 hours making t-shirts, 5 hours tutoring]

Step 5. You are asking yourself a question: "Should I move from B to C?"

To answer the question you have to compare two things:

Additional Benefits from “Moving from B to C” with Additional Costs of “Moving from B to C”. Additional Benefits from “Moving from B to C” are associated extra (additional) hour you spend at your business which will bring you an Additional Revenue. Therefore, Additional Benefits from “Moving from B to C” = Total Revenue you generate from making t-shirts for 3 hours – Total Revenue you
generate from making t-shirts for 2 hours = 15*$5 – 11*$5 = $75 - $55 = $20. That extra (additional) hour spent on making t-shirts will bring you extra $20 in total revenue. But when you reallocate one hour from “tutoring” to “making t-shirts” you lose also your revenue associated with that move. Therefore, Additional Costs of “Moving from A to B” are associated with the Loss of your Revenue as a tutor - $16.

**Step 6.** As we see, Additional Benefits from “Moving from B to C” = $20 are bigger than Additional Costs of “Moving from B to C” = $16. Thus, the cost – benefit principle advises you to move from B to C.

Now you are standing on allocation C [3 hours making t-shirts, 5 hours tutoring] and you are looking at allocation D [4 hours making t-shirts, 4 hours tutoring]

**Step 7.** You are asking yourself a question: “Should I move from C to D?”

To answer the question you have to compare two things:

Additional Benefits from “Moving from C to D” with Additional Costs of “Moving from C to D”. Additional Benefits from “Moving from C to D” are associated extra (additional) hour you spend at your business which will bring you an Additional Revenue. Therefore, Additional Benefits from “Moving from C to D” = Total Revenue you generate from making t-shirts for 4 hours – Total Revenue you generate from making t-shirts for 3 hours = 18*$5 – 15*$5 = $90 - $75 = $15. That extra (additional) hour spent on making t-shirts will bring you extra $15 in total revenue. But when you reallocate one hour from “tutoring” to “making t-shirts” you lose also your revenue associated with that move. Therefore, Additional Costs of “Moving from A to B” are associated with the Loss of your Revenue as a tutor - $16.

**Step 8.** As we see, Additional Benefits from “Moving from C to D” = $15 are less than Additional Costs of “Moving from C to D” = $16. Thus, the cost – benefit principle does not advise you to move from C to D.

Therefore, the optimal allocation is C [3 hours making t-shirts, 5 hours tutoring]. If you spend 3 hours making t-shirts and 5 hours helping students to grasp the essence of the cost – benefit principle you will maximize your total revenue.

**Problem 2**

To earn extra money in the summer, you grow tomatoes and sell them at the farmers’ market for 30 cents per kilogram. By adding compost to your garden, you can increase your yield. If compost costs $1 per kilogram and your goal is to make as much money as possible, how many kilograms of compost will you add?
Table 2: Tomatoes yield with respect to compost

<table>
<thead>
<tr>
<th>Kilograms of compost</th>
<th>Kilograms of tomatoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100.0</td>
</tr>
<tr>
<td>1</td>
<td>120.0</td>
</tr>
<tr>
<td>2</td>
<td>125.0</td>
</tr>
<tr>
<td>3</td>
<td>128.0</td>
</tr>
<tr>
<td>4</td>
<td>130.0</td>
</tr>
<tr>
<td>5</td>
<td>131.0</td>
</tr>
<tr>
<td>6</td>
<td>131.5</td>
</tr>
</tbody>
</table>


The table above presents information about the relationship between the amount of compost added to tomatoes’ field and the corresponding yield.

Let us apply the general algorithm to this specific problem:

Step 1. Pick up RANDOMLY any allocation A:

Assume that typically you do not add any compost and now you are thinking to add the 1st kilogram.

Thus, allocation A: [1 kg of compost]

Step 2. Look forward to another allocation B reallocating your resources just a little bit- you want to add one more kg of compost.

Thus, allocation B: [2 kg of compost]

Step 3. Standing on allocation A you ask yourself a question:

"Should I move from A to B?" To answer the question you have to compare two things: Additional Benefits from "Moving from A to B" with Additional Costs of "Moving from A to B". Additional Benefits from "Moving from A to B" are associated with extra (additional) yield of tomatoes due to extra kg of compost. Selling that extra yield of tomatoes on the market will bring you an Additional Revenue. Therefore, Additional Benefits from "Moving from A to B" = Total Revenue you generate from adding 2 kg of compost – Total Revenue you generate from adding 1 kg of compost:

$$120 \times 0.30 – 100 \times 0.30 = 6.00.$$  

The 2nd additional kg of compost will bring you extra $6 in total revenue. But the extra kg of compost will cost you $1.00.

Step 4. As we see, Additional Benefits from "Moving from A to B" = $6 are bigger than Additional Costs of "Moving from A to B" = $1.00. Thus, the cost – benefit principle advises you to move from A to B.
Now you are standing on allocation B [2 kg of compost] and you are looking at allocation C [3 kg of compost]

**Step 5.** You are asking yourself a question: "Should I move from B to C?"

To answer the question you have to compare two things:

Additional Benefits from "Moving from B to C" with Additional Costs of "Moving from B to C". Additional Benefits from "Moving from B to C" are associated with extra yield of tomatoes due to extra kg of compost. Selling that extra yield of tomatoes on the market will bring you an Additional Revenue. Therefore, Additional Benefits from "Moving from B to C" = Total Revenue you generate from adding 3 kg of compost – Total Revenue you generate from adding 2 kg of compost:

\[
125\times0.30 - 120\times0.30 = 1.50
\]

The 3nd additional kg of compost will bring you extra $1.50 in total revenue. But the extra kg of compost will cost you $1.00.

**Step 6.** As we see, Additional Benefits from "Moving from B to C" = $1.50 are bigger than Additional Costs of "Moving from B to C" = $1.00. Thus, the cost – benefit principle advises you to move from B to C.

Now you are standing on allocation C [3 kg of compost] and you are looking at allocation D [4 kg of compost]

**Step 7.** You are asking yourself a question: "Should I move from C to D?"

To answer the question you have to compare two things:

Additional Benefits from "Moving from C to D" with Additional Costs of "Moving from C to D". Additional Benefits from "Moving from C to D" are associated with extra yield of tomatoes due to extra kg of compost. Selling that extra yield of tomatoes on the market will bring you an Additional Revenue. Therefore, Additional Benefits from "Moving from C to D" = Total Revenue you generate from adding 4 kg of compost – Total Revenue you generate from adding 3 kg of compost:

\[
128\times0.30 - 125\times0.30 = 0.90
\]

**Step 8.** As we see, Additional Benefits from "Moving from C to D" = $0.90 are less than Additional Costs of "Moving from C to D" = $1.00. Thus, the cost – benefit principle does not advise you to move from C to D.

Therefore, the optimal allocation is C [3 kg of compost]. If you add 3 kilograms of compost you will maximize your total revenue.
Although two problems above are artificially created and the algorithm to solve them can’t be applied directly to real – life issues of optimal allocation of resources but students, nevertheless, will greatly benefit from solving them. They will get used to look at the real world problems through the glasses of "opportunity costs and the cost-benefit principle". This is the major benefit they should expect from studying and learning the principles of Introductory Economics. It is my deep persuasion that our role as economic educators is to help beginning students to form their economic way of thinking. As John Maynard Keynes said in his famous General Theory of Employment, Interest and Money: “The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method, rather than a doctrine. An apparatus of the mind, a technique of thinking, which helps its possessors to draw correct conclusions."
Title: A Participant Oriented Process for Developing National Educational Materials in the 21st Century

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Topic Area of Submission: Health Education

Presentation Format: Paper Presentation

Abstract:
Background: The educational materials for specialized training courses offered by a national health professional association required revising and updating to become current, evidence informed, and user friendly.

Methods: This project was laid out in 3 main Stages. The first Stage had two components - a Stakeholders’ Survey of instructors and learners across the country to seek guidance for the redevelopment of the educational materials, as well as a review and update of the curriculum. Stage two of the project also had two components - coordinating small Focus Groups with instructors and learners to discuss the revised education materials using the feedback from the Stakeholders’ Survey as a jumping off point for the discussions, and a comprehensive literature review that gathered current research. The final Stage of the project was the development of the overall conceptualization of the revised educational materials including the delivery formats, contents, and supplemental educational materials. This conceptualization evolved from the input received from the Survey and the Focus Groups, underpinned by the updated curriculum and the literature review.

Results: Creation of national educational materials that are standardized, current, and evidence-informed, and were developed based on the needs and desires of the instructors and learners. In essence, the instructors and learners from across the country have influenced the future of this specialized professional training in Canada.

Conclusion: This project is a real-life example of best practices for developing a national, evidence-informed, educational program that is meaningful to instructors and learners because they participated in its development.
Title: Cultural Competence in Healthcare, Are We There Yet?

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Topic Area of Submission: Health Education

Presentation Format: Poster Session

Abstract:
In recent years, the medical community has proclaimed that cultural competence is the key to equitable, effective healthcare that ensures positive health outcomes for all individuals. However, research evidence that cultural competence education for healthcare professionals results in culturally competent care, and improved equity in healthcare delivery and health, is lacking. This poster reviews the influence of culture on health and healthcare, and displays what culturally competent healthcare entails. Inequalities in healthcare delivery and health outcomes are revealed, with evidence that this disparity is caused by the culture of the healthcare system as well as the culture of healthcare providers. A series of steps that could become the path to truly culturally competent healthcare are described. These steps include: developing self-awareness through self-reflection; building interpersonal relationships and community through effective communication, storytelling, and collaboration. Finally the poster shows how these concepts could underpin the development of a cultural competence curriculum for healthcare providers. For instance, how this learning could be conveyed in experiential contexts involving culturally diverse patients, patient communities and interdisciplinary care providers as collaborators, advisers and assessors. This type of interactive collaborative education must be ongoing throughout a healthcare professional’s educational career so that these experiences become incorporated into their worldview and transform them into truly culturally competent individuals. This will eliminate inequities in care delivery that result from cultural bias, and in turn improve patient access, satisfaction, participation, and ultimately health outcomes.
Teaching an Online Graduate Course in Public Safety and Security Studies for Adult Learners: A Case Study

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Abstract
This paper discusses self-directed and context-based learning design for adult learners in online classroom settings. The paper focuses on student and instructor perspectives concerning teaching public safety and security studies graduate curriculum to adult learners who are in the midst of their career. Specific examples of assignment formats are discussed based on adult learning theories and students’ reflections. The paper will conclude with suggestions on how to improve context-based learning based on feedback from students and faculty.

Key Words
Skills-based learning, competency-based education, context-based learning, adult learning

Introduction
Adult learning is moving towards more skills-based or competency-based model where institutions are providing career-relevant educational program choices to the potential applicants and their current students. The trend as much as being self directive, is also based on the competition among the institutions to maintain or increase their market share in the adult education market. Many of these institutions offer hybrid (face-to-face and online) and/or fully online programs.

As part of this trend, University of Maryland University College¹, a premier public university that is one of the 13 degree awarding institutions in the University System of Maryland, decided to ramp up its current curriculum structure by incorporating state-of-the-art and workplace-relevant set of activities that students can engage in, in order to be more desirable in today’s job market. This decision is one of the many strategic decisions that involve not only the university itself but also (relatedly) is a step forward to enhance the quality of the workforce that caters to the Maryland and the Washington DC Metropolitan Area.

¹ UMUC - University of Maryland University College (2016). Main website http://www.umuc.edu
A recent survey assessing the most needed academic skills for the workforce of the Department of Homeland Security and its sponsored organizations and agencies, indicate that the top sought-after skills include understanding of HS operations and procedures, laws and law enforcement practices, responding to and mitigation of disasters, and critical thinking2.

The existing curriculum on Homeland Security and Emergency Management3 employs contextualized material that enhances student understanding of dealing with threats from naturally induced phenomena and/or from intentional or unintentional acts that threaten the physical and/or virtual systems that provide the well-being of societies. In the curriculum the theoretical underpinnings explaining how the National Emergency Management system and the institutions and systems that deal with Homeland Security evolved over years, but the bulk of the curriculum is based on studying actual events as well as plausible future events that carry the risk of disrupting a major bulk of infrastructure systems and/or causing mass casualties4. Hence, competency-based adult learning models fit well with the Homeland Security and Emergency Management academic programs.

UMUC’s Homeland Security and Emergency Management graduate courses, like many other programs in its Graduate School, are offered solely online using a teaching platform that allows discussion postings in an asynchronous format, downloadable lecture notes and readings in .docx, .pdf, or .pptx formats. Students can download materials to their computers at their spare time without having to log on in each time and without having to

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be present online at the same time with other students or faculty present in the classroom. A typical online classroom mimics a real classroom and in many ways in a more organized and featured way without the face-to-face interaction. Once the student logs in to the classroom, they see the daily/weekly announcement(s) indicating the topics to be covered or the exams due. With the help of the navigational tabs, the student can navigate through the virtual classroom from discussion threads pertaining to weekly topics to the lecture notes to the learning material such as case studies, research articles, actual reports from the government, private or non-profit organizations, to the assignment folders where the student has to upload finished work for instructor’s grading or the gradebook area to view grades and feedback.

Sample group exercises used in Context-Based Model

With the new spin towards making the academic programs more context-based and employment-related, academic chairs/directors at UMUC began to enhance the teaching material by introducing more real life like scenarios and added role playing for students to participate in. The course that particularly deals with large scale emergency response preparedness scenarios requires students to work in groups. The groups either pick or are assigned one of the three crisis scenarios by the instructor. This paper will present the three crisis scenario case studies used in the online classroom that was taught in fall of 2015 and had twenty-six students in total.

Scenario 1 – Adult Residential Care Facility

In scenario 1, students are “confronted” with a real life-like situation where they all work as senior managers for an adult care residential facility that serves persons who suffer from a range of physical or mental illnesses or disabilities, but who are pretty functional and independent. The facility’s address and location is provided on a real map where students can check out on MapQuest and determine its proximity to major population and activity centers including businesses, and public facilities. The facility’s capacity in terms of number of residents, facility features including the layout of the common and private areas and operating hours and schedule are also provided. Then a superstorm scenario is presented including its projected path, intensity, and potential destruction patterns including the area where the adult care facility is located.

In a series of coreographed activities students individually will first take 3 short courses provided by the Federal Emergency Management Agency (FEMA)’s Independent Study Courses that are self paced and can be completed in a few hour periods. They consist of hurricane mitigation basics for mitigation staff, community hurricane preparedness course and a course that is about including people with disabilities and others with access and functional needs in disaster operations.

Next, students locate the residential facility via GoogleEarth and GoogleMaps, and then identify the major terrain features including flood plains, waterways, lakes, as well as

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5 HSMN 630, Resilience Planning and Preparedness for Disaster Response and Recovery (3)
major transportation networks including roadways and railways. Students are also asked to identify local assets for available healthcare and other assets that have any significance within the context. The next step is to contact the actual facility and determine the answers to some initial questions such as the assets and training provided to staff for evacuation of the facility, auxiliary power capacity and capabilities. Students also ask for permissions to review and critique the facility’s extant Emergency Operations Plan.

After that, students are asked to locate the residential care facility on a Storm Surge Mapping Tool; locate county emergency shelters over extant facilities sheltering populations in place during a major storm; and identify whether the facility has a Memorandum of Understanding or a Mutual Aid Agreement with other county agencies or adult care facilities in severe events.

Students are then asked to review several documents and reports that pertain to historic storm events that affected the greater geographic area that the facility is located on.

Next, students are presented with more details of the fictitious but plausible superstorm scenario that is predicted to affect the area. While the scenario focuses on the response and recovery phases of the Disaster Management Cycle for a single entity, there are numerous such facilities located within the given county and region. Given the vulnerability of the given extreme weather, students are asked to review mitigation and preparedness issues prior to working collaboratively with fellow classmates.

Students are then placed in groups, and asked to pick and assume one of each of the suggested roles of Director of Residential Services, Director of Facilities, and Director of Administrative Services of the adult care facility.

Using several templates, groups are asked to address the following questions at each phase of the disaster: Initial Response, Short-Term Response, and Early Recovery and Restoration. For each area of responsibility, groups are asked to state which activities are critical to perform as part of the responses as it progresses, i.e. create Status Reports. The status reports should also indicate what resources will be needed by organizations and people including equipment, materials, and supplies. They should indicate whether there are any recommendations or decisions that need to be made by the Board of Directors. A final report which is to be based on a provided template is to be written to the Executive Director this has to be direct, specific, and very clear. Students are asked work collaboratively and present one report to the Board of Directors at the end of the exercise. Students are asked to prepare an additional report, After-Action Report, that will summarize the things that went well and those that need improvement based on their work.

Scenario 2 – Terrorism preparedness in Johnson City, Tennessee

In scenario 2, students are “confronted” with a real life-like situation where they all work as members of the Incident Command System that is setup to respond to a series of fictitious terror attacks involving 8-15 members of an armed terrorist organization utilizing advanced squad tactics, conventional weapons and explosives. The potential for the use of advanced conventional weapons and false flag operations should not be ruled out. The city location is provided on a real map where students can check out on
MapQuest and gain an overview of the region, major transportation arteries, and significant terrain features. Using the city government website, students become familiar with the assets and liabilities of the city including the leading employers, businesses, employment parameters, major retail venues, cultural assets, strategic and tactical targets, significant terrain features, bordering cities. Students also familiarize themselves with the political parties that are dominant or active in the city and region. Students also identify targets of opportunity as well as targets of strategic interest throughout this region including the existence of unified emergency management command center, sheriff’s office, major factory production sites, shopping malls, community events, places of worship etc. that can be targets for terrorist groups.

In a series of choreographed activities students individually study successful terrorist attacks on similar venues across the globe, and develop a likely terrorist profile that would attack the city. Students also familiarize themselves with the effectiveness of conventional weapons and the potential use of advanced conventional weapons via studying various sources that explain the capacity and damage assessment reports from past incidents involving the use of such weapons. Students also identify the primary first responder organizations and major media outlets within the region; research the training, equipment, and other assets that might be available to local, regional, and state law-enforcement organizations. Next, students identify the major trauma centers within the locale and region.

Students are then placed in groups, and asked to pick and assume one of each of the roles of the Commander staff including Safety, Public Information, Legal Counsel, and Liaison; Section Leaders such as Planning, Logistics, Finance & Administration; Operational positions such as Law Enforcement, Emergency Communications, and Air Operations, Fire, Emergency Medical Services and Water/Wastewater.

**Scenario 3 – Levee Breach Response in Elk Grove, California**

In scenario 3, students are “confronted” with a real life-like situation where they all work as members of the Incident Command System that is setup to respond to a levee breach caused by a regional disaster – a California earthquake- and a secondary disaster caused by the earthquake, namely the breach of levees protecting the city of Elk Grove, CA. One caveat is that levees in nearby Sacramento are likely to be affected as well, constraining the resources available. The city location is provided on a real map where students can check out on MapQuest and gain an overview of the region, major transportation arteries including railways and roadways, and significant terrain features including flood plains, waterways, and lakes. Using the city government website, students become familiar with community resources available such as the police, fire, first responders, hospitals, volunteer organizations, and businesses.

In a series of choreographed activities students individually study individual and family preparedness resources for Elk Grove residents from the city website resources, study the recent capital investment projects in the region, detail or note any emergency management structures or reports, mitigation efforts, preparation training events or drills, and interviewing actual persons that take part in emergency preparedness. Students also review Census Data from government websites; note the presence of special need populations, immigrant populations, major industries in the city and region, assets that
would be helpful for successful recovery as well as vulnerabilities against known hazards. Students then make themselves familiar with the definitions and technologies used to predict earthquake hazards including likelihood, Richter Scale measurements, existing mitigation protocols for flood and earthquake hazards, reports prepared by Multi-Agency Coordination Group, levels of implementation of mitigation and preparedness plans, etc.

Students are then placed in groups, and asked to pick and assume one of each of the roles of the Commander staff including Safety, Public Information, Legal Counsel, and Liaison; Section Leaders such as Planning, Logistics, Finance & Administration; Operational positions such as Law Enforcement, Emergency Communications, and Air Operations, Fire, Search and Rescue, HazMat, Emergency Medical Services and Public Works including all utilities.

Using several templates, the three groups are asked to address the following questions at each phase of the disaster: Initial Response, Short-Term Response, and Early Recovery and Restoration. For each area of responsibility, groups are asked to state which activities are critical to perform as part of the responses as it progresses, i.e. create Status Reports. The status reports should also indicate what resources will be needed by organizations and people including equipment, materials, and supplies. They should indicate whether there are any recommendations or decisions that need to be made by the Board of Directors. A final report which is to be based on a provided template is to be written to the Executive Director this has to be direct, specific, and very clear. Students are asked work collaboratively and present one report to the Board of Directors at the end of the exercise. Students are asked to prepare an additional report, After-Action Report, that will summarize the things that went well and those that need improvement based on their work.

The collaborative report has the following sections:

Initial Response (first 24 hours):  
- **Resources Needed:**  
- **Decisions to be made by Board of Directors:**
Short-Term Response (first three days):  
- **Resources Needed:**  
- **Decisions to be made by Board of Directors:**
Early Recovery and Restoration (next seven days):  
- **Resources Needed:**  
- **Decisions to be made by Board of Directors:**

Additional information:

References:

The After-Action Report sections are as follows:

Initial Response (first 24 hours):  
- What went well:
- What did not go well:
- What mitigations can be put in place:
- What preparations for response and recovery need to be implemented:
Short-Term Response (first three days):
What went well:
What did not go well:
What mitigations can be put in place:
What preparations for response and recovery need to be implemented:

Early Recovery and Restoration (next seven days):
What went well:
What did not go well:
What mitigations can be put in place:
What preparations for response and recovery need to be implemented:

Survey methodology and administration

At the end of the exercise which consisted of 3 weeks of work, we asked students and the faculty teaching the course several questions using an online questionnaire. The aim of the survey was to explore the effectiveness of the scenario-based learning tool, which consisted of the three case studies detailed above. Survey consisted of 10 questions which combined the following categories: (a) 5-point Likert scale responses to statements, each of which corresponded to a specific attribute of the learning model that we intended to assess, (b) questions that lead the respondent to make specific preferences, and (c) open-ended questions. We intended to use the level of agreement for each statement as success levels of the intended purpose. We tried to keep the questions as short and as limited in number as much as possible since the survey was optional. We sent an e-mail to the students and the instructor containing the survey link, and asked them to respond to the short survey.

The faculty survey questions were as follows:

1. I feel that the “skills-based” approach is an engaging way for students to work on a career-relevant project and demonstrate mastery of specific competencies.  
   Strongly Agree/ Agree/ Neutral/ Disagree/ Strongly Disagree
2. I would like to see this approach used in future classes.  
   Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree
3. Which one of the following provided the best learning experience for your students? (pick only one)  
   Exams/papers/discussion forums/projects (using the “skills-based” approach)/ other
4. Using this novel approach, I feel that students were able to make a better connection between project activities and what is needed at work than in previous classes.  
   Strongly Agree/ Agree/ Neutral/ Disagree/ Strongly Disagree
5. I feel that this approach helped students gain needed competencies for their current or future job.  
   Strongly Agree/ Agree/ Neutral/ Disagree/ Strongly Disagree
6. Students demonstrated higher learning and submitted better quality work through this approach.
The student survey questions were similar to the faculty survey questions with the omission of question 6 above. They were as follows:

1. I found the “skills-based” approach an engaging way for students to work on a career-relevant project and demonstrate mastery of specific competencies.  
   Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree
2. I would like to see this approach used in future classes.  
   Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree
3. Which one of the following provided the best learning experience for you? (pick only one)  
   Exams/papers/discussion forums/projects (using the “skills-based” approach)/other
4. Using this novel approach, I was able to make a better connection between project activities and what is needed at work than in previous classes.  
   Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree
5. This approach helped me gain needed competencies for my current or future job.  
   Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree
6. What did you like about the approach? (open-ended)
7. What didn’t you like?
8. In general, how can this approach be improved (later you will be asked for specific improvements for the projects you administered). (You may choose more than one.)  
   Better instructions needed/more resources required to complete the project/make it less rigorous/more time needed/better technology needed/other
9. Please identify specific improvements to the project assignments you administered. (open-ended)

Survey Results
Since the survey was optional, the response rate was at a low rate of 23%. Only 6 students responded out of the 26 students that took the class. The following is a summary of the answers:

1. 5 out of 6 students reported that they found the “skills-based” approach an engaging way for them to work on a career-relevant project and demonstrate mastery of specific competencies. Of those 5, 3 of them strongly agree with the
above statement. Only 1 out of 6 students strongly disagreed. The instructor agreed that the approach used was engaging, although he did not agree strongly.

2. All the responding students (6 out of 6) and the instructor strongly agreed that they would like to see this (“skills-based”) approach used in future classes.

3. Half of the responding students (3 out of 6) stated that the skills-based projects provided the best learning experience for them, while 2 students preferred papers, and 1 preferred discussion forums over other methods. The instructor’s preference was also skills-based projects. None of them favored exams.

4. 5 out of 6 students agreed that they were able to make a better connection between project activities and what is needed at work than in previous classes. Of those 5, 3 of them strongly agreed. Only one out of the 6 strongly disagreed. The instructor’s position was to agree with the statement but not strongly.

5. 5 out of 6 students agreed that this approach helped them gain needed competencies for their current or future job. The instructor’s position was neutral in this question.

6. When prompted with the question of what they liked about the [skills-based] approach, students gave the following responses:
   a. “More direct relevance and easy to use”
   b. “The project put you in the middle of it all. The project made you think about what you would do if you were in that situation. I like the 'hands-on' feel to it. That is the kind of critical thinking that I enjoy and something that writing a 25 page paper can't teach you. I also enjoyed the story that went along with the project.”
   c. “I like that this approach forces me to put myself into the situation and think critically about what it is that I need to do. Not only does it require me to think critically about the situation but it allows me to hone the skills I feel are necessary for the career path in which this degree will take me.”
   d. “Nothing”
   e. “The interaction between my classmates was awesome; instructor set the tone and everyone followed her [sic] lead.”
   f. “I like that the [...] assignment tackled a subject that was new to me and has significant focus in homeland security (resilience), and the interviews caused me to thoroughly explore and apply the concepts we were studying.”
   g. The instructor stated “I think requiring some FEMA-EMI IS courses as preparation or a prerequisite has some merit, although the amount of courses required has to be kept reasonable.”

7. When prompted with the question of what they did not like about the approach, students gave the following responses:
   a. “Directions need to be clearer, and the number of FEMA courses to do must be limited due to the time it takes to do one of them completely in many situations.”
   b. “It was difficult to come up with answers and situations for things that weren't discussed in the story. I felt I should limit my actions to only that which was told in the story. I didn't think outside the story like I should
have and make up other situational-awareness activities that are most likely going on at the same time.”

c. “I found the pilot program redundant and tiring. I have participated in group projects […] for five years and they are all the same. No one is willing to do the work until the very last minute and the rest of us are left holding the bag, along with the grade. Groups do not get communication […] when students drop out and we spend hours, sometimes days, trying to contact this person only to find out they dropped the class weeks ago. […]”

d. N/A

e. N/A

f. “I did not like that this extra assignment added to a heavy term workload. The quality of work suffers as quantity increases.”

g. The instructor stated: “I think the amount or number of FEMA-EMI IS courses listed as required prerequisites for each individual was overly burdensome for most of the students, although a few had no problem with this. Also, I think more information needs to be provided for the rationale or intent for the new approach or content, and the desired outcomes.”

8. When asked in general, how this approach can be improved, 2 students responded indicating that better instructions are needed; 2 of them stated that it needs to be less rigorous, and 1 student stated that better technology is needed. None of the responses indicated that more resources are required to complete the project, or more time is needed. One stated the following: “I did not like that this extra assignment added to a heavy term workload. The quality of work suffers as quantity increases”. The instructor stated that better instructions are needed, as well as more resources and the project should be less rigorous.

9. When asked to identify specific improvements to the project assignments they administered, students provided the following responses:

a. “Less research papers. At this level we know how to do research - more learning is acquired from the discussion questions each week, especially since the Professor is active in the discussion and keeps things going.”

b. “In regards to posting responses to the completed projects. Allowing the class to view the scenario will allow us to critique the actions taken by the group.”

c. “The depth notes and instruction were vital.”

d. “I believe that more time should be spent on the Individual Assignment and the Group Project should be deleted. I have come to understand why resilience is such a critically important subject […]. I believe it should be among the very first topics explored in the EM program because it is integral to all phases of the disaster life cycle. Early exposure and ongoing reinforcement throughout the program would ingrain the concepts and provide the opportunity for original thought along with practical application in pursuit of mastering the topic.”

Findings and Conclusions
Despite the low response rates, the survey results indicate that the new “skills-based” learning approach has a promising future. It is understandable that group projects may be frustrating for some students since some students tend to pick the bulk of the work while others do not feel contributing at a level that is acceptable to others. If the skills-based approach can be evaluated with the absence of negative group dynamics, the results might have been more favorable.

Although it was hard to get the big picture due to the low rates of participation, the mini survey shed some light onto the perceptions of students and we were able to assess how they value the skills-based approach. Instructor perspective is equally important since faculty engagement affects student perception and performance. It is obvious from the survey results that the instructor of the course has the necessary skills to teach and is highly regarded by students; therefore there were no issues that had an artificial effect on students’ perception of the skills-based approach employed in the Homeland Security/Emergency Management course that was the subject of this research.

In general, students are looking for clearer instructions, less busy work, case studies directly pointing to the practical issues that pertain to the subject matter, and more use of technology, possibly audio-visual presentations that attract and keep their attention. The survey results partially aided us in enhancing our instructional design and we will continue to use methodical approaches to assess student learning.

Although the instructor’s position was neutral when asked whether student grades were better as compared to other classical ways of performance assessment (exams, papers, or quizzes), in the future, as we collect more data and make the appropriate comparisons, we will be able to determine whether there is a notable difference in student success and hence learning effectiveness. The results of this survey opened us a door to explore better ways to teach skills-based curriculum to students.

Acknowledgement: I would like to thank Dr. Les Pang for his preparation, testing, and administration of the survey tool.

References


Submission ID 979

1. Title of the submission.
   A case study of one organization’s push to make their website more tenable, navigable, usable and practical, achieving the ability for future data driven decisions

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6. Abstract and/or full paper.

Abstract

In the contemporary environment, word-of-mouth is no longer sufficient as a means of getting one’s name out there, nor are individual vignettes on mainstream media. Moreover, one’s web presence can no longer be basic or textual. Now, one’s presence must be rich, informative, visually appealing, and useful – all of which can be both Data Driven and Data Fruitful. The Professional Science Master’s National (PSM) Office and the movement have been and are continuing to grow for many years, but they have also met challenges to the growth, including the challenge of marketing, meaning, motivation and more. Part of the challenge to this expansion has been the context. The world is changing, and due to the influx of various mediums of information attainment that not only students have access to but also faculty, institutions, employers and other industry constituents, not only through a regular computer but now through mobile devices, a concerted effort was over the last few years being realized to address these needs of strategic and thoughtful application of anecdotal and other data to communicate the message of the office and movement to the world. Beginning in 2013, a number of issues were identified, including an outdated website, with poor maintenance, over abundant misuse of services, tools and providers, and lack of real-time information on usage. From these challenges, meetings with various stakeholders, including the boards of the office and the sister organization, and other partners, as well as program leaders were held to determine a path to improvement. A vendor selection process was conducted and an optimal vendor was secured based on needs, timeline, cost, and other factors. In 2015, over a 6-month period, a select team of a developer and designer on the part of the vendor and the administrative director as well as a consultant on the part of the national office worked arduously to realize a new platform for all the professional science master’s stakeholders to access information, beginning from an informal needs assessment through development and implementation and testing. What was delivered was a site that is easy to use, easy to
navigate, easy to maintain and easy to track. The results of this effort include – a new way for visitors to access information for which they are searching, and the office’s ability to provide both visitors and partners real-time information on usage, tracking, and interest through Google Analytics, moving the office’s website from being reactive to proactive and increasing the data-driven ability to respond to student, staff, faculty, employer, government, and industry needs. This presentation will discuss these activities and the resultant positive impact on website usage, and other organization’s web development and further challenges still to be addressed, including continued content renewal.
Submission ID: 980

1. Title of the submission.

Lessons Learned from Curricula Development for Master’s Students in STEM

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Abstract

There is a high demand from business, industry, and public agencies for highly-skilled and well-trained STEM graduates who can contribute immediately to the workplace. Curricular development aligned with verifiable student learning outcomes, particularly in the STEM fields, has been discussed to meet the demand. This is particular observed at the master’s level of education in STEM, where master’s students seek opportunities to enhance their graduate education with preparation for their future careers in industry. As a result, Institutions of Higher Education are facing challenges on their curricula to both address various sectors as well as provide education that aligns students’ subject interests with industry needs. Fortunately, there are examples of master’s programs meeting both the needs of the students as well as their future employers. Our presentation will discuss some of these specific program examples, particularly focusing on their experiential and professional skills components built into the science curriculum to enhance student learning outcomes and to meet employers’ expectations for tomorrow’s STEM workforce. We will share why such examples have worked well and what tipping points needed to be managed to build and implement such curricula. A several examples derive from surveys and interviews of 350 programs from 150 institutions across the nation that have developed their new curricula over the last 5 to 10 years, focusing on lessons learned from farther in-depth site visits of and discussions with a particularly successful institution with a number of exemplar programs in Southern California. We hope that this presentation will contribute to curricular designers and program leaders as examples for consideration when building such components into new, fledgling or redesigned graduate programs.
Abstract

In a traditional Doctor of Philosophy (Ph.D.) program, usually undergoes a 5 to 7 year course of study with a minimum of 2 years of coursework and some culminating experience, ordinarily a dissertation. Similarly, a Doctor of Education (Ed.D.), such as one at USC, has very similar requirements in a much more condensed time frame, usually taking 3-4 years (though a Master’s degree and years of previous work experience are also required prerequisites, which many traditional Ph.D.’s do not). In the traditional doctoral program, there are many non-dissertation and coursework related requirements and opportunities afforded to the students that are not afforded to students in the expedited ones. These opportunities include publishing, presentations and teaching. Research and Teaching assistantships (RA’s and TA’s) are usually part and parcel to any Ph.D. program, preparing students, under the guidance of seasoned faculty, with the knowledge they need for future careers in academia and industry. Ed.D.’s, like myself, are not prepared so robustly for such futures, often expected to already be seasoned in disparate fields themselves. As one such individual, pursuing academic opportunities outside of the career I already had prior to my program, that of an Information Technology Manager, was a challenge, even with a Masters and Doctorate in Education. When consulting and teaching opportunities finally did arise, there was a large learning curve to understand everything from where to order books for my class to getting the course roster, and all of these were lessons before even being placed in front of the students themselves. Moreover, in spite of my many years of formal learning about course design and pedagogy, there was nothing like actually standing in front of the students. This presentation will discuss lessons learned from my first term as teaching and present ideas for future teaching endeavors.
Submission ID: 982

1. Title of the Submission:
   Moving from Just a Portal to a User Experience - A Case Study of One Institutions’ Attempt to Create a Seamless Portal Experience from Applicant through Alumni Stages of Institutional Relationship

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Abstract

In Information Technology (IT), the major concern for most technical staff is the functionality of a product or service – making sure whatever someone is using is functional as opposed to appealing or for that matter pleasing. However, with the changing student user to that of more of a consumer and education as a field changing to be more on demand and non-traditional, the user experience is changing how education and as a consequence IT and IT-related products and services are being supported and delivered. Within the academic space, gamification of the education is becoming more and more important as is ensuring that course-related materials are all posted in the institutional Learning Management System (LMS). Similar, one often overlooked system that affects all current students is the student portal. Anecdotally, many institutions simply using the landing page of their Student Information System (SIS) as their student portal; however, there are other institutions who are making a concerted effort to employ a better, more seamless user experience. In the case of this institution, since 2012, they have worked with several vendors to move from just student information to a rich experience where all the information a student might need, links to services they would use, and automatically sign into and attention to the experience on any device has been considered. This has resulted in a much more tenable, usable and seamless experience for the. So successful this effort has been in fact, that additional attempts at providing a corresponding mobile device application and a role-specific experience have been made. Now, where efforts to adjust the experience to everyone from applicants to alumni are being sought, and moving the institution’s public website’s non-recruitment related data is underway where all nonessential information is moving internally to that new portal for students, staff and faculty to access and not distract from the message of the public website, that of recruitment. This presentation will discuss, from an IT perspective, lessons learned over the last 4 years, including successes and areas that need to still be improved and next steps.
1. Title: Establishing Student Centered Advising Model in Japanese Higher Education
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Establishing Student Centered Advising Model in Japanese Higher Education

Introduction

In Japanese higher education, the concept of academic advising as a system is relatively new. Japan Student Service Organization (JASSO) conducted a survey on the student support service programs in 2010. On that survey, the questions related to academic advising were not asked. In 2013, JASSO added a question on an academic advising (See Table 1), while questions on “meeting with students who have excessive absence and academic probation,” “Consultation counter for academic concerns,” and “Academic & Learning Support, including academic writing and seminars” were eliminated.

Based on the 2010 survey, 88% of the faculty and staff had concerns about students who had excessive absence and on probation. 60% had concerns on academic and learning support (JASSO, 2010). These two questions were further looked at in detailed categories. These changes were also affected by the accreditation organizations, which made changes in the assessment criterion.

Ways to work with students on excessive absence and on probation were divided into 16 categories. At 75.6% of the institutions, faculty and staff contact students with 3 or/and 5 absents with notification, and 83.5% of the institutions implements individual meeting sessions with faculty and staff when students were absent for more than 3 times (JASSO, 2013).

Hypothesis of This Study

This research has several hypothesis. They are the following:
1. The advising system implemented at Japanese higher education is not functioning well;
2. Advisors who have a Prescriptive advising style show more ethnocentric orientation;
3. Advisors who have a Developmental advising style show more relativistic orientation.

Methods

This research was conducted with four data gathering methods: 1) faculty survey on Intercultural Sensitivity model and advising style, 2) student’s survey on utilizing advisors, 3) individual faculty interviews on advising, and 4) secondary data analysis of advising sessions with students on probation.

Faculty surveys on intercultural sensitivity and advising style

54 faculty members from two institutions took a survey which included two scales. The first scale is Intercultural Development Inventory (IDI) which is designed to measure sensitivity and orientations toward cultural differences (Hammer, Benett, & Wiseman, 2003). This scale has six developmental continuum orientations from “ethnocentric” mindset to “ethno-relativism” mindset: Denial, Defense, Minimization, Acceptance, Cognitive Adaptation, and Behavioral Adaptation (See Table 2, Hammer, 2011).

The second scale is on advising styles. Prescriptive advising is automatic and one-way advice, like the prescriptions in pharmacies. Advisors always have right answers when students do not know anything. Developmental advising aims to develop
autonomous and independent learners. It encourages students’ self-reflection and self-determination. Students and advisors work together to reach students’ goals. The approaches might vary depending upon individuals and situations.

Among 54 faculty members, 46 were male, and 8 were female (Table 3). The departments varied, such as Law, Economics, Literature, and Engineering. More than 50% were 50 years old or over.

2nd Year Student Survey

During the fall semester in 2015, the online survey toward second year students on advising was administered. All 2nd year students from one university were invited to take this survey. 222 students (about 25% response) answered the survey with five questions. Due to protect students’ confidentiality, the survey did not ask demographic information.

Individual Faculty Interview

34 faculty advisors from three different institutions and ten different departments and units were interviewed. The interview included nine questions and was conducted during summer break and fall semester of 2015. Among 34, 19 were male and 15 were female. The interview questions were given to interviewees prior to their appointments. Ages are from 30’s up to 60’s.

Secondary Data Analysis of Advising Sessions with Students on Probation

Advising session notes with students on probation were also analyzed as secondary data. 1233 notes were reviewed, which consisted 369 5th year and over students, 292 4th year students, 364 3rd year students, and 208 2nd year students during 2014 and 2015 academic year. The grades of students were as of spring semester 2016.

Results

Faculty surveys on intercultural sensitivity and advising style

Table 3: Gender and Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>TOTAL</th>
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<td>30–39</td>
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<td>40–49</td>
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<tr>
<td>50 or over</td>
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<td>28</td>
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<tr>
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<tr>
<td>合計</td>
<td>46</td>
<td>8</td>
<td>54</td>
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</tbody>
</table>
1. Reliability of the scale

Reliability analysis was conducted to examine internal consistency of two scales. Table 4 shows the Cronbach Alpha. It shows that the reliability of subscales of IDI and advising styles are between .65 and .78, which means they are moderately high.

<table>
<thead>
<tr>
<th>IDI</th>
<th>Cronbach α</th>
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<tbody>
<tr>
<td>Denial</td>
<td>0.748</td>
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<table>
<thead>
<tr>
<th>Advising style</th>
<th>Cronbach α</th>
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<td>Prescriptive</td>
<td>0.707</td>
</tr>
<tr>
<td>Developmental</td>
<td>0.677</td>
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</table>

2. Gender and Age Differences

To examine gender and age differences in two scales, t-test and ANOVA were conducted. For IDI scale, there was no gender difference. For advising style, on the other hand, male had statistically higher scores in Prescriptive advising style.

Based on age, there was no difference in an advising style scale. IDI scales, however, showed differences in age group. The group of 40-49 years old had a higher score in “disinterest” in Denial orientation. Furthermore, the group of 30-39 years old had statistically lower scores in Describing/Enjoying in Acceptance orientation and Complexity in Behavioral Adaptation orientation.

3. Correlations between IDI and Advising Style Scales

The relationship between two scales were examined by correlation analysis. Table 5 shows correlations among subscales in IDI and Advising Style scale. It shows several moderately high positive correlations between two scales and within IDI scale.

Correlation between ethnocentric orientations, such as Denial and Defense, and an advising style scales, there was no significant difference. From this result, our hypothesis 1 (faculty who has Prescriptive advising style shows more ethnocentric orientation) is not supported. There are lower or no correlations between ethnocentric orientation and two advising styles.

Although correlations between ethno relativism orientation, such as Cognitive Adaptation and Behavioral Adaption, and Prescriptive advising style are positive, they are lower than correlations between Cognitive Adaptation/Behavioral Adaptation and Developmental advising style, exception of Bridge. This result would support our
hypothesis 2; subjects who have Developmental advising style shows more ethno-relativism orientation. This means high correlation with Behavioral Adaptation.

Table 5: Correlations among Subscales in IDI and Advising Style Scale

<table>
<thead>
<tr>
<th></th>
<th>Prescriptive</th>
<th>Developmental</th>
<th>Disinterested</th>
<th>Inadequate/ Separation</th>
<th>Designation</th>
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<th>Universal</th>
<th>Describing</th>
<th>Enjoying</th>
<th>Learning</th>
<th>Reluctant</th>
<th>Multiple</th>
<th>Bridge</th>
<th>Shift</th>
<th>Behavioral</th>
<th>Complexity</th>
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than 1%, and related to an internship and balancing study and other things were less than 25%.

Faculty Interview Analysis

77% of interviewees pointed out the need of restructuring the advising system. The current advising system tends to simply fulfill the required duty as an advisor. In three institutions, during students’ first semester at the university, faculty advisors teach a First Year Experience course. After that, students tend to meet with their advisors only when they are on probation. Even when students are on probation, faculty advisors talk with students and keep a simple record. They are not asked to follow up with their advisees. Most faculty advisors feel the need of change in this system; however, they do not feel that it is their place to restructure the system.

Related to the concern above, all the faculty members who were interviewed felt that there was no common understanding of what advising is and what the expectations from advisors are. Most of them felt that they are involved too much with students’ personal issues. Since they meet with students when they are on probation, faculty advisors tend to discuss students’ basic academic competence, time management, mental health, and so on. Faculty advisors do not feel that these are their responsibilities. They prefer working with students on “academic” issues, which is on faculty’s area of study.
The other common concern that faculty shared was that there were significant number of students who might need support in mental health. It is correct that they should not take responsibility for mental health issues, however, faculty felt institutional initiative to make sure students receive appropriate support.

Secondary Data Analysis of Advising Notes

Table 6: Students on Probation

<table>
<thead>
<tr>
<th></th>
<th># of students</th>
<th>Repeating students</th>
<th>Ratio of repeating students</th>
<th>Ratio of students expected for improvement</th>
<th>Ratio of students referred to Student/Academic Support</th>
</tr>
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<tbody>
<tr>
<td>2nd year</td>
<td>208</td>
<td>47</td>
<td>23%</td>
<td>86%</td>
<td>37%</td>
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<tr>
<td>3rd year</td>
<td>364</td>
<td>152</td>
<td>42%</td>
<td>79%</td>
<td>40%</td>
</tr>
<tr>
<td>4th year</td>
<td>292</td>
<td>133</td>
<td>46%</td>
<td>78%</td>
<td>29%</td>
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<tr>
<td>more than 5th year</td>
<td>369</td>
<td>218</td>
<td>59%</td>
<td>75%</td>
<td>24%</td>
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Table 6 shows that the longer they are enrolled, the ratio of repeating probation increases. This indicates that the first and second years of their student life are critical to improve their GPA. It also shows that the advisors tend to think of their students’ improvement in grades with no concrete reasoning. While the advisors hardly refer students to students and/or academic support (between 24 and 40%), more than 80% of the students were expected to improve their grades. Looking at the rate of repetition on being on probation, the advisors’ assessment of students’ ability is not accurate. In the comments, advisors give reasons why they believe students would improve their grades. The top reason is because students told their advisors that they would not repeat the same mistake. In addition, even when students get referral to student and/or academic support, only 20% of the students actually use the resources.

Discussion

Stated as the assumption 1, based on the analysis of various data, the advising system in Japanese higher education is not well functioning. As stated in the analysis, students do not feel in need or were not aware of academic advisers (60%), while not all students on probation (about 15% of total students) meet with their advisors despite the requirement. On the contrary, faculty advisors feel that they are doing too much, when they act as academic advisors. They do not mind to advice academically, yet, many of them do not believe the function of advising fit in that arena. There are two suggestions
that higher education in Japan can approach.

**Clearly Defined and Stated Advising System**

Higher education institutions in Japan need to inform students how to be successful. Student survey showed that students prefer asking their seniors for consultation, rather than faculty and staff. Also, more than 10% of the students were not aware who their advisors were. Students who are on academic probation in Japanese higher education are between 10%-20% of the student body. Faculty advisors also need to know what their responsibilities are. Currently, significant number of students are not being successful as university students even when they work with faculty. It is also possible to look into ways of collaboration between staff and faculty. Depending upon the institution, staff and faculty can divide advising responsibility and work with students collaboratively. In this case, also, it is important to clearly define and state what staff and faculty advisors’ roles and responsibilities are.

**Faculty Development Opportunity for Advising Issues**

The Faculty survey results showed that faculty who is in his/her 30’s scored low in Acceptance and Behavioral Adaptation orientation on IDI. The reasons are interpreted as the following. First of all, most college faculty members start full-time academic job in their 30s. They are not used to juggling their work responsibilities with time restriction. With the appropriate mentor system in their academic and political arena, they might need advice on advising.

Faculty also have a tendency to assess inaccurately on students’ academic performance and progress. This could be the result of faculty believing that they were advising students developmentally, but they are not assessing based on data and information. Although it is important to believe in students’ ability, faculty has to work with students realistically.
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DIGITAL ETIQUETTE PRACTICES IN A DIGITAL WORLD

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DIGITAL ETIQUETTE PRACTICES IN A DIGITAL WORLD

ABSTRACT

As the prevalence of digital tools utilized by today's youth continues to increase, more and more schools are incorporating technology into their curriculums as a way to connect with their students. This is providing educators with the opportunity to not only teach students the content within subject they teach, but allow for them to model the appropriate and responsible ways to use the technologies that envelope the world they live in. Furthermore, professors of education are being charged with the responsibility to not only teach future educators about the modern classroom and their roles in the school system, but also how to maneuver themselves professionally in a very technological world. The goal of this study was to address why and how educators today are incorporating digital etiquette practices into their everyday curriculum. A total of 81 education professors and 190 education students were surveyed on their current technology practices and their opinions on the need for the incorporation of digital
etiquette practices into the lives of today’s youth. According to the research participants, it was found that the majority of educators and students alike consider it critical that digital etiquette practices and responsible online habits are incorporated into the education of today’s students. However, the results showed that there was a disconnect between both the type and amount in which technology is utilized by education professors and their education students. It was also found that there are limited resources designed to educate individuals on proper digital etiquette practices. Such findings indicate a need to define and align expectations regarding digital etiquette and its role in education today.

Keywords: Digital etiquette; technology; higher education; classroom procedures

Categories: Research; Mixed; Technology
INTRODUCTION

Background

According to Ribble (2011), Digital Etiquette is defined as ‘the electronic standards of conduct or procedure’ (p.29). As the prevalence of digital tools utilized by todays' youth continues to increase, the need to educate these students on how to responsibly use and manage such technology continues to rise. As Ribble (2011) states, ‘there needs to be a structure that can teach students (and parents) how to act with respect to this technology’ (p.9). Gone are the days where libraries are the only sources of information for our youth, and face-to-face conversations are their only mode of social interaction. With the help of smartphones, tablets, laptops, etc., students and teachers have endless resources for information and social connection capabilities right at their fingertips. However, the abundance of and ease at which students can maneuver such tools has created an unarguable need to teach youth how to manage themselves online in such a way as to not misrepresent themselves.

Throughout this study, the focus will be on addressing why and how educators today are incorporating digital etiquette practices into their everyday curriculum. Considering that a majority of today’s youth spends most of their time in some form of school setting, educators have an undeniable opportunity to address and model appropriate behavior online to their students. Moreover, professors of education have a responsibility to not only teach these future educators about the modern classroom and their roles in the school system, but also how to maneuver themselves professionally in a very technological world.
Rather than banning the use of technology with an abundance of rules and policies, there has been a movement in schools on all levels to embrace the digital movement by capitalizing on the capabilities of such devices and in turn educating students and themselves on how to be responsibly represented online. As Tan (2011) states, ‘It is not enough to create rules and policy; we must teach everyone to become responsible digital citizens in this new society’ (p. 31).

Research Questions

Are those in education familiar with the term ‘Digital Etiquette’ and are they incorporating it into their curriculum? How do today’s educators incorporate digital etiquette practices into their curriculum? What are the overall attitudes of those in education concerning current digital etiquette practices?

REVIEW OF LITERATURE

Few can argue that the modern world in which this generation is being educated in is vastly different than that of previous generations. The digital world has indeed integrated itself into the everyday lives of society in general, but specifically into the lives of today’s students and teachers. With the availability of ever growing and changing technologies at their fingertips, a new dilemma has presented itself in the classrooms around the world: How are we to educate these digital natives to use technology in an appropriate and responsible manner? If we, as educators, strive to prepare our youth to thrive in the modern world, then the need to address social norms and etiquette in this digital world must be made a priority in conjunction with the taught norms of the ‘real world’.
Digital Citizenship is a term developed by Mike Ribble to describe the norms regarding appropriate and responsible use of technology. According to Ribble (2011), Digital Citizenship consists of nine elements: Digital Access, Digital Commerce, Digital Communication, Digital Literacy, Digital Etiquette, Digital Law, Digital Rights & Responsibilities, Digital Health & Wellness, and Digital Security. While each element is certainly of equal importance, Digital Etiquette seems to be one that strongly affects those in education today. Digital Etiquette is defined as ‘the electronic standards of conduct and procedure’ (Ribble, 2011, p. 29). With the increasing prevalence of cyberbullying and other behaviors that can be detrimental to both a student’s or educator’s health and reputation, teachers are beginning to take an offensive (rather than defensive) approach to online behavior by educating adolescents and themselves on how to one should manage their behavior online in an appropriate and responsible way.

The Importance of Digital Etiquette

While it is overall understood among educators that teaching digital citizenship to our youth is important in today’s world, there is little research concerning how exactly to implement these practices into the classroom curriculum. Ribble (2012) finds that educators are too often apprehensive about discussing these issues with their students because they themselves feel they are not well informed on the current events related to technology. For this reason, many school districts are creating and implementing long-range technology plans with the overarching goal of equipping their teachers so, in turn, they can equip their students to be productive citizens of this connected world. In a survey done by the National Association of Colleges and Employers, it was found that
the majority of U.S. employers use Web 2.0 technologies and social media as a way to prospect for potential hires (Greenhow, 2010). With this considered, the importance of educating students and teachers on digital etiquette practices and online reputation management is at its peak. According to Susan Crawford, the assistant to the president for Science, Technology, and Innovation, ‘The best software is between the ears’. Teachers are unable to watch their student’s online behavior 24 hours a day, but the ‘risks to youths online can be reduced through Digital Citizenship education’ (Tan, 2011, p. 30). In order to prepare todays’ students to thrive online, educators must not hide behind their policies and procedures, but instead teach them how to become digital citizens.

**Using Web 2.0 Technology as an Educational Tool**

Considering that the parents of todays’ students are oftentimes learning technologies alongside their children and mimicking how they see their peers using these tools, it makes sense that schools ‘are in a better position to teach kids appropriate digital etiquette’ (Ribble, 2011, p. 29). In the past, it has been the norm for districts to either partially or completely restrict personal student technology use during school hours. As the commonality of technology in our daily lives increases though, it is becoming more and more apparent that schools must not hide behind their Acceptable Use Policies (AUPs) but instead teach their educators and students about how to use these devices in a safe and appropriate manner.

In the classroom, technology is no longer limited to computer labs that students can visit to perform online research or create PowerPoint presentations. The modern classroom can implement a variety of the technology trends that have emerged and are
increasing in popularity. The trend that seems to be gaining the most momentum is referred to as ‘Bring Your Own Device’, or BYOD, in which educators are utilizing the technology devices students already own for educational purposes. Like most trends though, there are pros and cons to their implementation. Bruder (2014) discusses a number of advantages of letting students use their own devices such as the theory that its practice encourages participation by allowing students to use devices they are familiar with. While this is certainly the more economical choice in technology trends (as opposed to the 1:1 initiative in which teachers and students are all issued the same devices by the district), schools have noticed that allowing students to use their own tech devices has only widened the already existing the gap between the lower income students and their peers. No matter what (if any) tech trend a district chooses to implement, the need to make digital citizenship practices a priority remains.

Teaching Responsible Technology Use

Given the ever-increasing popularity of tech tools among society today, Ribble (2011) found that there are actually very few rules established regarding the proper use of such devices. However, most researchers and educators seem to agree on what digital citizenship education should include. Greenhow (2010) states that ‘digital citizenship ought to include their developing awareness of social and political issues as well as their online participation in public life’, primarily through the demonstration of ‘respect for the rights and responsibilities of self and others in the digital commons’ (p. 25). Yang (2013) simplifies what digital citizenship education should include by stating that ‘Digital citizenship isn’t just about recognizing and dealing with online hazards. It’s about...using your online presence to grow and shape your world in a safe, creative
way, and inspiring others to do the same’ (p. 440). This basic understanding of what a digital citizen should ‘look like’ seems to be understood by most, and as Tan (2011) puts it, an educator’s responsibility is to teach our students where the virtual worlds’ ‘lines’ are that should not be crossed. However, the question that remains is where exactly should these lines fall?

Prior to the implementation of digital citizenship education, Ribble (2012) finds that the schools must first establish a direction for how to use the tools of technology in their classrooms, despite how quickly it continues to change. A growing number of school districts are beginning to organize technology teams, from which long-range technology plans and goals for the district are being established and carried out. School districts are also creating the position of and hiring Instructional Technologists who are often former teachers who specialize in the incorporation of tech tools to help enrich the learning experience of their students. As these movements into the 21st century classroom continue to take place, educators are beginning to understand the need for the incorporation of digital citizenship education; however, there are little resources available that provide them with the information they need to set it in place. According to Ribble (2012), digital etiquette and citizenship education are best explained through the use of example scenarios and discussions with the students. As he says, ‘allow students to provide experiences they have had with technology and discuss how situations might have been handled better’ (p. 150). Oftentimes, awareness of the issue is the first step in a positive change being made. Ribble (2011) also provides educators with the following continuous Four-stage Reflection Model to help lead the discussions on any of the digital citizenship elements:
1. Awareness
2. Guided Practice
3. Modeling & Demonstration
4. Feedback & Analysis

Yang (2013) lists four indicators as well, as provided by the International Society for Technology in Education (ISTE), that are essential to digital citizenship education, all of which use the term 'model' in their text. If educators expect to impact the ways in which students behave online, they must first lead by example and continuously model, dialogue and discuss with students the appropriate and responsible ways to present themselves online.

**Digital Citizenship Practices in Higher Education**

Incoming teachers and the professors who are expected to prepare them are being presented with numerous challenges concerning the most effective ways to ensure the next generations of educators are ready for the ever-changing technology expectations of the modern classroom. In 2001, Mark Prensky popularized the term ‘digital natives’ but has since emphasized the need for ‘digital wisdom’ (Paulus & Ingersoll, 2015). While (college) students may be considered ‘tech savvy’, the ability for these young adults to manage their own digital footprints in a professional manner seems to be lacking (Osborne & Connelly, 2015). In turn, these very ‘adults’ are becoming tomorrow’s teachers for the upcoming generation. Education professors have a unique opportunity to ensure that proper digital etiquette practices are in place not only for the students they release into the field of education, but for the children whose lives they will impact in their future classrooms.
The current literature describes various strategies currently being implemented on college campuses today. These strategies include the incorporation of digital citizenship practices into the curriculum of pre-service teachers (Dabner, 2015), campaigns such as the ‘Manage your Digital Footprint’ Campaign developed and currently utilized by the University of Edinburgh, and a variety of Tech Desks designed to aide students in the incorporation and implementation of various software systems as well as troubleshooting help for their hardware issues. Those in higher education appear to be attempting to meet the modern technological needs of their students, but as with the education field in general, the need to match (or even exceed) the requirements of the time will grow continually.

Summary

The literature seems to indicate the need for the implementation of digital citizenship and etiquette education into the everyday curriculum. As more and more schools recognize the need to prepare their students for both the real and virtual world they are growing up in, the ‘look’ of the modern classroom is changing drastically. Technology trends such as BYOD, the 1:1 Initiative, and Blended Learning are beginning to become the norm in schools around the world, requiring educators to address how adolescents should present themselves online in a responsible and appropriate manner. There is indeed more in-depth research and resources needed for educators to not only implement digital etiquette practices into their curriculum, but also to ensure they are themselves informed on the issues concerning digital citizenship education. Although technology is ever growing and changing, the need to raise
awareness and educate society on proper online behavior as a whole will continue to remain the same.

METHODOLOGY

Convergent Design

The researchers used a convergent design in this study in an attempt to gather both quantitative and qualitative data at the same time with respect to the research problem. The quantitative data was analyzed using a Cross-Tabulation approach, while the qualitative data was utilized to add greater depth and substance to the research.

Participants

The participants involved in this study were collected from a variety of locations in Texas, depending on their current role in education. Participants indicated as student teachers were limited to one university in Texas while participants indicated as education professors were from a variety of universities across the state of Texas. The student teacher participants included 190 individuals, all of which are currently pursuing their degrees in education. The education professor participants included 81 individuals from a variety of public and private universities in Texas. The participants were provided with a web-based Google Forms survey at the beginning of which they were informed that their participation was entirely voluntary and any responses would not only remain anonymous but analyzed primarily as a whole with the existing data.

Instrumentation

The survey was originally constructed by a graduate student at a university in southeast Texas and a trial run was administered to public school teachers in the north Texas area. The survey was revised and a completed application sent to IRB for
approval. The approval was obtained and the survey was then sent to the College of Education at a southeastern Texas university for validation and to establish a base line for comparison to other Texas universities. Revisions were then made and the survey was sent to all colleges of education in Texas.

The web-based survey utilized for this study were created using Google Forms (www.google.com/forms). The participants were able to complete the survey on paper or from any device with Internet capabilities. The format of survey consisted primarily of multiple-choice questions with some opportunities for open response. After submission, the responses from their surveys were sent anonymously to Google Drive in the form of an ongoing spreadsheet. This data was then entered into IBM SPSS Statistics 22 and a Cross-Tabulation was run to establish relationships with variables.

Procedures

The surveys used for data collection were administered in two ways: paper copies on which responses could be recorded or via the sharing of a hyperlink, which sent participants directly to the survey. After receiving the surveys, data was collected for a two-month window, after which the spreadsheets containing the participant’s responses were downloaded from Google Drive to an Excel spreadsheet. From the spreadsheet, data was analyzed and grouped according to common criteria. The survey and content of this study could easily be replicated and used to determine similar findings for random or selected groups.

Limitations

The results of this study were gathered only from Education Professors in Texas and Student Teachers at one texas university. Considering that the location of the data
gathered was limited to individuals in one state, the findings of this research can only apply to the state in which it was administered.

**RESULTS**

The overarching goal for this study was to determine the overall attitude on the need for Digital Etiquette practices among those in Education as well as discover how Digital Etiquette practices are addressed among pre-service teachers and education professors in Texas. The results from the provided survey describe the experiences and opinions of 81 education professors and 190 student teachers planning to enter the education field within the next couple years.

**Summary of the Results**

*Are those in education familiar with the term ‘Digital Etiquette’ and are they incorporating it into their curriculum?* According to the participants in this study, 73% of education students consider themselves familiar with the term ‘digital etiquette’ while 62% of education professors have the same consideration. 5% of education students and 7% of education professors stated that they were not familiar with the term at all. Of the education professors surveyed, 68% went on to state that they did incorporate digital etiquette practices into their routine, which was interesting considering that a lesser percentage considered themselves very familiar with the term in general. Furthermore, only 57% of education students stated that they have taken courses in which digital etiquette practices are included.

*How do today’s educators incorporate digital etiquette practices into their curriculum?* The quantitative data collected from this survey indicated that the majority of professors do provide at least some sort of information within their syllabus regarding
online etiquette and/or technology expectations. There were also a large number of professors who mentioned ‘modeling’ their expectations to their students as the semesters progressed. There were a variety of responses that indicated a lack of understanding with what the term ‘digital etiquette’ includes, primarily mentioned as some form of technology restriction.

What are the overall attitudes of those in education concerning current digital etiquette practices? Based on the data collected, 74% of education students consider the incorporation of digital etiquette practices in education today ‘extremely critical’. Less education professors (56%) found the practice as critical. However, on a 1-5 scale with 5 being labeled as ‘extremely critical’, 17% of education students and 31% of education professors would at least rate the level as a ‘4’.

DISCUSSION & CONCLUSIONS

Discussion of the Findings

Technology use has indeed become common practice in today’s classrooms, for both educators and students alike. While technology use in the classroom has increased exponentially, there seems to be a lack of understanding of what it means to ‘teach’ responsible online behavior as part of the curriculum. Evidence of this is apparent in the fact that the majority of educators surveyed still consider the implementation of some form of technology restriction as a means to ‘educate’ students on proper technology use. While learning when it is appropriate to utilize technology and when it is not can certainly be viewed as ‘proper etiquette’, the focus needs to shift to a more in-depth understanding of exactly how one is expected to behave and represent themselves in online settings.
The data indicates that there is a fair percentage of both student teachers and education professors alike that understand the importance of the topic within education today; however, with limited literature on exactly how to incorporate such practices, educators are left to interpret the specifics on their own. While the literature and most participants surveyed agree that modeling appropriate behavior is the best way to educate both students and future teachers on proper digital etiquette practices, there still seems to be a need to define exactly what these practices should ‘look’ like. Until this occurs, the prevalence of and level at which digital etiquette practices are administered within education curriculums will vary significantly.

Implications & Conclusions

In my opinion, our survey data and the research indicates the need for today’s teachers (both pre-service and those in higher education) to be educated on Digital Etiquette practices in order to effectively educate their students on responsible online behavior. The desire and ability for educators to teach their students to be responsible digital citizens in this modern world seem to be disjointed. There seems to be a need to make general Digital Citizenship practices a priority, especially with the constantly increasing prevalence of different forms of technology devices/programs in the modern classroom. Analysis of the survey data also indicated that education professors have concerns about their students’ apparent inability to create a divide between professional and social forms of communication. This ‘inability’ could be impactful on their digital footprint viewed by not only peers but by future employers. Furthermore, the apparent lack of programs or software available regarding digital etiquette make it difficult for educators to determine where such lines should fall and how they should be presented.
to students of a different, more tech-savvy generation. As the need becomes more pressing, there may be a rise in the literature available on topics such as ‘digital etiquette’ and other terms related to digital citizenship in education today. As this occurs, the integration of digital etiquette practices in modern curriculums may become more commonplace as opposed to being the ‘novelty’ that they are today.
APPENDIX

SURVEY: Digital Etiquette Practices in a Digital World

1. Which of the following roles currently describes you best? Choose all that apply.
   - Parent
   - College Student
   - Public School Teacher
   - College Professor
   - Other (please specify)

2. What form of technology do you use most often, for personal purposes?
   - Smartphone
   - Tablet
   - Desktop Computer/Laptop
   - Other (please specify)

3. Does this form of technology differ from that used for professional purposes?
   - Yes
   - No

4. If you respond ‘yes’ above, please describe your reason for changing the form of technology in your professional life.

5. How often do you utilize some form of technology for personal and/or professional purposes?
   - 1-2 days a week
   - 3-5 days a week
   - 7 days a week
   - I don’t utilize technology

6. Are you familiar with the term ‘Digital Etiquette’ in regard to its use in education?
   - Yes
   - Somewhat
   - No

7. In your opinion, how critical is it that Digital Etiquette practices be included in today’s education on a scale of 1-5, with 5 being the highest?

8. Do you currently try to incorporate Digital Citizenship/Etiquette practices into your routine? (For Professors only.)
9. Please list/describe the ways in which you incorporate these practices with your learners, if at all. (For Professors only.)

10. If you do incorporate Digital Etiquette practices into your curriculum/routine, what specific programs and/or software do you implement? (For Professors only.)

11. Would you consider yourself ‘digitally responsible’? (For College Students only.)

   Yes
   Somewhat
   No

12. Do you feel that you were educated on how to be digitally responsible prior to entering college? (For College Students only.)

   Yes
   Somewhat
   No

13. Have you taken any courses in which Digital Etiquette practices were incorporated? (For College Students only.)

   Yes
   No
   Unsure

14. If you have taken courses in which Digital Etiquette practices were incorporated, can you list/describe the specific programs and/or software that were used for its implementation? (For College Students only.)

15. Who do you feel had the most impact on your current online behavior? (For College Students only.)

   Family
   Friends
   Teachers
   Other (please specify)

16. Please elaborate on your reasoning regarding the previous question. (For College Students only.)
17. What have you observed in your students regarding their digital responsibility and
etiquette? (For Professors only.)

18. Based on your opinions and experiences, how impactful is a family’s attitude toward
technology use on a learner’s online behavior? Please rate on a scale of 1-5, with 5
being the highest.

19. Please elaborate on your reasoning regarding the previous question.
REFERENCES


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Panel (Higher Education)
Different Cultures, Different Views: Introducing Film into Education
Chaired by Yoko IMA-IZUMI

This panel discusses the ways in which film should be introduced into class for
teaching a variety of cross-cultural subjects in humanities and social sciences. It is
true that documentary films have been providing evidence to establish history, but
feature narrative films, which are grouped as art and fiction in opposition to
knowledge and fact, can also be used to understand human activities and cultures.
Focusing on feature narrative films that are globally renowned, we will detect key
images and motifs in them to explore different views originated from different
cultural backgrounds. The films discussed include: *Black Rain* (1989, Japan), *Black
*A World without Thieves* (2004, China), *If You Are the One* (2008, China), and
Centimeters Per Second* (2007, Japan).

Yoko IMA-IZUMI, “Two *Black Rain* Films Revisited: Japan and America”
Lin ZHANG, “The Integration of Different Cultures in the Immigration Films”
Zhilixiang ZHANG, “The Chinese Family Value in Feng Xiaogang’s Films”
Xue SHAN, “Loneliness and Its Causes in Japanese Animation Films”
Ruojing JIN, “The Creatures in Fantasy: Miyazaki Hayao’s Animation Films”
“Two Black Rain Films Revisited: Japan and America”

Yoko Ima-Izumi
University of Tsukuba

This paper will connect two Black Rain films, America’s and Japan’s. The identical titles have been regarded as a mere coincidence. It is true that the two films may have nothing in common: the American Black Rain is a bloody action film focusing on conflicts between mafia and police while the Japanese film deals with the psychologically intense issue of the effect of the atomic bombings on ordinary people. But the two films bear a profound similarity to each other, despite the evident differences, in that they refer to nuclear fallout, especially black rain, of the bombings of Hiroshima and Nagasaki in August 1945 as a significant factor in determining human state of mind.

To illustrate the profound similarity, I will start clarifying where the two films stand in a sixty-year-old history of nuclear-bombing films made by the cinematic apparatus of both countries. I have drawn a chart to show side by side American and Japanese films dealing with nuclear bombing and its aftermath (List 1).

<table>
<thead>
<tr>
<th>Nuclear Films made in U.S.A.</th>
<th>Nuclear Film made in Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
<td><strong>Title</strong></td>
</tr>
<tr>
<td>1952</td>
<td>Invasion U.S.A</td>
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<td>*</td>
<td>Above and Beyond</td>
</tr>
<tr>
<td>1953</td>
<td>The War of the Worlds</td>
</tr>
<tr>
<td>Year</td>
<td>Film Title</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------</td>
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<tr>
<td>1960</td>
<td>Time Machine</td>
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<tr>
<td></td>
<td>*</td>
</tr>
<tr>
<td>1963</td>
<td>Dr. Strangelove: or How I Learned to Stop Worrying and Love the Bomb</td>
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<tr>
<td></td>
<td>*</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>1965</td>
<td>The Bedford Incident</td>
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<td></td>
<td></td>
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<tr>
<td>1970</td>
<td>Hiroshima Nagasaki August, 1945</td>
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<td>*</td>
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<td></td>
<td></td>
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<tr>
<td>1977</td>
<td>Damnation Alley (aka: Survival Run)</td>
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<td></td>
<td>*</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>Enola Gay: The Men, the Mission, the Atomic Bomb (TV)</td>
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<tr>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Year</td>
<td>Title</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>1983</td>
<td>The Day After</td>
</tr>
<tr>
<td>1985</td>
<td>Battalion</td>
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<tr>
<td>*</td>
<td>Hellfire: A Journey from Hiroshima</td>
</tr>
<tr>
<td>*</td>
<td>Hiroshima Maiden (TV)</td>
</tr>
<tr>
<td>*</td>
<td>Fat Man and Little Boy</td>
</tr>
<tr>
<td>*</td>
<td>Black Rain</td>
</tr>
<tr>
<td>*</td>
<td>Hiroshima: Out of the Ashes (TV)</td>
</tr>
<tr>
<td>Year</td>
<td>Film Title</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>1994</td>
<td>Genbaku Shi: Killed by the Atomic Bomb</td>
</tr>
<tr>
<td>1995</td>
<td>Enola Gay and the Atomic Bombing of Japan</td>
</tr>
<tr>
<td>1995</td>
<td>Hiroshima: Why the Bomb Was Dropped (TV)</td>
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<tr>
<td>1996</td>
<td>Independence Day</td>
</tr>
<tr>
<td>1995</td>
<td>Broken Arrow</td>
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<tr>
<td>Year</td>
<td>Title</td>
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<tr>
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<td>-------------------------------------------------------</td>
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<tr>
<td>1997</td>
<td>The Peacemaker</td>
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<tr>
<td>2000</td>
<td>Thirteen Days</td>
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<tr>
<td>2002</td>
<td>The Sum of All Fears</td>
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<td>*</td>
<td>White Light/Black Rain: The Destruction of Hiroshima and Nagasaki</td>
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<td>**</td>
<td>White Light/Black Rain: The Destruction of Hiroshima and Nagasaki</td>
</tr>
</tbody>
</table>

* asterisk indicates a film that was not primarily focused on the atomic bombings of Hiroshima and Nagasaki.
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Director</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>That Day in this Classroom: A Memory of Bombed Nagasaki 50 Years Ago</td>
<td>Toru Yoshikawa</td>
</tr>
<tr>
<td>1998</td>
<td>Kanzo Sensei (aka: Dr. Akagi)</td>
<td>Shohei Imamura</td>
</tr>
<tr>
<td>2002</td>
<td>Women in the Mirror</td>
<td>Yoshishige Yoshida</td>
</tr>
<tr>
<td>2003</td>
<td>Bomb Survivors: At the End of the World</td>
<td>Hitomi Kamanaka</td>
</tr>
<tr>
<td>2004</td>
<td>The Face of Jizo</td>
<td>Kazuo Kuroki</td>
</tr>
<tr>
<td>2005</td>
<td>Double Atomic-Bombing</td>
<td>Go Aoki</td>
</tr>
<tr>
<td>2005</td>
<td>Monuments to My Children</td>
<td>Masayuki Hayashi</td>
</tr>
</tbody>
</table>

There are many more films involving nuclear technology in general, but I have limited myself to the ones with depictions of, or references to, nuclear bombing.
which is characterized by heat waves, blasts, white light, and black rain. Film simply about nuclear power without bombing, such as *Godzilla*, will not come into my perspective this time.

I have added asterisks to indicate that films refer to the nuclear bombings of Hiroshima and Nagasaki in the first column, and that films are documentaries and not narrative feature films in the second column. Closely looking at the way asterisks are mapped, we will notice that there is the fundamental difference between the two countries: Japanese films are marked by the multitude of references to the atomic bombings of Hiroshima and Nagasaki. Almost all nuclear films made in Japan, whether they are documentaries or narrative feature films, have references to the horrifying bombing experience at Hiroshima or Nagasaki. American nuclear bombing films, on the other hand, tend to develop a plot of “unrealistic” nuclear bombing in a U.S. city or in some unidentified distant place. American films often seem to minimize devastating effects of atomic bombs on human beings. Lovers kiss each other near Florida against the backdrop of nuclear bombing without being injured in *True Lies* (1994). People in Los Angeles safely watch the explosion with binocular glasses, when invaders from Mars are smashed away with a nuclear bomb in *The War of the Worlds* (1953). Nuclear missiles are fired to demolish zombies in Kentucky, with no evacuation instructions for residents in the bombing area in *Battalion* (1985). In Utah, the couple are away only a hundred miles from the explosion of atomic missiles, but they are not harmed by radiation. Some films cover the cold war between the United States and the Soviet Union with the nuclear threat, as in *Dr. Strangelove: or How I Learned to Stop Worrying and Love the Bomb* (1964), *Fail-Safe* (1964), *Panic in Year Zero!* (1962), *Countdown to Looking Glass* (TV, 1984), and *The Abyss* (1989).

To show the “unrealistic” quality of American nuclear films, I need simply quote a short ending sequence from Stanley Kubrick’s *Dr. Strangelove*, where military high officers of both the Soviet Union and the United States are insane, and the most insane of them all, Major King Kong, fires the atomic missile against a Russian nuclear base. The destruction of the entire living world arrives (Fig. 1), but amazingly enough this destruction sequence is edited with sentimental romantic music and lyrics and is concluded with a flippant mood: “I know we meet again some sunny day.”
Shohei Imamura's *Black Rain* shows the common image of light and cloud but, at the same time, it shows a truly unique image of black rain. Ashes and dusts are produced in atomic explosion, and rain contaminated by them is sticky and black. It is the female protagonist, Yasuko, who is caught in this black rain on a boat. In the sequence of the bombing, both the uncle and Yasuko experience it. The former is on a train (Fig. 2) and the latter on a boat going back home (Fig. 3).

It cannot be too emphasized that the shot of the black rain falling on Yasuko is unique in cinematic representation of the bombing of Hiroshima. There is no other Japanese atomic bombing film that depicts black rain except *Women in the Mirror*.

Yasuko seems as healthy as before, and the aunt is happy about her darling niece. But there is a turning point in their life. The aunt finally sees an unmistakable sign of Yasuko's atomic bomb sickness. In the impressive sequence of Yasuko's hair falling out, her aunt has a heart attack and dies (Figs. 4-9).
At the aunt’s funeral (Fig. 10), everybody wears “black,” the traditional mourning attire (Fig. 11). This image of “blackness” comes into the film and dominates the screen every time a major character dies due to his/her exposure to atomic radiation.
It is not obvious whether Yasuko is dying, but she is certainly seriously ill. She knows that she was affected by the critically contaminated black rain and says: “The black rain was poisonous.” She has been feeling dull, suffering pain, and having little appetite. She collapses and is taken to a hospital by ambulance. She is still alive when the film ends, but her future is not very hopeful. Her ominous future is hinted at by the uncle’s monologue at the very end of the film: “If a rainbow rises now, a miracle will happen. Not an ominous white rainbow, but a beautiful, colorful one. Then she will recover, for sure.” This is a powerful paradoxical statement. The choice of black and white for this film is proved effective. A “beautiful, colorful” rainbow could never be shown in a black and white film, where any rainbow would look “white” which is defined as “ominous.” “Ominous white rainbow” is a logical consequence of the choice of colorlessness.

I have an interesting film clip to show you. It is a discarded color ending to Imamura’s Black Rain. In this color version, Yasuko lives for twenty years or so, using a wig for her hairless head and cosmetics for her spotted face, and on her religious journey she finds a group of stone statues, among which she recognizes the familiar faces of her aunt and uncle (Figs. 12-14).
Yasuko smiles and approaches the statues of her uncle and aunt, and places herself between them (Figs. 15-16). Suddenly she herself comically turns into a stone statue (Fig. 17). The tone of filmmaking here is that of black comedy. The point I wish to emphasize is that Imamura discarded this comical color ending. He decided to make his film faithful with the tragic reality. Japanese atomic bomb films cannot be like American, that is, they cannot be humorous and comical.

When we turn to the American *Black Rain*, the only American film that has a reference to “black rain” (except the documentary film *White Heat / Blake Rain* made by Japanese-American Steven Okazaki in 2007), we immediately notice that
The film begins with a parody of the Japanese national flag. The Japanese flag has a red sun against a white background (Fig. 18), and the opening sequence shows a red sun emerging out of the black (not white) frame, which visually emphasizes the significance of blackness (Fig. 19-21). The vertical, not horizontal, lettering of “black rain” also invokes Japanese-ness. The red sun dissolves into a round skeletal globe (Figs. 22-24), which has curious resemblances to the top of Atomic Bomb Dome in Hiroshima (Fig. 25).
The theme of the atomic bombing is introduced by a yakuza named Sugai. He develops a unique idea about the feelings of a Japanese who was exposed to the atomic bombing of Hiroshima or Nagasaki. Sugai emphasizes that the black rain has produced people like himself and blood-thirsty Sato, and blames Nick for the mental contamination. The skillful use of the angle shows that the two people begin to feel compassion for each other despite the different positions. The initial “low-angle” shot of Sugai makes him look dignified (Fig. 26). He in fact looks down on Nick, who is shot at “high angle” (Fig. 27), which makes him look powerless compared to Sugai. At the end of their meeting scene, the “eye-level angle” is used to shoot both Sugai (Fig. 28) and Nick (Fig. 29), with the indication that their power relation changes from “strong vs. week” to equal. They are not quite equal, of course, as is shown by the different shot size: Sugai remains to be shot in close-up, which gives, in cinematography, the utmost power to the person shot, and Nick is shot in no larger than medium-close-up. However, the slight change in the shot size while shooting Nick, from “medium shot” to “medium-close-up,” positively indicates that he gets closer to being equal to Sugai.
There is a fundamental difference in the way rain functions between the two *Black Rain* films. In the Japanese film, it literally falls on the bodies of people, leaving black stains on their faces, hands, or any exposed body part. The black stains make a prey of the host and proliferate like a cancer to cover the film screen by blackness, which is prominently shown during funeral scenes. In the American film, on the other hand, the rain functions as a metaphor of the U.S. occupation of Japan soon after the Second World War. There is not really any logical connection between the U.S. occupation and the existence of yakuza, but Sugai, who spoke of his experience of the black rain, blamed America for proliferating parasite-yakuza in the once peaceful Japan. This metaphorical use of the black rain is certainly distorted, but ironically it represents the way American feature films develop a fictional, unrealistic story of atomic bombing.

The uniqueness of Scott’s *Black Rain* among American atomic bombing films is mainly derived from the fact that it refers to the black rain falling on Hiroshima and Nagasaki and uses it to explain yakuza’s state of mind. No other American film ever ventures to involve itself in the issue of black rain. But ironically the very use of black rain reveals that the film is as fictional as any other American bombing films. The lack of a literal description of black rain makes the black rain scene look more metaphorical; it does not even clarify whether Sugai was caught in the black rain in Hiroshima or Nagasaki. The filmmaker Scott shows the lack of his
confidence by a repeated phrase, “I think,” in his interview: “The black rain called the ash that fell after, I think, Nagasaki. Nagasaki was the second, I think, after the first bomb.”

Japanese atomic bombing films, on the other hand, are literal when it comes to the depiction of the atomic bombings of Hiroshima and Nagasaki. The image of a flash and mushroom cloud is always inserted. Even the black rain, an unusual fallout to be depicted in a film, is used in Imamura’s film *Black Rain*. We have seen black rain drops gradually stain the faces of characters. It is not a mere coincidence that all Japanese filmmakers of atomic bombing films have some direct experience of atomic bombing. If they don’t, at least their relatives or close friends do.

I am not saying that American atomic bombing films are limited by their lack of direct experience. On the contrary, I have observed that America turns a serious film topic into a black comedy when realism does not go so well with it. This observation is applied to Scott’s *Black Rain* as well as Kubrick’s *Dr. Strangelove*. In an interview, Kubrick clarifies that he originally intended to make *Dr. Strangelove* a serious film of realism, but that he felt uncomfortable about it. This uncomfortable feeling by a filmmaker in face of a serious issue, of which he does not have direct experience, can possibly explain his turn to a black comedy.
“The Integration of Different Cultures in the Immigration Films”

Lin Zhang
University of Tsukuba

Abstract

The film can reflect the culture, the ideology and the history of a society, so it is also considered as the important material to record the past. Conflicts between different cultures have been always depicted in immigration films. This paper is mainly a comparative study of *The Gua Sha Treatment*, (a Chinese film in 2001) and *Gung Ho* (an American film in 1986). These two films described the life of Chinese and Japanese immigrants into the United States, and I will examine cultural similarities and differences between Chinese or Japanese immigrants and American people.

*The Gua Sha Treatment* emphasizes that it is impossible to persuade Americans to believe in a traditional Chinese medical treatment, and that Datong, the leading role, decides to be blamed by Americans in order to save his family bond and value. This film shows that Datong protects his family members and takes responsibility for what other members of his family have done.

*Gung Ho* is an American comedy film portraying the takeover of an American car plant by the Japanese. Americans and the Japanese regard the others culture incomprehensible. For Americans it is unintelligible that Japanese workers perform morning calisthenics every day and go to the river near the factory together to take a bath. For the Japanese, it is beyond comprehension that Americans do not have a strong working ethic and rely too much on the labor union.

Analyzing the messages conveyed by these two films, this paper clarifies what cultural differences and why the differences are finally integrated.

Full Paper

There are always the conflicts and the fusions of the different cultures in the films concerning the Asian immigrants in the United States. This paper is mainly about the comparative study of the Chinese film *The Gua Sha Treatment*, released in the year of 2001 and the American film *Gung Ho*, released in the year of 1986. These two films both pictured the life and work of the immigrants from China and Japan in the United States. The purpose of this study is to compare the features of Japanese culture, Chinese culture and American culture by interpreting these two
films to analyze the similarities and the differences between Japanese culture and Chinese culture against American culture.

*The Gua Sha Treatment* is designed to discuss the culture differences. Gua Sha has been used as a treatment for thousands years in China, and many people advocate it for their own experience. Like many ancient Chinese technique, it is useful but can’t be explained clearly. So it seems to be impossible to persuade westerners to believe. Then the culture conflict happened. Actually, Datong, the leading role, was not the person who did the Gua Sha Treatment to his son. It was his father. But Datong decides to be a scapegoat. This is one of the culture differences. In Chinese traditional culture, family bond is much more important than anything else. Though we admire those people who can put justice in the first place rather than family, it is another thing when that happens to ourselves. If a family member did something wrong, traditional Chinese people thought if they could bear the consequence for him, the family member would be safe. So it was kind of protection or responsibility for them to bear the consequences that their family members should have done. This film showed us was that many Chinese theories are based on sensibility and experience while American theories are based on evidence.

*Gung Ho* is an American comedy film in 1986. The story portrays the takeover of an American car plant by a Japanese corporation. It mainly view the friction between Japanese culture and American culture in the film. The Americans think it is ridiculous that Japanese people do morning exercises every day and they have their lunches with chopsticks. The Americans also feel ludicrous that the Japanese go to the river together near the factory to take a bath. On the other hand, Japanese people think the American workers have a poor work ethic and very lackadaisical to quality control. So they set new rules for their American colleagues: dismissing the labor union; lowering the wages and starting job rotation to make everyone familiar with every job in the factory as well as setting a seemingly impossible standard of efficiency and quality. Then culture conflict occurred. This film showed us was that Japanese culture is high-context while the American culture is low-context.

Through analyzing these two films and interpreting the progress of the integration of the different cultures, this paper discusses what is the culture difference and indicates the reasons why the different cultures finally be integrated. I will clarify the messages conveyed by the films through describing the culture differences of Asian immigrants in the United States.

The film *The Gua Sha Treatment* describes the living condition of the Chinese
immigrant Datong’s family in the United States. When Datong succeeded in his career, he wanted to take care of his father to fulfill his duty as a son, so he asked his father to live with them in the United States. One day, the grandfather used the Chinese traditional treatment Gua Sha to his grandson Dennis in order to bring down his fever. This Chinese traditional treatment would left some red spots on the back of Dennis, which was misunderstood by the American Association for the protection of children, so Datong was accused of ill-treated. In the film, the director portrayed a heroic Chinese traditional man who sacrificed himself for his family and for his parents through the camera lens.

At the beginning, it was the scene that Datong won the computer game design awards. The award hall was firstly shown by the camera lens from top to bottom. The participants in the banquet taken by the high angle long shot were impressed with their modesty and weakness (fig.1). However, in the next shot, the camera’s angle was completely changed.

The main character Datong was taken from the bottom up by a low angle (fig. 2), which made Datong look great, powerful and dignified. Datong lifted the trophy and made a speech with loud voice. “for 8 years ago, I was just an new immigrant, but now I’m standing here……this is my piece of American dream.” It is easier for an immigrant to feel the loneliness in a foreign country, especially for the man who is the breadwinner for his family, so the priority target for him is the success in career. Therefore, it is considered that Datong’s speech fully represented the male immigrants for their grave responsibilities.

In this scene, the director depicted the image of a successful male Chinese immigrant in the United States to foreshadow his individual heroic performance later.

![Fig.1](image1.jpg) ![Fig.2](image2.jpg)

The second scene is that the red spots left by the treatment Gua Sha on
Dennis’ back were seen and Datong was accused by the Association of Children Protection. Datong admitted it was him that did Gua Sha to Dennis instead of his father in front of the judge.

However, Jiannin, the wife of Datong, would like to tell the truth that his father was the person who did Gua Sha, but was stopped by Datong (fig.3). In the end, Jannin kept silent and Datong admitted that he did Gua Sha (fig.4·fig.5). Although he understood that if he admitted he might be convicted as guilty, Datong told the lie without any hesitation. A very serious look on Datong’s face was taken by close-up shot where always wore smiles to highlight the image of the individual heroic Chinese men who was ready to sacrifice himself to protect his own father.

Fig.3  Fig.4  Fig.5

From figure 6 to figure 8 is the very important scene where the attitude and feelings of Datong started to change greatly. It was taken by a long shot that Datong was bending his back in the corner of the room. So far, Datong was a highly proud and powerful person who would never want to show his weakness in front of the people except for his family. No matter what happened, he could always cope with a smile on his face and wasn’t allowed to fail by himself. Now he came to a breakdown for the first time (fig.6). Datong, who decided to lay down his pride and show his weakness to the public in order to protect his family and his son, was taken by three shots (fig.6·fig.8) at an eye-level angle. It pictured Datong’s eyes shining with tears by using medium shot (fig.6), medium close-up (fig.7), and super close-up (fig.8). They are the scenes the director would like to show the audience a father’s consciousness objectively that compared with the safety of his own son, the pride he had considered the most important as a man so far was nothing. This is also an aspect of Datong’s individual heroism.
The third scene is that Datong’s father finally knew what happened to Dennis, asked the address of Datong’s American friend Quinlin and told Quinlin that he was the right person who had done Gua Sha to Dennis. When he went back home together with Quinlin, he met Datong who was looking for him round and went into the room with Datong, while Datong’s wife Jenin was answering questions from Quinlin. It was taken by the POV shot and shot reverse shot.

The medium shot was used to take Quinlin who was looking at the father and son (fig. 9). It is the POV shot used in the next scene from the sight of Quinlin (fig.10) and it showed the back of Datong and Datong’s father in profile. The back view of Datong in figure 10 could be considered as a wall refusing to understand the different cultures completely. Contrarily, Quinlin was taken from the front fully in figure 9 and this full-frontal view could be considered as an implication that Quinlin went to China alone to find out the truth in the following plots.

When Quinlin learned the truth, he asked Jiannin why Datong had admitted with a question about Datong’s lie but no opportunity to ask Datong himself (fig.11). Jiannin said that because he was a Chinese (fig.12). Quinlin was looking at the back view of Datong and his father thoughtfully as soon as hearing the answer of Jiannin (fig.13). It was the back view of the father and son climbing up the steps from the POV shot of Quinlin (fig.14), which enhanced the sense of dignity sense of Datong and his father by a low angle and the low angle is also showed the Quinlin’s respect and attention to this Chinese culture as the first time he learned.
From figure 15 to figure 16 is the scenes that Datong walking out with Dennis was arrested for breaking the law. This scene depicted an image of an emotional man who sacrificed himself for his father, became a criminal for his son and left the house for his wife.

In the next plot, the truth of Gua Sha was finally cleared. Datong’s American friend Quinlin, who was shocked by Datong’s self-sacrifice spirit, went to China alone in order to find the truth of Gua Sha. In figure 17, the foreigner Quinlin and the native Chinese were both in the same flame, but it was
clearly divided into two layers of front-back or upper-down, which indicated the conflict between two different cultures. However, after Quinlin experienced the Gua Sha treatment in person and saw the same red spots on his back from the mirror, he eventually understood the Chinese culture Gua Sha which has existed for more than 2000 years. In the figure 18, the mirror was used as a prop reasonably putting the expression on Quinlin’s face and his back in the same flame to show the acceptance of the Chinese traditional treatment by leaving the red spots on the foreigner’s back. Contrary to the previous incongruousness, this was a hint of the cultural integration.

![Fig.17](image1.png) ![Fig.18](image2.png)

This is the most touching scene in this film.

On the Christmas Eve, Datong was dressed in Santa Claus, creeping up on to the 9th floor along the pipe outside the building with the full-hearted hope to meet Dennis. A long shot was used to show the action and position of Datong in figure 19 to indicate clearly that it was a very dangerous behavior. Datong chose to climb up the building that might threaten his own life without any hesitation, which reflected his strong feelings and loves to his family.

Figure 23 is a scene that when the safety of Datong was confirmed, the people there under the building began to clap hands gladly. Figure 24 is a close-up shot, which depicted a scene that the children, the head of the Association and the Quinlin’s family were all moved to tears by Datong’s behavior and his love to his son. As a result, the misunderstanding and conflict between the two cultures were eliminated. The most interesting thing here is that Datong, the representative of the traditional Chinese man, was wearing the red clothes of Santa Claus, the representative of the western culture, when he reunited with his family. The dressing is also the director’s trick with a special meaning to show the final integration of the Chinese and American cultures.
The Japanese collectivism culture in the film *Gung Ho*

In the last section, it analyzed the differences between Chinese and American cultures in the Chinese film and discussed the individual heroism of traditional Chinese men. In this section, it comes to analyze the differences between Japanese and American cultures.

*Gung Ho* is an American comedy film. The reason for choosing this film is that the Japanese culture shown in the film is totally different from the Chinese traditional individual heroism analyzed above. In this film, the Japanese collectivism and teamwork are mainly and clearly highlighted.

Some scenes would be chosen in the next paragraph to analyze the confrontation and cooperation between the Japanese and American cultures.
investigate the conflict and integration between the Japanese and American cultures.

The first scene was the comparison of the two fragments, which were the first morning exercise for the Americans and the ending scene of the film. Fig. 27–fig. 29 was the first morning exercise time after the reopening of the factory, while fig. 30–fig. 32 was the morning exercise scene at the end of the film. In the figure 27, it clearly showed the power condition as well as the superior and subordinate relations by the positions of the characters. Mr. Takahara which means the Japanese side, represented by Mr. Takahara standing in front of the frame and standing near the central line on the platform, was in the strong position. Compared with this scene, the positions of the characters in the figure 30 were slightly different. Takahara and Hand were standing side by side instead of front-back to show the equal relationship between them. Besides, the positions of all the employees standing on the ground were also changed a lot (fig. 31–fig. 32). Different from the mess in the figure 28 to figure 29, the formation in the figure 31 to figure 32 was very neat and ordered with a strong impact.

This comparison showed the mutual understanding and integration of the two confronted cultures.
In the next scene, the director indicated the collectivism of Japanese culture. A special expression called voice over was used in the opening, in which the voices appeared without the characters and the screen was dark (fig.33). It was the big dark screen that made the focus of the audience on the voices and strong indication as well as explanation to the next scene. In the next shot, the focus was shifted to the characters. The facial expressions of the character taken by the close-up shot reflected the importance of this character, one of the main characters, the Japanese factory director Mr. Takahara.

In the fig.34-fig.36 there were the scenes about the employee training in the Japanese factory. People gathered together to get training, which was not concerning the skills or the knowledge, but the spirit. Especially in the figure 36, when Mr. Takahara saw the man in the front was exhausted and fell down, instead of rescuing, the action he took was looking around and shouting slogans much more loudly, which clearly showed the Japanese culture that collective interests comes first. Furthermore, the content of the slogans was exactly the same as the words on the cloth posting on Takahara’s chest in the figure 36. Please pay special attention to the red cloth with the content. In Japanese, it’s read “協調”, translate into English is cooperation, which means the process of working together to the same end, which could be considered to indicate the Japanese culture the director wanted to show us.

Fig.33 Fig.34

Fig.35 Fig.36
In this film, the director described the differences of the Japanese and American cultures by Three shots each in figure 37 to figure 45. Japanese men would go to take a bath in the river together in every weekend to tough their minds. The Japanese stuck to their own traditions while the Americans kept a cool eye on it. In order to run the company more efficiently, Japanese installed cameras in the factory while the Americans were sniffy about it with thinking that it was the violation of human rights. When they were eating, the Japanese ate ra-men noodles by chopsticks while the counterparts laughed at them with imitation and vilification. The director of this film showed the unintegration between Japanese and American cultures very visually by these three scenes. Especially, it always started from the close-up shot of the Japanese behaviors in every scene to emphasize the Japanese culture. This kind of shooting technique has strengthened the description of culture conflicts.
There were conflicts, there were also mutual aid, and the image of a Japanese man was established. The ultimate goal is to find common roads and solve problems. Such a Japanese male statue is seen. This is the scene that the Japanese and American combined their efforts to achieve the production target. The director used the symmetry (fig.46-fig.47) to interpret the integration of the Japanese and American cultures perfectly.

This paper discusses the differences between Chinese and American cultures as well as the differences between Japanese and American cultures by analyzing and comparing the two films. Meanwhile, it also makes a comparison of Chinese and Japanese culture to conclude the reasons for the eventual integration of the different cultures.

The film *The Gua Sha Treatment* shows the Chinese traditional culture by describing the individual heroism of traditional Chinese men. The hero of the film Datong, as father and son, chose to sacrifice himself to take all the responsibilities. Datong falsely admitted to do the Gua Sha for his son so that his old father could avoid the punishment. And Datong also falsely claimed that he was fully responsible for the issue and his wife knew nothing about it so that his son could be taken care by his mother instead of living in a welfare home lonely. As a result, Datong lost his job as well as his family and he was forced to separate from his wife.
and son. Datong’s non-explain individual heroism, contrary to the American’s pursuit of individual rights, is the main difference between Chinese and American cultures that the film would like to show. This culture difference has caused the conflict between the two parties in the film. However, it is precisely the cultural difference that determines the happy ending of the cultural integration. Although Datong’s American friend still could not understand the traditional Chinese treatment of Gua Sha very well, the behavior of self-sacrifice to protect his old father and his little son has moved him to make this traditional American believe that Datong wasn’t the cruel father against the law. And so, he went to China alone to find the truth and came to the final mutual understanding as well as cultural integration. It is the self-sacrificing individual heroism of baring family responsibility in the Chinese culture that the director wants to show to the audience as well as the reason for the final cultural integration.

At the other hand, the Japanese culture shown in the film Gung Ho is totally different from the Chinese traditional individual heroism analyzed above. In this film, the Japanese collectivism and teamwork are mainly and clearly highlighted. Therefore, the film focused on describing a lot of scenes of Japanese people living and working in the United States, such as doing morning exercises every morning to enhance the sense of community and bathing in the cold river together on every holiday in order to build up willpower and improve the sense of collective honor. In order to ensure the benefits of the factory, Japanese chose to reduce the pay and break time. It is the Japanese collectivism culture of sacrificing one for the team that caused the conflict in the film. Like the analysis for the Chinese film mentioned above, American people advocate to protect the personal rights while ensuring the collective benefits, where lays the main difference between Japanese and American cultures in the film.

At last, it comes to compare the differences between Chinese and Japanese cultures shown in the two films. Although the self-sacrifice spirit could be found both in the Chinese traditional individual heroism and Japanese collectivism, Chinese culture emphasizes individual while Japanese culture lays stress on solidarity, which is the biggest difference between Chinese and Japanese cultures shown in the two films.

Reference
“The Chinese Family Values in Feng Xiaogang’s Film”

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This paper examines the Chinese family values by analyzing 4 of The Feng Xiaogang’s movies---The Dream Factory(1997), A World Without Thieves(2004), If You Are the One(2008), Back to 1942(2012). Feng Xiaogang is a Chinese film director who is well known in China as being a highly successful commercial filmmaker. Because of the character in his film shows typical Chinese people, Feng Xiaogang also be called as “The Chinese’s Director”. As a conclusion, the character in Feng’s films is representative.

Family is the core unit of society, with parents at the nucleus. In addition, there is a lot of social differences between Asian and Europe, and the root of these differences is from family structure and the family values between Asian and Europe. The another problem is that social system in China is based on the division of labor by gender. And this problem also based on the Chinese family values.

With these two facts, Chinese family values can be showed in Feng’s films by shot analyzing theory. And these family values can help to see the China’s society and social problems around gender, strata, and social function. Besides, it could be a reference that how to build a real Chinese character when making a film.

The historical and disaster film Back to 1942 is released in 2012. This film is based on Liu Zhenyun’s novel Remembering 1942, and it tells a tragedy about The Famine in Henan. People always call this tragedy as “The Chinese famine of 1942-43”. The Director Feng use hundreds of actors to build a huge stage to reproduce this history. The famine occurred within the context of the Second Sino-Japanese War and resulted from a combination of natural and man-made factors. 2 to 3 million people died of starvation or disease and upwards of 4 million fled Henan. Because millions of refugees died in this famine. So the theme of this film is about the disorganization of the family, humanity&instinct. And through these scene we can get a lot family values.

The Placement of Characters in a scene can show lots of things. Then, back to the film, through Fig.1 we can see the two actors are standing on the left side and middle of the screen, and the actress are leaning on the wooden cart. Focus on background, other actors are walking toward to the left to taking refuge from the famine. Through these actors who are moving, we can see that the main actors are stuck for some reasons. According to the plot of the film, here are two families in there, and they are waiting for one of member that did not come back from last night. Absolutely, they can’t just stop and wait here. So this problem must be solved as soon as possible. It is not difficult to imagine that how anxiously they waited. But the situation is still good in Fig.1 because the actors in background is still passing by. It means the main actors are not fall behind with other refugees. But when it comes to the next shot, the camera get high and faraway. In this extreme long shot we can totally understand what is happening. The trees without leaves, the barren land, the shabby house, which those sights can’t be seen in fig.1. Through the fig.2 we can understand how badly of the situation that characters are stayed in. What’s more comparing with fig.1 we can see the background actors are reduced in number. And we can clearly see that almost nobody coming from behind. As a conclusion, they’re already dropped out. So they have to give up waiting and take their departure again. The director Feng use a shot changing to build an anxious air.

Moreover, focus on the main character’s pose and position, we can see that the men are standing straightly and their sight line is higher than the women. On the contrary, women are looking at ground, leaning on the wooden cart. Although, there are three women on screen, but the space they take is small than two men. Absolutely, the males show more power than females. In the long history of China, treat women as inferior to men is widely existed in everywhere. Especially in rural area of China, sex discrimination is serious. This phenomenon exist in many other countries. In this scene, director Feng use the placement of Characters to shows a traditional Chinese family statue.

In fact, they are waiting here for three days with no result. So when a family member got lost, although the another family is unwilling to wait, and the situation is bad for them. But still, they will find and wait until the last.
In the previous paragraph, the placement of characters plays a very important role. But in figure 3 and 4, it will show another pattern. Because the feature of this film. The background of the scene is always barren land and refugees. It will be a challenge to director Feng that how to let the monotonous background tells more.

Then focus on fig.3, this scene is almost close to the end. These refugees were threatened by the gunshot and runaway, also the main actor Master Fan is one of them. But when Fan noticed that his grandson is dead in his arm, he stops running and just kneel on the ground. And now he is the only one who stopped. When all characters are running away but one stopped, it shows a lot of negative emotion about the one who stopped. What’s more, these characters is runaway for surviving, so it is not hard to imagine that Master Fan lost the meaning of living. (fig.4) Like the Fan stopped in the center of flame, his life also getting frozen.

And when it comes to the end of scene. Fan lost his whole family, the only thing he can do is looking for a death. According to the fig.5, the dutch angle with handheld shot can be seen. It shows a unstable of his mental. And the left side we can see corpse lying on the ground. And every refugee is moving toward for living, only Fan is moving backwards and towards to the corpse. According to these facts, we can clearly understand that Fan don’t want to live anymore. So the focusing of feet shows that he is not a human anymore, he is already became a ghost. Then the refugees warned Fan that moving backwards will just kill himself. But Fan didn’t stop and says that he wants to die nearly from homeland as close as possible. And the shot comes to the face of Fan, (fig.6)the firm faith to die can be seen through his face. Then, refugees back to the background again. As the result, Chinese humanism is based on their family. And the placement of characters in Feng’s Films have told lots of family values.
“Loneliness and Its Causes in Japanese Animation Films”

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Abstract

It is fair enough to say that Hayao Miyazaki is the greatest animation director of the world. However, Makoto Shinkai, known as his successor, is now the most popular one worldwide. In Kiki’s Delivery Service and 5 centimeters per second, two animations directed by them respectively, the loneliness of the characters is one of the most stressed themes. Loneliness, generally, refers to a kind of state where a person holds no contact, relationship or connection with others. However, even being in a community, differences between a desired social relationship and the reality can still cause loneliness.

In Kiki’s Delivery Service, the heroine’s ego heterogeneity contradicts with the new community and damages its orders. Her original identity is lost, yet the new identity is not vivid either, which makes her feel lonely: While 5 centimeters per second is quite another story, in which the hero, separating from others at his own will, is constraint by reality and the loss of beautiful memories, thus tasting the loneliness. Here, we will make shot analyses on the two productions above, to review different ways employed by the directors to express the loneliness of the characters, and the reasons for their loneliness.

Full Paper

When it comes to loneliness, generally, the concept is to create a character that lacks connections with the society or other people. Yet, in Kiki’s Delivery Service and 5 centimeters per second, two animations directed by Hayao Miyazaki and Makoto Shinkai respectively, loneliness is shown from a different perspective. Kiki, the heroine of Kiki’s Delivery Service, is a trainee witch who’s only thirteen years old. The story shows her experience of leaving home for independent practices. It depicts the challenges and loneliness with which Japanese adolescent girls tend to be confronted as they try to be independent in a new environment. 5 centimeters per second tells a story of Takaki and Akari. They had to separate from each other because of theirs parents’ job transfer, which set back their childhood romance. Before Takaki went for his study in a remoter place, they determined to meet each other for the last one. Characters in these two animations are not secluded in the
mountains, but live in a social community. However, both of them feel lonely and solitary. Thus, their loneliness is not caused by the environment, but rather by themselves. The analyses will focus on the expression of loneliness and the reason for such feeling in these animations, and illustrate different methods of the directors to portray characters’ loneliness.

Directed by Hayao Miyazaki in 1989, *Kiki's Delivery Service* is an animation adapted according to a namesake novel. It tells the story of a trainee witch named Kiki, who leaves her parents at the age of thirteen and grows up independently through practices. In this animation, Hayao Miyazaki didn’t express too much about the magic, but made it a unique skill of the character. In this realistic production, Kiki, a thirteen-year-old trainee witch on the adolescency leaves her living environment and explores new life styles in a strange environment by her own strength. During the process, she is bound to meet all kinds of difficulties, troubles and loneliness. Hayao Miyazaki fairly describes such difficulties and loneliness she meets in this movie.

In the middle phase of the movie, thirteen-year-old trainee witch Kiki leaves home with her talking black cat Jiji. When she newly arrives in the city of Koriko, she feels the coldness of its people, and her requests are rejected every now and then. Feeling there’s no place to live, Kiki, disappointed, comes to a park in Koriko (Figure 1 and Figure 2). In figure 1, the bronze statue in the center line of the frame, and the woods and streetlights beside make it a symmetry picture. Then the camera uses tilt method, gradually moves downward and stays at the position of figure 2. The stopping position of tilt is where the director wants to stress to the audiences. Thus, the background of figure 2 follows the symmetry composition of figure 1. However, for character arrangement, the director deliberately put all the characters other than Kiki to the left of the center line, but Kiki to the right of it. In figure 3, the director purposefully let Kiki sit in the shadow, while the edge of light comes through the side of her body. In a word, the symmetry composition is a symbol of peace and order of the Koriko City. Yet in such a city full of peace and orders, the arrangement of characters and light show the loneliness and disappointment of Kiki, for being rejected by the city community. Meanwhile, through voice-over method, the expression of other kids playing and laughing happily around makes Kiki’s loneliness even stronger.
After leaving the park, in figure 4 and figure 5, Kiki walks alone and aimlessly in Koriko, seemingly abandoned by the world. In these two figures, no other characters show up around Kiki. That is to say, the director intentionally created a totally deserted space. At the same time, longshots are applied to show the non-character and objective features, which makes Kiki’s figure very fragile compared with the surroundings. Kiki’s surroundings are not a natural space, but building blocks represent human communities. Such building blocks, dense and huge, show Kiki the cruelty and stress of social communities. Additionally, Kiki’s small figure seems much uncoordinated with the social community, which implies her expectations and dreams will be very hard to be realized in the community. This society of Koriko is too huge for Kiki.

In the next two shots, Kiki comes to a high place of the city and overlooks the
scenery. Figure 7 and figure 8 are POV shot of Kiki in figure 6. In Kiki’s subjective
POV shot, the camera remains still because Kiki stands still. But through pan
method, the camera, rotating from left to right, shows what she sees to the
audiences. In this subjective shot, all the scenery she sees is the same, which is the
dense building block. And the block, of course, is where Koriko people live. It infers
that sociality is a human nature, and the collectivized feature of Koriko. Yet, such a
community, such a collective society even doesn’t provide a place for Kiki, which
makes her loneliness very intensive. In addition, the POV shot, as Kiki’s subjective
view, shows her wish and desire that she is accepted by the city and adapts to the
society. However, the feeling of distance expressed in the longshot shows that, for
Kiki, there’s still a long way to go. Therefore, in the facet of social relationship, the
difference between Kiki’s wish and desire and the reality causes her loneliness.

Fig.6                                Fig.7

Fig.8

Summarily, just as Kiki arrives in Koriko, she feels the unescapable loneliness
in this major city. However, this is not because she is treated differently from the
others. The root cause lies in herself. Director Hayao Miyazaki has already shown
the reason through shots before Kiki arrives in Koriko.

When Kiki first sees the city of Koriko and flies to it on the broom of the
witch, the director first uses longshot in this sequence to show her flying in the sky.
Through longshots in figure 9 and figure 10, Kiki keeps a distance away from the camera, so the audiences can see the environment more subjectively. By this longshot we know Kiki is not alone when she is flying. The director deliberately adds other elements around her, which are the flying sea gulls. In mother nature, only birds can fly in the sky. It is quite obvious, in other words, that humans are not able to fly. Except Kiki, in this scene with flying sea gulls, the background sea, sky and sea gulls create a picture of nature. The scene, excluding all elements in human society, embraces Kiki who flies with the birds, and stresses that Kiki’s feature more belongs to the nature, and such feature contradicts with human society.

Fig.9  
Fig.10

In the scene that follows, we can be more clear about Hayao Miyazaki’s such intention. Figure 11 and figure 12 are POV shot of Kiki in figure 10, namely, that is what Kiki actually sees. Seeing a ship sailing towards her, she waves to the people on board. (figure 13). In the POV shot of this scene, the ship comes closer to Kiki, but as they are at different levels, they don’t physically knock into each other at last. As the ship sails away into the deep sea, the opposition of Kiki and ordinary people is expressed through space arrangement. Kiki can fly freely in the sky as she inherited the witch’s blood, yet ordinary people can only take voyages in the sea by tools (ship). The expression of the two different features and the opposite space further emphasizes the difference in characteristics between Kiki and ordinary Koriko residents.

Fig.11  
Fig12
Fig. 13

Scenes in figure 14 and figure 15 also show the opposition between Kiki and the human community. When Kiki flies over a port in Koriko on her broom, she can see workers operating at the port: Some are fixing sails, while others are carrying cargos. In this picture, the sky where Kiki is flying and the ground where people are working are clearly separated as two parts up and down. The opposition lying in the sky and the ground implies contradictions between people in them respectively, namely the conflict between Kiki and the city community represented by the port workers.

Fig. 14                               Fig. 15

Beyond that, there's almost no spare place among characters at present and the scenery arrangements in the scene of figure 14 and figure 15. This dense picture created by longshot contains non-characteristic and objective meanings. Such meanings are exclusive from natural environment impacts, yet focus on the meanings of social environment. As for the community built up by such a dense human society, neither does Kiki enter it, nor in fact, was her figure shot normally, quite small. High up in the sky, she passes the community quickly and runs through this scene. It is a very uncoordinated way of showing up, which implies she's inharmonious and isolated with and from ordinary people's live in the community below. However, this isolation is not so called complete isolation in relationship. When Kiki flies over this scene, the director puts standing masts and sails between her and the camera, which blocks her in her flying. Such arrangement shows that Kiki, who cannot be completely isolated from the society, must accept the norms of it
and be constraint by it. And after the scene, the camera is set high in the sky, overlooking the ground. In figure 16 and figure 17, Kiki zooms in from the remote place on the right of the camera, and finally flies beyond the frame higher into the sky. Since she flies towards the camera, her figure grows larger and larger. Through such movement of the character, Kiki flies away from the crowd, the distance between her and the port’s people at the upper right of the frame gradually gets larger, which shows her isolation and difference from the crowd representing the social community. This is also a special design of Hayao Miyazaki in camera angle arrangement.

![Fig.16](image16.png) ![Fig.17](image17.png)

Later, Kiki flies to the upmost of the city, when she looks down to the center of it, the scene made her halt with astonishment. In the objective shot of the longshot in figure 18, the city scenery in the background is composed of two parts, the upper one with traffic jam, and the lower one with crowded people on the plaza. No matter which, the exaggeration is used to express the same idea, which is the expression of community. Yet Kiki, at the close shot, floats alone in the sky. The conflict of space between close shot and remote shot in figure 18 repeatedly shows the opposition between Kiki and the social community.

![Fig.18](image18.png)

Through the expressions of pictures, the two conflicts between Kiki and the Koriko community after her arrival are vividly presented. The difference between her and the ordinary people created this opposition and uncoordinated relationship.
Hence, she cannot rely on this community, that's why she cannot fit in this new environment when she arrives in Koriko. That’s one of the causes of her loneliness.

Apart from the conflict between Kiki and the social community, she cannot comply with its rules, either. Occasions are that she breaks the community orders. When Kiki comes to Koriko and feels its density, she is greeted by an old man at the clock tower window. At the same time, Kiki inquires the old man whether any other witches have arrived in the city. In this scene (figure 19), Kiki comes into the frame from the left to the right. But she doesn’t fly completely near the clock tower, just halts in the sky at the left side of the frame. Through the composition, we clearly see the shot separated in two halves, which are the sky on the left and the clock tower on the right. The sky is totally natural scene, and the clock tower is a man-made architecture. The middle of the frame is the interface of natural scenes and human architectures. By this setting, the director creates conflicts between the left side and the right side. In the shot of this conflict, Kiki floats in the sky on the left, whilst the old man who greets her stand on the clock tower from the right. According to the forgoing analyses, the distance between Kiki with natural characteristic, and human society is shown by the shot. However, more important is the conflict between Kiki and the clock tower on the right.

Fig.19

In figure 19, to say Kiki is in conflict with the clock tower, we'd rather make it more accurate to say she’s in conflict with the huge clock. Clock is a tool that shows time, created for people's well-being. From the concept of user group, it can be sorted as “private time” for personal use and “public time” for common use. Obviously, the clock tower in figure 19 is not built for any individuals for “private time”, but rather for all Koriko people to show the “public time”.

In Clock Tower – Carve the Time of the City by Tadashi Yokoyama, there is an expression of public time that goes:

In the manual proposal of the clock tower in Lyon city council, it says: If a
clock is set in a city that allows everyone to hear its ringing, it will bring comfort to the people and create a public order. ²

Public time symbolizes public orders of the community. It’s a common requirement in most societies to be on time. For example, for productions of a company, the most important thing is workhour and deliver time. Working hours in companies, class hours in schools, operating hours of public traffic are all restrictions of individuals in social communities. Hence, the symbolic meaning of public time is tightly combined with public orders.

In this movie, Kiki keeps distance away from the clock tower that represents public order, which shows her resistance to it, and causes of events that follows, namely, that is the breaking of public orders. When Kiki decides to land in Koriko, her flying in the air of the city is shown in figure 20. And through this whole composition we could see cars running left and right. Buildings on two sides of the frame make the shot a perfect symmetry, which shows the peace and orders of the city. However, Kiki’s presence breaks this symmetry symbolizing the peace and orders of the whole city, which also implies her damages to the organizational rules. Afterward, Kiki’s flying interferes with the city traffics and she receives education from the police (figure 21). In this shot, lines applied to the background building walls are designed as neat straight lines, representing stereotyped social rules that people must obey. But Kiki shows resistance to the order education.

In her flight to Koriko, Kiki hears the ringing from the clock tower. In this scene, Kiki looks towards the direction of the clock (figure 22). The next shot shows what she sees, which is her subjective POV shot. This POV shot applies tilt method, and it moves down from figure 23 and stops at figure 24. Tilt is a way to draw attention, the halt after movements is the very important scene. In Kiki’s POV shot where the camera halts, the clock tower of Koriko lies in the middle of the screen.

² Clock Tower – Carve the Time of the City, Tadashi Yokoyama, Apr, 25, 1986, kajima-publishing.

It’s not related to the style of the set position. Even if the style is not high or specially protected by rules, public clock symbolizes the identity of a city with shared fate. With times passing by, the symbolic meaning of bell tower is gradually taken over by clock tower.\(^3\)

That is to say, for a society, a building like bell tower or clock tower symbolizes the common sense of belonging of it. When Kiki sees the clock tower of Koriko, she says a line: “that is a clock tower, how I wish to live in it”. It clearly shows her willingness to adapt to the society and build up an identity.

However, her will is totally at the other pole of reality. In figure 25 we could see, when Kiki first arrives in Koriko, she uses her mother’s broom and her father’s radio. These tools show her pride as a witch and her previous identity. In the second half of the movie, when she loses her magic and her only pride as a witch, the ability to fly, Kiki loses her old sense of belonging, yet fails to form a new identity in the Koriko society, and that’s the time when she feels unbearable loneliness (figure 26).

\(^3\) *Time and human – a history of American Time*, Michael O’Malley [written], Heigo Takajima [translated], shobunsha published P.190.
At the end of the movie, she manages to fly again by her own power, saves her friends and resolves the city crisis, she doesn’t ride on a witch’s broom but a brush borrowed from a citizen. Therefore, the weakness of her identity is a main reason for her loneliness when she arrives in a new city of Koriko.

Fig.25                               Fig.26

5 centimeters per second directed by Makoto Shinkai in 2007 describes the love between the hero Takaki, a student in Tokyo, and the heroine Akari. After graduating from the primary school, Akari has to transfer to Tochigi middle school for her parents’ sake, and the two will never meet again. When Takaki enters middle school, he receives a letter from Tochigi. Since then, the two start this long-distance relationship through letters. In Takaki’s perspective of this relationship, the atmosphere is lonely and distressed throughout the movie. For Takaki, his loneliness is expressed differently from Kiki’s Delivery Service. If we consider the theme of Kiki’s Delivery Service is growth, Kiki’s loneliness is caused by this growing process, Then the theme of 5 centimeters per second is solely loneliness.

The major technique deployed to express the theme of loneliness in this movie is monologue. In the movie, dialogues between characters are limited, and the driving of plots is the monologues. Takaki’s sadness, with long monologues shows his desire to express his inner feelings and his isolated state with no connections and relations with others. This isolated atmosphere of social reality is a major technique of this movie to express the loneliness.

However, in the situation of sad monologues, Shinkai, the director, also uses camera to express people’s loneliness. The first is to create a totally deserted space with only Takaki in it. Like figure 27 and figure 28 and figure 29, nobody shows up in Takaki’s surroundings. Figure 29 is the first shot of this movie. In this shot, Takaki newly receives heroine’s letter and stands at the mailbox downstairs. As he receives a letter from the one he misses, Takaki doesn’t feel any hint of delight. Almost all the elements, including camera, characters presented and backgrounds
are still, which created such effect. Meanwhile, the hero doesn't face forward the camera in this longshot. The lighting management also puts Takaki in the shadow. Such setting of the tone shows great agony and depression. And the utterly deserted space of the hero shows his deep loneliness as well.

Similarly, the shot before figure 30 is the close-up plate of a classroom door. On the plate it writes “Student Council Room”. Council Room is a place of exchanges, however, in figure 31 that comes, we see Takaki completely alone in such place. Takaki is put in such a dim, deserted place while reading the letter from Akari, there are no dialogues, and only monologue of the content in heroine's letter. Thus loneliness and depression are spread in the scene. Completely deserted spaces are often seen in the movie. figure 32 and figure 33 shows the classroom at different times. In these scenes, no other people come on stage; only through the plot can we infer that Takaki comes in this scene. Also in figure 34, Takaki sits alone in the longshot of the deserted classroom. The objective of longshot shows his loneliness. In the middle phase, Takaki takes a train to meet Akari. However, heavy snow occurs and blocks his way. When anticipating that it is impossible to meet his missed one in time, Takaki feels great loss and loneliness. Inside the train, longshot is also applied as an objective way to show Takaki’s surroundings, which is totally deserted (figure 35). In this sequence, Takaki’s monologue goes:” I don’t know why, but I feel Akari’s loneliness in her letter.” Along with the monologue, the director
deploys graphic match (figure 36 and figure 37) to show Akari and Takaki are in a similar suffering, which is loneliness. Analyzed by the projective theory in psychology, Takaki casts his loneliness on Akari through the monologue and graphic match.
The loneliness of the hero goes through the whole story in *5 centimeters per second*. And it’s also one of the themes in this animation. The reason for Takaki’s loneliness first lies in his relations with other people. The animation shows Takaki subjectively separates from others. Judging from shots, all shots regarding Takaki and other people throughout this movie have one thing in common, that is the way other people shows on stage creates a sense of distance. For example, in the sequence of figure 38, Takaki’s mother comes on stage and says her only one line to him. Takaki makes no respond to it, and the camera doesn’t use shot/reverse shot to show their normal relationship, but uses longshot to show the small profile of his mother and her distance to the camera. Moreover, she doesn't face directly the camera, which makes it hard to see her face clearly. Yet this is a scene in Takaki’s memory, Which is a subjective shot of Takaki. It is certain that Takaki has a sense of distance away from his mother, which represents the character of parents, in his subjective view. However, his parents never come on stage in fact.

![Fig.38](image)

Besides, Takaki has the same attitude towards his friends. In figure 39, for example, the camera shows his relationship with school mates. That camera focuses on Takaki’s face and the others around him become defocused. And the friends’ faces are not put in the frame, which shows an unharmonious relationship. Also, in this sequence of figure 40 and figure 41 of the memories, the camera shots Takaki sitting alone in the classroom from the back side. At this moment, a classmate comes in and talks to him. The camera crosses the 180°line and shots them in the front. This expressing method strongly implicates the uncoordinated relationship between characters. At the same time, the camera moves out of the classroom and shots their dialogue continuously till it ends. Such spatiality and timing of movement also clearly show the distance between Takaki and his friend.
As Takaki isolates himself from others, he is in great hope of meeting heroine Akari, the one he misses, again. Before their meeting, in Takaki’s perspective of the plot, Akari almost never shows up, only her letter appears in fact, while all the letters from Akari to Takaki are expressed by POV shot. What’s more, all shots used the technique of close-up, even super close-up like figure 42 and figure 43. Beyond that, the same method is used in the shots of Takaki’s response to Akari, and the shots of him marking on the train map (figure 44 and figure 45). That means, in Takaki’s perspective of the plot, all shots related to Akari are processed by close-up, even super close-up to show Takaki’s missing of Akari and his wish to get close to her. This is Takaki’s desired relationship.
However, the camera’s expression of real scenes in the movie contradicts with his wishes. Through long monologue that shows the memory of Takaki and Akari, the camera also presents Takaki’s living environment. For example, through the description of city scenery in figure 46 and figure 47, Akari becomes lonely in the space of school as he transfers from the old one. In these scenes (figure 48 and figure 49), we could see two things in common, which are longshot for expression and totally deserted space. According to former analysis, deserted space shows Takaki’s emptiness and loneliness in the reality. At the same time, the use of longshot as mentioned before, are completely different from the close-ups or super close-ups for Akari related things. From the remote & the close, and longshot & super close-up, two different shot sizes create a way of conflict. Through interacts between these two shot sizes, we may clearly experience the opposition between the present and the past in the movie. For Takaki, living with Akari is happy. However, this happy memory may never come to being in reality. The loss of happiness in the old times also causes Takaki’s loneliness.
Further, the differences between monologue and the camera also imply the same case. For a sequence of shot in figure 44 and figure 45, Takaki buys the timetable and map of the train; he has decided to transfer to a remoter place for high school study, and hopes to come to Akari’s place and meet her beforehand. Through camera movement in figure 44 and figure 45, it shows Takaki marking on the train map from the place he lives to the city Akari lives in. These shots all follow Akari, the heroine, so the director uses super close-up to express it. However, in the monologue at the same time, Akari’s lines are filled with shock of Takaki’s moving towards a remoter place, and the chance of never meeting again. Expressions of never meeting again in the future and the preparations for their last meeting right now in the monologue, which conflicts with each other and also emphasizes the theme of emotional loss. This loss here is different from the former, not of the happiness in the past, but of the hope of the future. While losing happy memories of the past, Takaki also loses hope of the future, thus right now, he feels intense loneliness. Such strong sense of loss is one cause of Takaki’s loneliness.

On the other hand, his loneliness rests in restrictions of the real environment. In figure 50, Akari’s letter, through close-up shot, expresses Takaki’s missing and yearning of Akari as explained before. Takaki was reading the letter in the shot before figure 51. By analyzing his behavior, we know figure 50 is his POV shot, and his subjective shot also shows his thoughts. However, there is a longshot, namely figure 52, in this sequence. And the direction of the longshot is from the back side of Takaki, which makes the character’s face indirect forward to the camera. Such effect shows the character’s feeling of loss and pessimism. The objective and non-characteristic feature of the longshot vividly present the environment of the character and their relationship. In figure 52, Takaki sits alone in the classroom, his figure very small and inharmonious with the environment because of the remote shot. Especially the reflects of the window frames from the sunset, their shadows cast to the ceiling and floor of the classroom. Because of the net structure, the
shadows look like a cage that locks up Takaki, creating an image of him restricted by the space. Such expression also reflects the real situation, where Takaki is trapped, unable to meet his beloved Akari. And it also complies with the plot of Akari, who is unable to be independent as a high school student, has to separate from Takaki because of her parents’ job transfer. This separation causes deep loneliness. Hence, restrictions of reality is another cause of Takaki’s loneliness.

In this movie, the same expressions also appear in figure 53. In this figure, Takaki is reading Akali’s letter, the net-shaped window behind him hints a sense of constraint. On the way to their last meet, Takaki’s train was trapped in heavy snow. Inside the train, Takaki is lost in great loneliness for unable to meet Akari for the last time because of the train delay. At this moment, the net for luggage on the train appears in figure 54. Through its net lines we see the remote scene of top lights of the train cabin. In Japanese, “Akari” connotes the meaning of light. Thus in figure 54, Takaki and Akari are separated by the net, which resembles the fact of Takaki being trapped by the train, and the loneliness caused by losing chance of meeting Akari again.
From the analysis about the shots above, we can clearly know both director Miyazaki and director Shinkai happen to coincide on showing the loneliness of modern people. The loneliness expressed by the two directors are different. Kiki has a unique character as a “witch”, which separates her from ordinary people and makes her isolated from social community. What’s more, her pride in her identity as a witch caused damage to the social orders of the new community. Also because she is overprotected by her parents in the old family, she loses her original identity in the new community. At the same time, the belonging of the new community is yet to form, which causes her loneliness. While in 5 centimeters per second, Takaki’s missing of Akari makes him totally isolated from others. As he lost the happy memories of the past with Akari, his dreams are constraint by the reality, which makes him lonely. Neither of these two kinds of loneliness are caused by close objective surroundings, but by their dreams and the difference between their desired relationships with people and the society with the reality.
Creatures in Fantasy World of Hayao Miyazaki Animation Films

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In animation films, fantasy and reality are smoothly connected, and creatures in fantasy world play significant roles just as main characters. There are a variety of creatures live in fantasy world of Hayao Mizayaki animation films, which have well-rounded characters with individual “personalities” and abilities, such as speaking, communicating, thinking, and so on. Most importantly, they are created with various cultural backgrounds, especially Japanese culture. In his own book, Turnaround 1997 to 2008, Miyazaki says that, he pays much attention to the representation of Japanese history and culture. Japanese traditional ideas such as animism, the forest culture, and the environmental conservation are also embodied in his animation films. In my presentation, I will examine two Miyazaki’s animation films in different creation periods, *My Neighbor Totoro (1988)* in earlier stage, and *Spirited Away (2001)* in later stage, to analyze the images of the creatures, their cultural backgrounds, also their deep implications.

Animation film has become more and more popular in recent years. In animation films, fantasy and reality are smoothly connected, and creatures in fantasy world play significant roles just as main characters. There are a variety of creatures live in fantasy world of Hayao Mizayaki animation films, which have well-rounded characters with individual “personalities” and abilities, such as speaking, communicating, thinking, and so on. Most importantly, they are created with various cultural backgrounds, especially Japanese culture. In his own book, *Turnaround 1997 to 2008*, Miyazaki says that, he pays much attention to the representation of Japanese history and culture. Japanese traditional ideas such as animism, the forest culture, and the environmental conservation are also embodied in his animation films. In my presentation, I will examine two Miyazaki’s animation films in different creation periods, *My Neighbor Totoro (1988)* in earlier stage, and *Spirited Away (2001)* in later stage, to analyze the images of the creatures, their cultural backgrounds, also their deep implications.

*My Neighbor Totoro* is a 1988 Japanese animated fantasy film written and directed by Hayao Miyazaki. The film tells the story of two young girls, Satsuki and Mei, and their interactions with friendly forest spirit totoro in 1958, postwar rural Japan. The film won the Kinema Junpo Award for Best Film in 1988. This film and
its titular character, totoro, have become world-famous cultural icons.

In the scene about the cat bus, a small dark vague image with car headlights appeared in the center of the frame. Long shot was used here to attract Satsuki and Mei, as well as audience's attentions. As the image getting closer, the girls recognized that it was not a common bus and were astonished by the weird shape. Figure one to four were shot in the “cat bus--girls--cat bus--girls” order, used the reverse shot, to emphasize the girls’ expressions to this big monster. And then the camera gave the cat bus a close-up to show its appearance, especially the horrible smiling face, which was too big that broke out the frame, and brought a extraordinarily terrible effect. As a contrast, the girls’ scared faces were also showed with close-up shot. In figure eight to ten, the camera kept still focusing on the cat bus and paid much attention to the bus door changed from window, which introduced the function of the cat bus as well. According to this scene, we know that the cat bus is not a bad monster but a kind vivacious cat, on the basis of its excited expressions and warmhearted helps for its totoro friend.
The character Totoro comes from a mysterious image of Japanese children’ stories, which circulate in Miyazaki director’s home town, that totoro is a existed forest spirit which can only sight by children, because they are pure enough. On the contrary of totoro, the old school bus shaped cat bus is a horrible moster in the first sight. But in my opinion, it is a symbol of horror which every kid will feel in his childhood. Things not always have beautiful and kind outside, but they may not as ugly and scary as they look like. To accept and get along with those things is also one of the most important education for children. Furthermore, I think this character may also be a salute to the worldwide famous character Cheshire Cat in Alice in wonderland and Japanese children’story writer Kenji Miyazawa’s story.

I will turn to *Spirited away*. It is a 2001 Japanese animation film also written
and directed by Hayao Miyazaki. This film tells the story of Chihiro, a common ten-year-old girl who accidentally enters the spirit fantasy world with her parents together. After her parents eating forbidden food and were transformed into pigs by the witch named Yubaba, Chihiro takes a job working in Yubaba's bathhouse, trying to find a way to free her parents and return to the human world. The film won the Golden Bear at the Berlin International Film Festival in 2002, as well as the 75th Academy Award for Best Animated Feature in 2003.

The scene I will examine is the final battle between Chihiro, and the monster Kaonashi. In the opening, the camera panned across the scene from Chihiro to Kaonashi, which emphasized the tense atmosphere of “little girl versus big monster”. On the contrary of the extremely magnificent ukiyoe background setting, big black faceless monster Kaonashi, as well as the food rubbish, becoming the symbol of the vile lust and the ugly greedy part of humanity seemed to be much more degenerate. Moreover, in figure thirteen to sixteen, reverse shot was used to show the comparison between Chihiro's equanimity and Kaonashi's unstable state. After Chihiro asked the question Where is your home? Don't you have any friends or family? Kaonashi was beaten instantly. In this close-up shot, he retracted his head into the belly and become a giant black ball. Head is the symbol of oneself, and Kaonashi could not face himself in front of those questions because its belongingness and loneliness, which also indicated that Chihiro was fearless and equanimity because she upheld the faith to save her parents and friend Haku. That's where she belonged to, and that's why she had the confident to win.
On conclusion, the creatures in fantasy world of Hayao Miyazaki animation films in earlier stage are concrete objects who have the nature as well as Japanese traditional culture as their source, while abstract image creature characters appear.
in later stage’s films, which are created as the reflection of the humanity and human nature, good and evil. This change indicates that, although nature and Japanese traditional culture are part of the main focus of Miyazaki animation films, as the creation works turning to the later stage, the society circumstance also becomes more serious. To face this situation and find the answer to solve the problem of the relationship between human and nature, director Miyazaki does a lot of deep thinking and embodies them in his creations. And that is the glamour and fascination of Miyazaki animation films.

References


Influence of Motivation on Performance at University level of Education: A case of
Universities in Kisii County, Kenya

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Introduction

Every concern requires physical, financial and human resources to accomplish the goals. It is through motivation that the human resources can be utilized by making full use of it. Building willingness in teachers and students to work can do this. Few studies in university education are available that show effect of motivation on performance of both teacher and learner. The study use self-determination theory based on quality of motivation that differentiates between autonomous motivation (AM) (intrinsic motivation) that originates within an individual and controlled motivation (CM) (extrinsic motivation) that originates from external sources. The study sought to establish whether relative autonomous motivation (RAM) intrinsic motivation) a measure of the balance between AM and CM, affects academic performance through self-study strategy and supervised study effort.

Background

Motivation is a powerful tool that enhances students’ performance to reach their educational goal. It accounts for the difference between waking up before dawn to study the topics one did not understand or not (Clear, 2016). At times it might be easy for students to get motivated, and do insightful tasks, while at other times it is impossible, which may lead to procrastination. Motivation influences the level of academic performance through the mediation of the effort of study during elementary, secondary and university education. Oftentimes majority of students struggle to look for the motive to assist them reach their goals. Without it, they end up wasting too much time and energy on irrelevant concerns that do not add value to their effort in achieving their goals.

There is growing research evidence showing that motivation is critical in influencing study strategies, academic performance, adjustment to situations and students’ well-being in various domains of academic work and achievement and affects every aspect of school-life. It manifests in students’ choices of learning assignments (Peklaj & Levpušček, 2016) and the effort
they dedicate, persistence they show, attendance of classes, extra-curricular activities and systems of coping with obstacles they encounter in the learning process. Evidence from research studies have shown that achieving goals, interest in courses and success expectancies are positively related to the final grade (Ballado-Tan, 2014). Thus, motivation is both an internal and external force that drives students to achieve their own goals. It is what drives a student to perform well in education. The concept of motivation also includes the students’ reasons for learning and the learning achievement goals they set for themselves.

Intrinsic and extrinsic motivations have their strengths and weaknesses. The extrinsic motivation maybe easy to achieve through a reward system but intrinsic motivation can be difficult to tap into because of its personal nature. In some cases, students may be dealing with difficulties in their personal lives that use up their energy leaving little room for academic enthusiasm. In those cases, some interest in the subject can often be encouraged by a teacher willing to show concern for the student. One first step is for the professor to listen to the students, get to know them, their interests, and their dreams. Using such “data” points, the professor can tailor curricula to help hook them into academic work. Cultivating and maintaining intrinsic motivation is a life-long skill that all students can develop. Adults often have tasks at work or home that must be done even though they will receive no outside payment or recognition. Learning to be satisfied with a job well done is an important part of growing up.

Extrinsic motivation is much easier to establish once the teacher knows what the student is willing to work for it. Whether it is recognition, a bit of extra free time or some sort of prize, students usually have a reward they value. A reward system can teach students to put in hard work in order to get a prize, another life skill. However, a downside to extrinsic motivation is that it can get expensive for the motivator. The real problem, though, is that extrinsic motivation works in the short term, but it does little to kindle the fire of curiosity that leads to lifelong learning. It may be that the book a teacher bribes a student to read hooks them into reading; however, there is little guarantee of this. Better to find books that link naturally with the student’s interest and provide multiple entry points for that student to engage in the topic in a meaningful and relevant context.
Autonomous motivation (Intrinsic motivation) is the behaviour driven by rewards that come from one’s inward feeling (Cherry, 2016). According to (Coon & Mitterer, 2010), intrinsic motivation transpires when we act without any obvious external rewards. We either just enjoy an activity or view it from an opportunistic perspective to explore, learn, and actualize our potentials. In addition, the motivation to engage in behaviour arises from within the individual because it is intrinsically rewarding. Consider when reading a social sciences article. If one reads a social sciences article because he is interested in that sector of education and or only just wants to know more about the topic; then he is acting based on intrinsic motivation. One's true enjoyment of activity offers enough rationale for their behaviour. Researchers suggest that people get very creative when they are intrinsically motivated. In as much as extrinsic rewards may increase productivity, the quality of the work is mainly influenced by intrinsic factors. If one is doing something rewarding, exciting, and challenging to self, then he or she is prone to come up with more creative solutions. Intrinsic motivation is likely to increase if students pursue objectives that have a personal attachment, that relate to their self-esteem; when something in the environment attracts their attention and when something about the activity stimulates the person; when they strain to control themselves and their environments and want to determine what they chase; in situations where people gain contentment from helping others wholesomely and in cases where they can compare their performance favourably to others; and, enjoy acknowledgment of their achievement by others.

Autonomous motivation (Intrinsic motivation) holds many aspects in students’ interest to school work, a reason to study, believing in one to have what it takes to do well in school plus ability and the knowledge required. Factors that demean intrinsic motivation include when the student finds schoolwork "boring" or not “simulating”, when the student has the impression that schoolwork is always the same thing daily. Sometimes the student loses motivation because he thinks he cannot invest in education or does not have the energy to study and lacks the effort required.

Finding a perfect balance between extrinsic and intrinsic motivation for a student can be very daunting. In a positive light, every student can be motivated in one way or another. Professors have a massive task to ensure that their students are motivated and in addition,
inspire a behaviour that helps them to aspire to be life-long learners. Motivation pushes a student through behavioural modification towards a particular goal that they might have either set for themselves or have already been set for them. The motivators could result in causing the difference of a student finding study time instead of rote memorising for a test (Wilkinson, 2016). Motivation enhances the student’s ability to follow through what they do even when they think of themselves as incapable. Motivation also increases pride in a job that is done well. Students who have the motivation towards academic success tend to have genuine pride in their effort and recognition. These students are often leaders and seek for respect from their seniors and classmates. The mindset also keeps students’ interest in continuing with the higher education geared towards post graduate and post-doctorate studies. It is, therefore, critical for every learner to be motivated.

While motivation is often a challenging task for teachers, the rewards of having students who are interested and eager to learn make the hard work worth the effort. By combining intrinsic and extrinsic motivators, professors can assist students learn the subject at hand as well as valuable life skills. Few studies in university education are available that show effect of motivation on performance of both teacher and learner.

Method

This study sampled 80 third-year education students. The students completed a Likert formatted questionnaire on a five-scale point. The students rated their level of agreement with the statements that were given. Seven (7) questionnaire items were framed to probe AM while three (3) probed CM and the remaining five (5) items were used to probe both sources of motivation. The questionnaires were coded, scored and entered into the Statistical Programme for Social Sciences (SPSS). Analysis was done using both descriptive and inferential statics in order to answer the research question.
Results & Discussion

*Table 1: Mean score per question*

<table>
<thead>
<tr>
<th>Question #</th>
<th>I don’t like studying because ...</th>
<th>Mean score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>For me, school holds no interest</td>
<td>4.24</td>
</tr>
<tr>
<td>2</td>
<td>Studying is not valuable to me</td>
<td>4.43</td>
</tr>
<tr>
<td>3</td>
<td>I have no good reason to study</td>
<td>4.36</td>
</tr>
<tr>
<td>4</td>
<td>Studying is not important to me</td>
<td>4.42</td>
</tr>
<tr>
<td>5</td>
<td>I don’t have what it takes to do well in school</td>
<td>4.27</td>
</tr>
<tr>
<td>6</td>
<td>I don’t have the knowledge required to succeed in school</td>
<td>4.22</td>
</tr>
<tr>
<td>7</td>
<td>The tasks demanded of me surpass my abilities</td>
<td>3.86</td>
</tr>
<tr>
<td>8</td>
<td>I find that studying is boring</td>
<td>3.73</td>
</tr>
<tr>
<td>9</td>
<td>Because my school work is not stimulating</td>
<td>3.93</td>
</tr>
<tr>
<td>10</td>
<td>I have the impression that it’s always the same thing everyday</td>
<td>3.81</td>
</tr>
<tr>
<td>11</td>
<td>I’m a bit lazy</td>
<td>3.53</td>
</tr>
<tr>
<td>12</td>
<td>I’m not energetic enough</td>
<td>4.05</td>
</tr>
<tr>
<td>13</td>
<td>I can’t seem to invest</td>
<td>3.92</td>
</tr>
<tr>
<td>14</td>
<td>I don’t have the energy to study</td>
<td>4.08</td>
</tr>
<tr>
<td>15</td>
<td>I don’t have the effort that is required</td>
<td>3.95</td>
</tr>
</tbody>
</table>

The mean scores are above a score of 3 for each item although the scores of the 80 participants ranged from no score, blank, zero to a score of a five.

Table 2 shows number of participants, the total marks against and mean scores.

*Table 2: Responses versus Total & Mean Scores*

<table>
<thead>
<tr>
<th>Source of Motivation</th>
<th>No. of Responses</th>
<th>Scores</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td>Intrinsic Motivation (AM)</td>
<td>574</td>
<td>2273</td>
<td>3.96</td>
<td></td>
</tr>
<tr>
<td>Extrinsic Motivation (CM)</td>
<td>246</td>
<td>1060</td>
<td>4.30</td>
<td></td>
</tr>
<tr>
<td>Intrinsic &amp; Extrinsic Motivation (A&amp;CM)</td>
<td>410</td>
<td>1713</td>
<td>4.18</td>
<td></td>
</tr>
</tbody>
</table>
Table 2 shows that although the total score is higher where more questionnaire items were used to probe the source of motivation, the mean score is highest where few questionnaire items were used to probe the source of motivation. In addition it was observed that the easiest source of motivation that both students and teachers may tap into to improve performance is extrinsic motivation while intrinsic motivation is the hardest source to tap into. In this study, results show that combining intrinsic and extrinsic sources was not more favourable than tapping into extrinsic source alone or worse than taping into intrinsic source of motivation.

One explanation why mean score for extrinsic motivation were higher than intrinsic motivation is perhaps because extrinsic motivation is transient or opportunistic as suggested by Coon and Mitterer (2010). The problem with this is that you may need higher and better rewards to continue sustaining the motivation to perform better. Hence, the reward system may not be sustainable in the long run. Although by employing intrinsic motivation may not be beneficial in the short run, it might offer a better and more pragmatic strategy in the long run.

Self-study strategies utilise intrinsic motivation while supervised study strategies employ extrinsic motivation. Table 3 shows the mean scores of Relative Autonomous Motivation (RAM) (intrinsic motivation) which is a measure of the balance between AM and CM.

Table 3: Relative Autonomous Motivation

<table>
<thead>
<tr>
<th>Source of Motivation</th>
<th>IM</th>
<th>EM</th>
<th>I&amp;EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Motivation (AM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extrinsic Motivation (CM)</td>
<td>-.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic &amp; Extrinsic Motivation (A&amp;CM)</td>
<td>-.22</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows that individuals are motivated more through taping into extrinsic source of motivation compared with taping into intrinsic sources hence the negative mean scores. While extrinsic motivation may be easy to tap into by utilising a reward system, intrinsic motivation can be difficult to tap into because it differs from one person to another. In certain instances, students may be dealing with difficulties in their personal lives that end up in employing their energy to the extent of leaving little room for academic enthusiasm. In such
cases, some interest in the subject can often be encouraged by a teacher willing to show concern for the student.

Table 4 shows the correlation between the various sources of motivation.

**Table 4: Correlation between sources of Motivation**

<table>
<thead>
<tr>
<th>Source of Motivation</th>
<th>IM</th>
<th></th>
<th>EM</th>
<th></th>
<th>I&amp;EM</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>PC</td>
<td></td>
<td>N</td>
<td>PC</td>
<td>N</td>
</tr>
<tr>
<td>Intrinsic Motivation (IM)</td>
<td>547</td>
<td></td>
<td>235</td>
<td></td>
<td>384</td>
<td></td>
</tr>
<tr>
<td>Extrinsic Motivation (EM)</td>
<td>235</td>
<td>.506</td>
<td>238</td>
<td></td>
<td>232</td>
<td></td>
</tr>
<tr>
<td>Intrinsic &amp; Extrinsic Motivation (I&amp;EM)</td>
<td>384</td>
<td>.543</td>
<td>232</td>
<td>.616</td>
<td>392</td>
<td></td>
</tr>
</tbody>
</table>

Key: N = Number of Responses; PC = p correlation

From the study it is clear that to achieve performance one would need to improve (Autonomous motivation) intrinsic motivation by 50.6% while controlled motivation (extrinsic motivation) can be improved by 54.3% and AM and CM can be improved by 61.6 to cause significant difference in performance.

**Conclusion**

Arising from the findings of this study, it would seem that there is no need to look for a perfect balance between extrinsic and intrinsic motivation for a student because intrinsic and extrinsic motivation seem to work independent of each other. Although, it is difficult to motivate students, every student can be motivated in one way or another. Consequently, lecturers face a daunting task to ensure that their students are motivated and inspire a behaviour that helps them to aspire to be life-long learners. Motivation compels a learner to modify their behaviour towards a particular set goal either by themselves or by others. The motivators could result in causing the difference between a student finding time to study and cramming for a test (Wilkinson, 2016).

Motivations empower learners to follow through what they do, even when they think of themselves as incapable. Learners who have the motivation towards academic success tend to have genuine pride in their effort and recognition. It is, therefore, critical for every learner to be motivated either intrinsically or extrinsically.
References


Teachers usually prepare lesson plans before their class. However, these tend to be teacher-centered lesson plans. In this article, we proposed the concept of a “Lesson Designing Map” based on students’ knowledge and thinking to design student-centered lesson plans.

Lesson plan and proposed Lesson Designing Map

Teachers usually develop lesson plans before their classes. Lesson plans can be represented in various formats, of which the timeline format (see Figure 1) is popular in Japan. It contains information about activities, tasks, supports, feedbacks, evaluations, and so on. These are arranged chronologically as per the activities involved in imparting the lesson. This type of lesson plan is very useful for teachers because designing and moderating the lessons becomes easy for them.

However, it has a few drawbacks. First, it is difficult to represent changes in students’ concepts or schemas over the course of the lesson. Second, it is difficult to connect students’ prior knowledge, tasks in the lesson, concept generation, and objectives mutually with the lesson structure. Therefore, lessons using timeline-formatted lesson plans tend to be teacher centered while lessons must be learner centered and knowledge centered (Bransford, Brown & Cocking, 2000).

<table>
<thead>
<tr>
<th>Objective: To find the angle of the slope in a triangle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>1. Explain the task</td>
</tr>
<tr>
<td>2. Draw a triangle on a smaller scale and measure the angle of the scale (group work)</td>
</tr>
<tr>
<td>3. Share ideas</td>
</tr>
<tr>
<td>4. Summarize the lesson</td>
</tr>
</tbody>
</table>

Figure 1: An example of a Lesson Plan
To resolve the problems mentioned above, we developed the “Lesson Designing Map” (in short, LDM) (Misono, 2014). Figure 2 shows the example of an LDM. The LDM includes lesson objectives, students’ prior knowledge, activities, supports by the teacher, and students’ thinking. Using the LDM enables teachers to design structured lessons by connecting all these elements.

To clarify effectiveness of a lesson design with LDM, an interview was conducted to an elementary teacher. She drew a LDM to design a 3rd-grade mathematics and that was her first time to draw it. She pointed out that she was able to aware of students’ prior knowledge during drawing the LDM. This is one of strong points of lesson designs with LDM. However, she mentioned that she was not clear from where she should start to drawing it. Therefore, more supports are needed for teachers to draw LDMs more effectively and fluently.

Future research must investigate the effect of designing lessons using LDM compared to that of using the lesson plan.

Figure 2: An example of a LDM

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References

Title: The impact of a summer research program on factors that prepare undergraduates to matriculate to graduate school

Topic Area
STEM Education

Presentation Format
Paper Session

Presentation Description
The purpose of this study was to examine the impact that a summer research program had on factors that prepare undergraduates to matriculate into STEM graduate studies. The participants of this study spent eight weeks in a summer research mentoring program on a university campus in the United States.

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Abstract
Studies show that less than four percent of United States (U.S.) high school students continue on to complete undergraduate degrees in science, technology, engineering, and mathematics (STEM) disciplines. The amount of U.S. students that matriculate to graduate school and major in STEM is even fewer.

The purpose of this study was to examine the impact that a summer research program had on factors that prepare undergraduates to matriculate into STEM graduate studies. The participants of this study spent eight weeks in a summer research mentoring program on a university campus in the United States.

The program was designed to immerse each participant into a graduate research environment in a STEM discipline. Each participant worked under the supervision of a faculty mentor and an advanced Ph.D. student. Participants conducted research in their STEM area of interest. The research was followed by poster and oral presentations. Various preparatory workshops included presenting a poster presentation, how to prepare for the Graduate Record Examination (GRE), identifying funding for graduate school, research methods, writing publications, professional development, and life as a graduate student.
Students were surveyed before and after the summer research program to measure their change in knowledge about research and attending graduate school. The overall findings of this study indicated an increase in self-efficacy in: conducting research, presenting a poster, presenting orally, conducting literature reviews, academic writing, and finding fellowships.

Furthermore, at the end of the summer research program, results indicated that participants felt more confident about collaborating with a mentor such as a faculty member or seasoned Ph.D. student on a research topic and presenting their research findings in front of an audience. Participants expressed confidence in preparing for the GRE, overall knowledge about graduate school, locating funding such as fellowships, TA-ships, and research assistantships for graduate school.

The findings of this study emphasize the importance of summer research programs that might help prepare undergraduate students to matriculate into STEM graduate programs.

Keywords: Graduate school, STEM, summer research programs, mentorship, matriculation, self-efficacy
Innovative and Interdisciplinary Program Review Strategies

Dr. Lata Murti and Dr. Sheila Lakshmi Steinberg

This presentation focuses on the innovative and interdisciplinary efforts by Brandman University faculty to complete a program review and program revision for the Sociology and Social Science Programs at Brandman University. We specifically highlight the interdisciplinary and highly engaged methodological approaches that were used to create and to frame each program. Brandman University has a series of pre-defined steps that were followed for every program design--beginning with a literature review, a competitive analysis of other existing and/or similar programs, engagement with stakeholders and consideration of internal feedback from faculty, advisors, counselors and administration. Specifically, in this presentation, we highlight the intensive engagement with our stakeholders and feedback from experts in the real applied fields related to both disciplines of Sociology and Social Science and the very iterative process that we all engaged in. Additionally, we focus upon the collaborative nature of this creative design process, where we were able to discuss and work together to actively update the Sociology program (which had not been updated in 40 years), and to create a completely new program called the Integrated Social Sciences major. Integrated Social Sciences is more focused on multiple methods, and incorporates a systems-based interdisciplinary approach to understanding society and its interaction with the surrounding environment. Through establishing a strong methodological base in both Integrated Social Sciences and Sociology we are equipping our students with the necessary critical thinking skills to engage in creative, yet applied problem solving and to generate useful policy at the local, state, national and international levels.
Effects of changes in physical education curriculums for elementary schools and the recruitment of specialized physical education teachers on students’ physical fitness

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Abstract
[Background] In Japanese elementary schools, each teacher has to teach all subjects, and there are few specialized physical education teachers. High-quality physical education programs are not being implemented in some schools without specialized physical education teachers. Furthermore, there is a decrease in the physical fitness of Japanese children compared with that in around 1985.
[Objective] The present study aimed to examine the effects of changes in physical education curriculums for elementary schools and the recruitment of specialized physical education teachers on students’ physical fitness.
[Methods] Two-year longitudinal surveys (2014 to 2016) were conducted involving first-year students of a private elementary school (males: n=20, age = 6.8±0.3 year, height = 116.7±4.6cm, body weight = 20.8±2.7kg. females: n=26, age = 6.6±0.3 year, height = 116.0±3.3cm, body weight = 20.3±2.3kg; means ± SD) in Kanagawa Prefecture. The survey included tests to measure the grip strength of the toes and hand and assess performances in sit-ups, forward-bending in a sitting position, the side step, 20-m shuttle run, 50-m run, and standing long jump. The maximal isometric toe flexor strength in the sitting position was measured using a toe flexor dynamometer (T. K. K. 3361; Takei Scientific Instruments Co., Niigata, Japan). During the period between 2014 and 2015, specialized physical education teachers were recruited. In addition to this, modifications were made to physical education curriculums during the period between 2015 and 2016.
[Results and Discussion] There was a significant improvement in the physical fitness of the children, side step, 50-m run, sit-ups, and the grip strength of the toes in particular, following the recruitment of specialized physical education teachers and
changes in physical education curriculums (2015 to 2016), compared with their
physical fitness during the period between 2014 and 2015, during which only the
recruitment of specialized physical education teachers was implemented. Therefore, it
is necessary to recruit specialized physical education teachers and develop effective
physical education curriculums to improve children’s physical fitness.

[Introduction]

According to a report on the results of a physical fitness/exercise ability
survey published by the Ministry of Education, Culture, Sports, and Technology⁶), the
present level of physical fitness of Japanese children is lower than that of around 1985.
Although their level of physical fitness has not decreased significantly in recent years,
the decreased physical fitness of children is still a serious social issue. In the past,
children enhanced their physical fitness by playing outdoors. At present, children are
advised to learn basic physical movements through various activities in physical
education classes. Therefore, it is necessary to improve such classes implemented in
schools to enhance children’s physical fitness.

In general, elementary schools in Japan have adopted the “classroom-based
teacher assignment system”: One teacher is in charge of a single classroom of students
and teaching all subjects for the class. The opposite is the subject-based teacher
assignment system: In principle, each teacher teaches a specific subject, or their
specialty, for multiple classrooms of students. Education in Japanese junior high
schools or higher educational institutions is based on this system at present. Japanese
elementary schools are allowed to employ “specialized teachers”, who are specialized
in and teach only a single (practical) subject, such as domestic science, music, and
physical education. These specialized teachers are usually not in charge of classrooms.
A school with 12 classrooms is allowed to employ 1.5 specialized teachers. This means
that a school with 12 classrooms (of approximately 420 students) cannot afford to even
employ three specialized teachers for domestic sciences, music, and physical education.
Most Japanese elementary schools have no specialized physical education teachers,
and each teacher is required to teach all subjects. Therefore, quality of physical
education classes are not implemented in those elementary schools with no specialized
physical education teachers. However, few studies have been conducted to examine the
effects of changes in physical education curriculums adopted by elementary schools
and the deployment of specialized physical education teachers on children’s fitness,
particularly on the relationship between their recruitment and children’s fitness and
athletic performance.

Therefore, the present study aimed to examine the influences of changes in
physical education curriculums in elementary schools and the introduction of
specialized physical education teachers on children’s fitness.
[Methods]
1. Subjects

A longitudinal survey was conducted for two years (between June 2014 and June 2016) involving first-year (as of 2014) students (males: n=20, females: n=26) of Private Elementary School M (in Kanagawa Prefecture).

The present study was conducted in accordance with the rules established by the human research ethics committees of Kanto Gakuin University and Nippon Sport Science University, and after obtaining the consent of the subjects (Number: Human Research 2014-1-1, No. 015-H42).

2. Measurement items

The measurement items included the strength of toe muscles, grip strength, sit-up, sit-and-reach, side step, 20-meter shuttle run, 50-meter run, and standing long jump. Students’ fitness and athletic performance were measured or assessed in accordance with the Guidelines for the Implementation of the New Physical Fitness Test (for children aged 6 to 11 years old) developed by the Ministry of Education, Culture, Sports, Science, and Technology3).

(1) Strength of toe muscles

The strength of toe muscles was measured using equipment for the measurement of the toe muscle strength (Takei Scientific Instruments Co., Ltd., T.K.K.3361) 9).

During measurement, the students were asked to sit on a chair without leaning on its back and place their hands on their knees. The students put all of their toes on the bar of the measurement equipment and maximally contracted them. The strengths of toe muscles of the left and right feet were measured twice each. The maximum measurements for the left and right sides were adopted, and the means were calculated.

(2) Changes in curriculum (annual teaching plans)

Figure 1 presents changes in the curriculum of Elementary School M. Between April 2014 and March 2015 (prior to the change in the curriculum), the school provided education based on a curriculum in which “classroom teachers (not specialized in physical education) presented tasks for their students and encouraged them to set goals by themselves”. From April 2015 onward (following the change in the curriculum), education was implemented based on a curriculum developed by teachers specialized in physical education.

Prior to the change in the curriculum (between April 2014 and March 2015), classroom and specialized teachers were responsible for three hours a week of physical education: one to two hours each by classroom and specialized teachers. Following the change in the curriculum (between April 2015 and March 2016), classroom and specialized teachers taught physical education classes for one and two hours a week, respectively.
The curriculum (annual teaching plan) was changed because the results of a physical fitness test for fifth-year students conducted in 2014 had suggested that the scores for all assessment items were lower than the national means and that it was necessary to improve their physical fitness. Classroom teachers were in charge of teaching “stretch exercise” and “play-based exercise” to observe and assess their performance and development, and teachers specialized in physical education were in charge of the “exercise bar” and “vaulting box” to provide professional advice on their movements. The curriculum was changed according to the fields of exercise related to physical education suggested by the Ministry of Education, Culture, Sports, Science, and Technology, and taking into account the development of students of Elementary School M.

(3) Statistical methods

All measurement data are expressed as mean values ± standard deviations. Analyses of variance were conducted to examine changes in the height, weight, strength of toe muscles, and measurements in the physical fitness test according to the age, and Tukey’s test was used for multiple comparison. The significance levels in the risk rate for all items were lower than 5% (P<0.05). Statistical software JMP10 (SAS Institute Inc.) was used.

(4) Analytical methods
The present study aimed to examine the effects of changes in physical education curriculums and the deployment of specialized physical education teachers by comparing the performance of students of Elementary School M in a fitness/athletic performance test for first-to-third-year students with the national levels (published by the Ministry of Education, Culture, Sports, Science, and Technology)\(^6\). Since the strength of toe muscles is not included in a report of a physical fitness/athletic skill survey\(^6\), comparison of the performance of students of Elementary School M and national means were not conducted.

The performance in 2015 was measured prior to changing the curriculum, and the performance in 2016 was measured following the change.

**Results**

Figure 2 presents longitudinal changes in the heights of students of Elementary School M. The increases in the heights of both male and female students of the elementary school were similar to the increases in the national means, and the differences were not significant.

![Figure 2](image1)

**Figure 2.** Longitudinal changes in the height of students of Elementary School M.

![Figure 3](image2)

**Figure 3.** Longitudinal changes in the weight of students of Elementary School M.
Figure 3 presents longitudinal changes in the weights of students of Elementary School M. The increase in the weights of male students of the elementary school was similar to the increase in the national mean, and the difference was not significant. However, the weight of female students of Elementary School M in 2016 was significantly lower than the national mean.

Figure 4 presents longitudinal changes in the physical fitness/athletic performance of students of Elementary School M and those of the national means. Regarding longitudinal changes in the performance of students of Elementary School M, there were significant improvements in the 20-meter shuttle run and
50-meter run in 2015 compared with 2014. However, their performance in the sit-and-reach test in 2015 was significantly inferior to that in 2014. Their performances in the toe muscle strength and side step tests in 2016 were significantly superior to those in 2015.

Students of Elementary School M received lower scores in all tests in 2014 than the national means: the scores in the side step test and 50-meter run were significantly lower. In 2016, students of Elementary School M received significantly higher scores in the 20-meter shuttle run and standing long jump than the national means.

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**Figure 5.** Longitudinal changes in the physical fitness/athletic performance of (female) students of Elementary School M.
Figure 5 presents longitudinal changes in the physical fitness/athletic performance of female students of Elementary School M and those of the national means.

Regarding longitudinal changes in the performance of students of Elementary School M, there were significant improvements in sit-up, 20-meter shuttle run, 50-meter run, and standing long jump in 2015 compared with 2014. There were significant improvements in the strength of toe muscles, sit-up, side step, and 50-meter run in 2016 compared with 2015.

Female students of Elementary School M received significantly higher scores in 20-meter shuttle run than the national means in 2014. Students of Elementary School M received significantly lower scores in grip strength, side step, and standing long jump than the national means in 2016. However, there were no significant differences between the scores for other measurement items received by students of Elementary School M and the national means in 2015.

[Discussion]

Based on the philosophy of developing students’ “ability to live”, the current Japanese curriculum guidelines aim to develop their academic abilities, personalities, and health, and promote well-balanced intellectual, moral, and physical education, while taking into consideration the status of children.

The objectives of physical education are to encourage people to enjoy sports throughout their lives, maintain and improve their health, and lead an active life by improving their physical fitness according to their individual abilities. In particular, the guidelines have defined elementary school education as follows: “Each school should give proper instruction on physical training and health promotion through all of the school’s educational activities, while giving consideration to the developmental stages of the pupils”, and systematized it by taking into account the transition from one stage of school education to another. However, in Japanese elementary schools, in which each teacher is responsible for teaching all subjects, the number of teachers specializing in physical education is very small, and quality of physical education classes are not implemented.

Private schools have been required to promote characteristic education/research to respond to diversified public needs, and they are conducting unique activities based on their school philosophies. Elementary School M was established for primary school education based on Christianity in April 1949, and some subjects such as music, art, and English are taught by specialized teachers. However, since the school had no specialized physical education teachers prior to the revision of the curriculum, classroom teachers were in charge of physical education classes and the development of the curriculum (annual teaching curriculum in physical education). A previous study conducted by the authors suggested that the first, second, and
fifth-year students of Private Elementary School M (in Kanagawa Prefecture) received lower scores in a physical fitness test in 2014 than the national means reported by a physical fitness/athletic performance survey conducted by the Ministry of Education, Culture, Sports, Science, and Technology. 

In the present study, students’ physical fitness and athletic performance were compared and analyzed prior to and following the revision of the curriculum. In 2015, the tests were conducted prior to the revision of the curriculum (three hours a week of physical education: one to two hours each by classroom and specialized teachers). In 2016, the tests were conducted following the revision of the curriculum (three hours a week of physical education: one hour by classroom teachers and two hours by specialized teachers).

Immediately following admission, students of Elementary School M received lower scores in all tests than the national means (2014). This was presumably because only people who have passed the entrance examination are admitted to the private school, and 83.3% of the students attend it by car or school bus.

Regarding longitudinal changes in the performance of students of Elementary School M, they received significantly higher scores in stamina and running ability in 2015 compared with 2014. During the period of the study, a significant proportion of physical education classes were allocated for “marathon” and “running race”, and teachers specializing in physical education and classroom teachers provided advice. They presumably improved their stamina when they trained to participate in a “marathon race” - one of the school events.

The results of the present study suggested that students of Primary School M received significantly higher scores in the side step test following the revision of the curriculum.

Jumping rope is positioned as a physical exercise associated with such physical fitness and athletic skills as physical agility, stamina, and jumping power. The physical agility of the students increased after they received technical advice on movements required in jumping rope from specialized physical education teachers.

Female students of Elementary School M received significantly lower scores in the sit-up test than the national means in 2014. However, there was no significant difference between the scores received by female students of Elementary School M and the national means in 2015.

According to a report by Yokota et al., teachers of schools with specialized physical education teachers stated that the specialists were able to provide students with consistent education according to their developmental stages and respond to students’ needs for improvement in their athletic skills. Following the revision of the curriculum in 2016, there were no significant differences in the physical fitness/athletic skills between students of Elementary School M and other schools across Japan. The curriculum was revised into one designed to provide students with
appropriate advice required for developing athletic skills and techniques while taking into account the developmental stages of their ability to exercise, and this had positive effects on the physical fitness of students.

Persons who are recruited as specialized physical education teachers by elementary schools are expected to be more skilled than teachers in charge of all subjects at encouraging students to develop the habit of performing exercise and senses of cooperation and responsibility, as well as further enhancing their physical fitness, developing athletic skills, and helping them experience the joy and pleasure of playing sports. Whereas specialized physical education teachers were recruited and the curriculum was revised before the implementation of physical education between 2015 and 2016, only the adoption of specialized physical teachers was conducted before the period between 2014 and 2015, and there were greater increases in students’ physical fitness between 2015 and 2016.

Dunn, LL. et al. stated in relation to the efforts to increase children’s physical activities that: “Teachers trained in Move-to-Improve (MTI) led their classrooms in significantly more physical activity compared with teachers who were not trained. The MTI Program is designed by New York City”. Therefore, the adoption of teachers specializing in physical education is expected to help students experience the joy and pleasure of performing exercise, develop the habit of playing sports, and motivate them to become more interested. There were improvements in students’ physical fitness and athletic performance as positive influences of the adoption of teachers specializing in physical education and the development of physical education curriculums according to their age.

[Conclusion]

Between April 2015, when teachers specializing in physical education were recruited and the physical education curriculum was changed, and March 2016, there was an improvement in the students’ fitness, their performance in the side step test and the strength of toe muscles in particular, compared with the period between April 2014 and March 2015 when the curriculum had yet to be changed.

The above-mentioned results suggest that it is necessary to recruit teachers specializing in physical education and develop effective curriculums for students on taking into consideration their age.

[Acknowledgement]

I would like to express my sincere gratitude to the principal, Mr. Ogi (specializing in physical education), and other teachers, students, and their parents of Kanto Gakuin Mutsuura Elementary School for their cooperation in the study. The study was conducted with the support of 2015 Research Funds for Academic Staff from the Department of the College of Human and Environmental Studies, Kanto
REFERENCES


Title of Proposal:  
The Collaborative Community of Learners (CCOL): A New Kind of Professional Learning Community

Topic Area of Submission  
Mathematics Education

Presentation Format:  
Paper Session (Research Paper)

Presentation Description:  
In this report we will focus on a professional development project conducted in the U.S. aimed at advancing teachers’ mathematical knowledge for teaching through site-based Collaborative Communities of Learners (CCOLs) facilitated by mathematics faculty from community colleges. Our paper discusses the data from the CCOLs that reveals two dominating characteristics which contribute most to the success of the CCOLs: (1) richness of discussions relating to teaching practices and (2) meaningful feedback of classroom observations.

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THE COLLABORATIVE COMMUNITY OF LEARNERS (CCOL): A NEW KIND OF PROFESSIONAL LEARNING COMMUNITY

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The common approach to executing change in a teacher’s classroom practice is through professional development activities and programs. Undoubtedly the most common type of professional development for the teaching profession is the workshop. Institutes, courses, and conferences are other typical forms of professional development that share many of the features of workshops. Although these formats are quite common and can be effective, they have been criticized for lacking meaningful learning experiences, for not incorporating techniques that help to motivate teachers to transfer what they learn into the classroom, and for creating sustainability and change in the educational culture of a school or department.

The belief that many conventional programs are ineffective and wasteful has led to growing interest in adding other more innovative models for professional development, such as mentoring, action research teams, teacher networks, inquiry groups, vertical teaming, study groups, and lesson study. Professional development models such as these differ from the more common and traditional methods in several respects. For instance, they often take place during the process of classroom instruction or during regularly scheduled teacher planning time. By locating opportunities for professional development within a teacher's work day and at his or her own school site, professional development has been shown to be more effective in making connections with classroom teaching. We are also starting to see that these novel formats for growth have more direct influence on changing classroom teaching practices and result in incremental teacher change over time. Furthermore, by design they are more responsive to individual teacher’s needs and goals and are more aligned with how teachers learn.

Reflection and analysis are often individual activities, but they can be greatly enhanced by teaming with an experienced and respected colleague, a new teacher, or a group of teachers. Collaborating with colleagues regularly to observe, analyze, and discuss teaching and students’ thinking is a powerful, yet neglected, form of professional development in American schools. Interest is rising in what is seen as a promising model of professional development designed for groups of teachers from the same school, department, or grade level. There are many terms used in education attributed to a group of educators who come together on a regular basis to explore different aspects of learning and teaching including teacher inquiry groups (Hammerman, 1997), professional study groups (Mitchell, 1989), learning circles (Collay, Dunlap, Enloe, & Gagnon, 1998), communities of practice (Lave & Wenger, 1991; Wenger, 1998), teacher support groups (Rich, 1992), teacher professional groups (Avalos, 1998), faculty learning communities (Cox,
2003), professional learning communities (DuFour & Eaker, 1998), and now Collaborative Communities of Learners (CCOLs).

This report focuses on a professional development project in the U.S. aimed at advancing teachers’ mathematical knowledge for teaching through site-based Collaborative Communities of Learners (CCOLs) facilitated by mathematics faculty from community colleges (non-university tertiary institutions). Data from the CCOLs have revealed two dominating characteristics which contribute most to the success of the CCOLs: (1) richness of discussions relating to teaching practices and (2) meaningful feedback of classroom observations. This report provides a discussion of the professional development project, along with qualitative data to demonstrate success of CCOLs.

**OVERVIEW OF THE ARIZONA MATHEMATICS PARTNERSHIP (AMP)**

The Arizona Mathematics Partnership (AMP), funded by the U.S. National Science Foundation, is a project that supports in-service teachers in advancing their knowledge about the teaching and learning of mathematics as a means for increasing student achievement in middle school mathematics. AMP also produces research about the characteristics of a sustainable professional development program, as well as contributes to the body of knowledge for understanding teachers’ mathematical thinking and beliefs. The AMP project developed a collaborative partnership among seven school districts and five community colleges in Arizona.

The project targets 300 in-service middle school mathematics teachers, 32 teacher-leaders, 40 administrators, and also impacts a total of 24,000 students in grades 5-8. By including a variety of educators, AMP has facilitated the creation of new mathematics educator networks that span within and across regional districts to serve middle school students, with special attention given to those schools serving economically disadvantaged students and underrepresented students.

An objective of the project is to enhance teachers’ Mathematical Knowledge for Teaching (MKT) (Ball et al., 2008) with the goal of improving student learning and attitudes toward mathematics by engaging teachers in approximately 100 hours of professional development per year for two years. Teachers engage in: (1) Institutes and Workshops that emphasize conceptual understanding and problem-solving, with the intent to develop teachers’ subject matter knowledge, (2) Collaborative Communities of Learners (CCOLs) that assist teachers to connect what they learn in the workshops with classroom practice, which develops their pedagogical content knowledge, and (3) Instructional Rounds (City et al., 2009) that provides the opportunity for teachers to make their practice public.

**The Need for Collaboration Communities of Learners**

It seems unlikely that even the most dedicated teachers would be able to acquire and sustain the resources and the commitment necessary for teaching for understanding by themselves. They need the support and advice of colleagues, and they need continuing access to new developments in their fields. In concert with the calls for involvement by institutions of higher education, outside agents are seen as an invaluable link that can provide the support necessary to help with the development and sustenance of teacher learning communities. Thinking pragmatically, it is important to follow up on current efforts which focus on the need to support
the development of teacher learning communities that can both nurture and sustain growth. Franke, Carpenter, Levi, and Fennema (2001) refer to this as generativity and means to not only maintain new practices over time, but also to modify and adapt practices continually in response to new learning and reflection that occurs as a result of a persistent focus on student thinking. Franke et al. (2001) argue that both maintaining practice and generativity can be observed at the level of individual teacher, but a crucial difference between the two is that generativity occurs in the context of collaborative inquiry rather than in isolation. In other words, these generative practices occur and become normative in the context of participating in a teacher learning community.

DuFour and Eaker (1998) suggest further that research both inside and outside education has arrived at the same conclusion: professional learning communities require educators to function as a collaborative team characterized by shared mission, vision, and values; collective inquiry; supportive and shared leadership; an orientation toward action and experimentation; commitment to continuous improvement; and a focus on results.

Despite the obstacles and challenges that exist in all professional development models, the literature is quite extensive in suggesting that the most promising strategy for sustained, substantive teacher improvement is developing the ability of school personnel to function as effective learning communities. Therefore, building upon the previous work related to the learning community structure, the definition of the Collaborative Community of Learners (CCOL) for this project will be:

A collaboration of secondary teachers who meet with the assistance of a trained facilitator for the shared purpose of deepening their conceptual and pedagogical content knowledge, and understanding the process by which secondary students acquire understandings and reasoning abilities for the function concept in order to inform and improve their practice. There will be an expectation of making instructional changes for the improvement of student learning not for the sake of change.

To optimize the impact of CCOLs we strive to keep the size of the CCOLs to a maximum of \( n = 9 \) (ideally 6 – 8 teachers). The CCOLs focus on teachers’ immediate classroom instructional needs. It is designed to be a safe place to discuss in an open forum how to improve teaching practices, deepen individual teacher’s content knowledge, and address students’ learning needs. Each CCOL sets its own agenda with the direction of the trained facilitator to fit the immediate needs of the participating teachers and focus on ensuring success in the students they are teaching.

There are two key innovative features of the CCOLs within AMP. First, the project establishes strong partnerships among community colleges and middle schools, with community college faculty serving as facilitators of the site-based CCOLs. Second, the CCOLs focus on developing teachers’ deep conceptions of the “big ideas” of middle school mathematics by leveraging the expertise of the CCOL facilitator through feedback on content and pedagogy based on classroom observations.
The AMP Model: Embracing Collaborative Communities of Learners

In 2015, the Arizona Department of Education reported that 24% of first year teachers and 20% of second year teachers leave the teaching profession (ADE, 2015). The decision to leave the profession is often based on the lack of support received during these early years, and one of the most effective ways to retain high quality teachers is to improve the support system. In response to this retention issue, AMP provides professional support through a CCOL, initially facilitated by community college faculty. Teachers are supported in shifting their thinking about mathematics as a set of skills and procedures to thinking about mathematics as well-connected ideas that anchor their curriculum and instruction. The site-based CCOLs, ideally comprised of teachers at one school, are designed to support the emergence of an intimate collaboration between the CCOL facilitator and the teachers, as a means of enhancing teacher collaboration. The CCOL name was adopted because its emphasis on "learner" suggests that each member of the collaborative is both learning with and learning from other members of the community for the purpose of enacting a shared research-based vision of effective learning experiences for students.

The CCOL design draws from the body of literature on professional learning communities (Cox, 2005; DuFour & Eaker, 1998). Research findings from other projects have revealed the importance of a strong CCOL facilitator who has deep and connected understandings of key mathematical concepts. Thus, each CCOL consists of a community college faculty and a group of teachers (n < 9) who meet together for 18 hours per year (ideally 9 two-hour sessions), and invest 12 hours per year in CCOL preparation. During the first semester, each CCOL articulates a shared vision, needs and goals, identifies content areas and standards as well as pedagogical needs in an effort to address their students' mathematical struggles. The Didactic Triad (Thompson, 2009) provides the foundation for facilitators to plan for the CCOL meetings. The Triad helps teachers simultaneously focus on the learning goals for their students, the tasks they will use, and the teaching strategies to be implemented.

During the first two years of each cohort, community college mathematics faculty serve as CCOL facilitators. In the third year, emergent teacher-leaders facilitate their own CCOLs with project support. In this way, AMP develops sustainable, locally-led CCOLs where teachers regard their CCOL as an important element of their professional practice. CCOL facilitators and teachers form collaborative teaching teams to embrace and create an environment for public-openness of teaching. In the CCOLs, common readings are chosen to highlight aspects of mathematics teaching. The CCOLs have focused on Principles to Actions: Ensuring Mathematical Success for All (NCTM, 2014). Each CCOL is very different, as many groups are composed of teachers from different AMP cohorts, different grade levels, and different professional concentrations.

In an effort to insure that the time spent in each of the self-directed CCOLs is beneficial and productive, a framework of an agenda is shared with each facilitator and they are encouraged to generally employ its elements. The agenda framework includes:

1. Open Discussion (10 - 15 minutes)
   ○ Time to talk about important issues regarding mathematical content knowledge, or the teaching and learning of mathematics
2. Let’s do some math! (20 - 30 minutes)
   ○ A relevant math task or problem is provided for participants to work through designed to challenge and build teacher content knowledge

3. Topic of Investigation (60 - 90 minutes)
   ○ Investigation is focused around the framework of The Didactic Triad (Thompson, 2009) including: Learning Goals, Teaching Practices, & Curriculum Materials

4. Action Items for next meeting (5 minutes)
   ○ Readings
   ○ Classroom tasks
   ○ Research
   ○ Implementation of a lesson
   ○ Student interviews, etc.

**Making Practice Public**

Another important part of the CCOL structure is the focus on making the teacher’s practice public. This occurs in two major ways within AMP CCOLs. First, the community college faculty facilitator schedules regular classroom observations for teacher feedback and coaching opportunities. Typically, the teacher being observed communicates with the faculty observer to indicate a specific teaching issue on which the observation will focus. For example, one CCOL group decided that feedback on the Math Teaching Practices (NCTM, 2014) would be most beneficial to improve their teaching practice. After the lesson, the facilitator provided detailed written and verbal feedback using the eight Math Practices as the framework.

Second, the AMP CCOL structure includes instructional rounds. Borrowing from the medical profession and the idea of medical rounds, teachers from a CCOL (and other invited professionals) observe other classrooms and observe student thinking. While instructional rounds need not look exactly the same for all CCOLs, the common approach is for the CCOL members to work together to plan the lesson that will be observed. On the scheduled day, the CCOL teachers make plans to observe the lesson in other classrooms. At the next scheduled CCOL meeting, the group debriefs and discusses the observation. A goal of working through this process is to afford teachers the opportunity to work together to create a lesson, to observe how that lesson can play out in another classroom (observers), to receive feedback from peers (teacher), and to generally grow in both mathematical content knowledge and pedagogical knowledge.

The self-directed instructional rounds allow AMP teachers to do something that has not been typical for our teachers - to make their practice public. This has the potential to create a school culture where teaching and learning is open and a culture where teachers work together to challenge one another, to grow in their own content knowledge, and to increase their ability to support student success.

**Evidence of Success of Collaborative Communities of Learners**

Qualitative data gathered from the CCOLs, through videotaped sessions and written reports, have
revealed two characteristics which most contribute to the success of the collaborations in supporting teachers’ development: (1) richness of discussions relating to teaching practices and (2) meaningful feedback of classroom observations that is embedded to both mathematics and pedagogy. Both of these characteristics are detailed below.

As an example of discussions that occur in the CCOL meetings, teachers from one CCOL recently discussed an excerpt on illustration from Principles to Actions (NCTM, 2014). Illustration relates to teachers establishing clear goals, along with clarifying and understanding the mathematical expectations for their students’ learning. The goal is for students to develop a more precise understanding of the mathematical concepts discussed during a lesson, and to develop the ability to connect mathematical ideas and concepts to problem-solving situations. Students focus not only on finding answers but also attend to how the various problem situations relate to the mathematics.

In the CCOL discussion on illustration, teachers shared their observations about their ability to provide complete yet concise illustrations of mathematical ideas for their students. The reading highlighted an example of illustration of subtraction for 2nd grade. The teachers collectively shared the sentiment that they do not possess the mathematical content knowledge to provide such learning opportunities for their students. In particular, one teacher felt she had inadequate resources to provide students with appropriate illustration for any given topic, while she acknowledged that she would be a better mathematics teacher if she were able to “do this.” Another teacher shared the vision that perhaps teachers should start “small” by trying to implement such methods incrementally from year to year. This is one example of how the CCOL meetings provide teachers a safe environment (devoid of school administrators) to read and reflect on materials relevant to their teaching practice and to support each other in their professional growth.

As an extension of the CCOL experience, the community college faculty facilitator observes teachers in their classroom and provides feedback about content and pedagogy. Feedback varies for each teacher and by CCOL facilitator. Teachers choose an area of focus with which the facilitator can use as a lens for the observations, thus the feedback for the teachers is based on their self identified area. Often, the Mathematics Teaching Practices from the Principles to Actions book (NCTM, 2014) serves as the primary lens for observing the teaching and learning of mathematics. After each class observation, the CCOL facilitator provides a written report to the teacher, which includes a description of things that went well in the session, as shown below.

Your students are very eager to share their work as illustrated by the warm-up activity with integers. This integers warm-up went a lot slower than I anticipated. Your questioning of the students challenged them to think more carefully about their actions. For example, I liked how you asked a student who had written \(-7 - 5 = -2\) (after reasoning with color chips) to represent the operation on the number line and explain how it compares to her work using color chips. Like in constructing understanding for any concept, it is challenging for students to develop a conceptual understanding of what it means to add/subtract. I really liked how you kept the meaning of these operations the focus of this portion of your lesson. You were intentional about asking questions such as “what does this
operation mean” in reference to operations such as \(-7 - (-5)\), which kept the meaning of the operation at the center of the activity. You then leveraged the students’ responses such as “\(-7\) take away \(-5\)” to justify the algorithms they used (color chips or the number line). This is a great way of building your students’ procedural fluency from conceptual understanding. [Observation of Trevor’s 8th Grade Class, October 8th, 2015]

In addition to complementing the teachers, the facilitator’s feedback aims to connect what the teachers learn from the workshops to the teachers’ practice. For instance, Trevor was learning about constructing meaning of mathematical concepts as well as strategies for these concepts in the workshops. In this feedback the facilitator is commenting Trevor on how he is integrating and enacting ideas learned in workshops into his teaching practice. The feedback also highlights areas that teachers can work on to perfect their craft, as shown below.

When the students were working on the handout Distance Between Two Rational Numbers you gave them sufficient time to work in pairs and explore distances between rational numbers using number lines. As they worked on these tasks you walked about posing questions to prompt the students to think carefully about their work. The students were not quite as successful in coming up with a generalization/formula of the distance between two rational numbers, \(p\) and \(q\), on their own…I wonder if it would be more fruitful to leverage their work on the warm-up to help them make sense of the formula \(|-| - |\|\). Your students have already spent a considerable amount of time trying to make sense of the difference between two rational numbers, \(p\) and \(q\) (i.e., \(|\| - |\|\)): “how far is \(p\) from \(q\)” (with + or – to indicate where \(p\) is located relative to \(p\)). Maybe the students would have an easier time making sense of the distance formula if you build on this knowledge and argue that if we are looking for the distance between two integers, \(p\) and \(q\), we don't care whether we start at \(p\) or at \(q\) (direction) hence the formula is \(|-| - |\|\|. The absolute value allows us to strip off the sign (direction). [Observation of Trevor’s 8th Grade Class, October 8th 2015]

Such feedback allows the facilitator to perturb the teacher to think about the trajectory of the lesson and how to facilitate it in ways that show the connections among the mathematics concepts he/she teaches.

Conclusions

The Arizona Mathematics Partnership provides teachers an opportunity to be challenged and supported in their professional growth. While there are a variety of ways in which this support and challenge is manifested, the Collaborative Community of Learners provides a flexible, self-directed, focused, and site-based opportunity for professional growth. Currently, the CCOLs supported by AMP are facilitated by community college colleagues assigned to a particular school. A goal of AMP is to encourage sustainability and to leave a lasting legacy where a school’s culture is to maintain the focus of local CCOLs. Future research can help to determine if sustainability is possible, strategies for encouraging sustainability as well as strategies for encouraging a successful CCOL model. We acknowledge that this success will vary from school to school and that the measure of success will also vary. There is much work to be done and exciting results to share in the future.
In summary, through the CCOL model, AMP has been very successful in bringing together a community of college mathematics instructors and middle school teachers to work together towards a common goal of improving the quality of mathematics education in the targeted middle schools.

References


ABSTRACT:
The study aimed to develop an ICT Training program into different areas of Computer Hardware Servicing. Main sources of data came from the 25 ICT Coordinators. The researcher used Frequency and Mean in getting the profile and in assessing the levels of competency in Computer Hardware Servicing. A validated questionnaire was designed for the participants highlighting the 3 areas of Computer Hardware Servicing; Assembly / Disassembly, Installing Computer System and Computer Networking. Findings showed that ICT Coordinators have competent skills in Assembly/Disassembly and Installing Computer System while incompetent in Computer Networking. However, there are items in Assembly/Disassembly and Installing Computer System which have a fairly competent result. There is a need to have an ICT Training Program that will help the ICT Coordinators enhance their skills in Computer Hardware Servicing. In the implementation of K to 12 that integrates ICT in education, the study can provide information necessary for educational planning and decision making concerning ICT training. It will help them in maintaining properly the computers and orienting the teachers on its proper utilization.

KEYWORDS:
Computer Hardware Servicing, Assembly/Disassembly, Installing Computer System, Computer
INTRODUCTION

One of the most vital defining characteristics of our century today is that information is increasing at a level that is too fast to catch up. In such an atmosphere, it is unavoidable to develop, create, and update the different skills of every people in information-based professions. Or else, their status and professional skills may be questionable.

From the given press release of the Department of Education dated last August 26, 2008, former Education Secretary, Jeslie Lapus said that Information and Communications Technology (ICT) will serve as a tool but this will not teach the students. It is the teacher who will continue to teach and impart learning. Therefore, the teachers should be fully technologically equipped and updated in harnessing the full potential of technology in improving learning outcomes. The effective use of Information and Communication Technology as a pedagogical tool integrated to the subject being taught is designed to improve the teaching and learning which are provided by the teachers to all their students. The pedagogy of teachers and their use of Information and Communication Technologies (ICT) as instructional tools are factors in helping to meet the challenge of every school in preparing students with the essential skills necessary for success in a rapidly changing, technology-driven kind of society (Schoen & Fusarelli, 2008). Teachers are important component for enabling students to use technology and they should be equipped to use technology as a tool for instruction.

The researcher, as a member of the academe specializes in teaching computer subjects and as the District ICT Coordinator of Silang II, is motivated to conduct this study, which he believes will be able to provide the district with the data and pieces of information on how to establish an ICT training program to enhance the skills and knowledge of ICT Coordinators in order to sustain and utilize effectively the computers of the school for the teaching-learning process.
The major purpose of the study was to assess the level of competency of ICT Coordinators in Silang II District and fill the gap for the improvement of an ICT literacy training program.

Specifically, the study answered the following questions:

1. What is the profile of the ICT Coordinators in Silang II District in their number of years being an ICT Coordinator?

2. What is the level of competency of the ICT Coordinators with regards to the following areas of Computer Hardware Servicing:
   a. Assembly / Disassembly,
   b. Installing Computer System,
   c. Computer Networking?

3. What ICT training program can be designed from the results of the study?

REVIEW OF RELATED LITERATURE

Basic Computer Skills include learning how to turn on/off the computer, connecting different devices to the computer and manipulating the mouse. However, teachers of the 21st century need more than these basic skills. They need to incorporate computer use in their teaching through the use of computer-aided instruction. In doing this, the teachers should learn how to utilize different computer applications not only in making presentations, and other instructional materials but also in creating reports, making grades and in keeping the student records, and developing different evaluation activities, making examinations, etc. (Wagmare and Budharam, 2012; van Braak et al, 2004; Masagca, 2008).

In response to this demand, schools from all over the world have been conducting ICT training for teachers. In almost all countries in the Asia Pacific region, teachers are being trained in all levels in the use of Information and Communications Technology (ICT) (UNESCO, 2002). However, the number of teachers and occurrence of training vary from country to
country. The more advanced and progressive countries train almost all teachers every year while others select and limit the number teachers to be trained (Tasir, 2012).

In the Philippines, the Department of Education and other non-government agencies have launched programs for Teacher-education. These programs aim to equip the teachers with the much needed ICT literacy that they will apply in teaching. The DepEd ICT4E Strategic Plan is the most recent among these endeavors. This program aims to enhance basic education and help the students develop their abilities to seek, to evaluate, to organize and to present information; higher order thinking skills; habits of life-long learning and an understanding of impact of ICT on their daily lives and the society. Other studies also show that there are three main variables that would make the integration of ICT tools as an easy process: namely, teachers' ICT competency, teacher’s confidence level in using the ICT and teacher’s satisfaction on ICT training programs (Tasir, 2012). This only proves the great importance of ICT in instruction.

However, the success of efforts to integrate technology on teaching does not only rely on teachers’ attitude toward the use of computers application alone (Garland and Noyes, 2004; Sam, Othman & Nordin 2005; Seyal, Rahim & Rahman 2002) but also on the students’ as well (Varank, 2006). This undertaking will not also materialize without the support from the administrators. As mentioned in the study conducted by Chan et al (2007), “The failure and success in the use of ICT in a classroom very much depend on the implementers, the teachers and the administrators.” This only means that in order for the teachers to be empowered, they need the necessary support structure from the administration in order to improve performance. Thus ICT can play a major role not just in learning outcomes, but in system governance as well.

Technology changes so fast that it requires new skills and knowledge to be mastered frequently. And successful implementation of ICT in teaching is only possible when teachers have a deeper understanding of the principles and concepts. And the short term exposure to technology would be inadequate in equipping them with the necessary skills and knowledge for
confident and masterful use of ICT in the classroom” (Albion & Ertmer, 2002; Brown & Waschauer, 2006). Hence they need constant and rigid training to fully use ICT in teaching (Kent & Facer 2004).

It is undeniable that the Department of Education has been doing its best to conduct ICT trainings for teachers. But there is also a need to have trainings to the teachers especially to all the ICT coordinators to properly maintain and maximize the instructional use of computers being given to every public school in the Philippines through their DepEd Computerization Program.

Figure 1 shows the Input-Process-Output research paradigm of the study. The input will be the Level of Competency of ICT Coordinators in Computer Hardware Servicing in Assembly / Disassembly, Installing Computer System and Computer Networking assessed by the ICT Coordinators of Silang II that will be a basis for a proposed ICT Training Program.

![Figure 1. IPO Made Showing the Research Paradigm of the Study](image)

**METHODOLOGY AND RESEARCH DESIGN**

The study used the descriptive method of research. The reason for using this method is the fact that the study dealt with the assessment of the level of competency of ICT coordinators. It involved gathering of information to find out as to what extent of competency are being demonstrated by the ICT coordinators. The respondents of the study were the 25 ICT
coordinators of 25 public elementary schools under the District of Silang II.

Table 1 shows the Likert scale used in the study with the verbal interpretation from Incompetent to Very Highly Competent.

**Table 1. Scale Used in the Study (Likert Scale)**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Range</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4.21 to 5.00</td>
<td>Very Highly Competent</td>
</tr>
<tr>
<td>4</td>
<td>3.41 to 4.20</td>
<td>Highly Competent</td>
</tr>
<tr>
<td>3</td>
<td>2.61 to 3.40</td>
<td>Competent</td>
</tr>
<tr>
<td>2</td>
<td>1.81 to 2.60</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>1</td>
<td>1.00 to 1.80</td>
<td>Incompetent</td>
</tr>
</tbody>
</table>

To assess the level of competency of ICT coordinators in Silang II District, the researcher used a self-made questionnaire which was validated by experts. It was administered to the respondents as a measuring instrument in determining the level of competency of the respondents. This questionnaire was mainly about the level of competency of ICT coordinators in the areas of Computer Hardware Servicing namely Assembly / Disassembly, Installing Computer System and Computer Networking as stipulated in the Training Regulations of Computer Hardware Servicing from TESDA.

The results obtained from the survey were analyzed and interpreted using the frequency and mean. Mean is the sum of the scores in a distribution divided by the number of scores in the distribution. It usually refers to arithmetic mean that is the commonly known average. Frequency refers to the number of times the event occurred or the characteristics present in the study. A table of the raw data collected, including the frequencies, are presented in a frequency distribution table. The frequency was used in determining number of years of the respondents as ICT Coordinator. While the mean was used in determining the level of Competency of ICT Coordinators in Assembly / Disassembly, Installing Computer System and Computer Networking.
RESEARCH RESULTS AND DISCUSSION

The results of the study are presented to answer the following problems.

**Problem 1.** What is the profile of the ICT Coordinators in Silang II District in their number of years being an ICT Coordinator?

<table>
<thead>
<tr>
<th>ICT Coordinator Experience (Year)</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>2 – 3</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>4 - 5</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>6 and above</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 2 shows the profile of ICT coordinators in Silang II in terms of the number of years they served being an ICT coordinator. Finding shows that **10 or 40%** from **25** ICT coordinators are serving as the ICT coordinator for **2 – 3** years while **24%** and **28%** served for **4 – 5** years and **0 – 1** year respectively. There are only **2 or 8%** who are ICT coordinators for **6 years and above**. Result shows that majority of the ICT coordinators are new in the position and have been serving in less than 4 years.

**Problem 2.** What is the level of competency of the ICT Coordinators with regards to the following areas of Computer Hardware Servicing:

a. Assembly / Disassembly,
b. Installing Computer System,
c. Computer Networking?
Table 3: Level of Competency of ICT Coordinators in Assembly / Disassembly

<table>
<thead>
<tr>
<th>ASSEMBLY / DISASSEMBLY</th>
<th>MEAN</th>
<th>VERBAL INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Removing and connecting hardisk in the system unit</td>
<td>2.32</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>2. Removing and connecting RAM in the system unit</td>
<td>2.18</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>3. Removing and connecting power supply in the system unit</td>
<td>2.45</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>4. Removing and connecting Video card in the system unit</td>
<td>2.05</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>5. Removing and connecting monitor in the system unit</td>
<td>4.00</td>
<td>Highly Competent</td>
</tr>
<tr>
<td>6. Removing and connecting mouse and keyboard in the system unit</td>
<td>4.30</td>
<td>Highly Competent</td>
</tr>
<tr>
<td>OVERALL MEAN</td>
<td>2.88</td>
<td>Competent</td>
</tr>
</tbody>
</table>

Table 3 shows the level of competency of ICT coordinators of Silang II in Computer Hardware Servicing under Assembly / Disassembly. Result shows that ICT Coordinators are highly competent in removing and connecting monitor in the system unit with a mean of 4.00 and removing and connecting mouse and keyboard in the system unit with a mean of 4.30. However, the rest of items under Assembly / Disassembly have fairly competent results with a mean of 2.05 to 2.45 in the skills of removing and connecting video card in the system unit, removing and connecting RAM in the system unit, removing and connecting hardisk in the system unit and removing and connecting power supply in the system unit.

The findings strengthen the claim of Brown and Warschauer (2006) that teachers perform better in using ICT when they are well grounded in the technology. Albion and Ertmer (2002) state that teachers’ short-term exposure to technology would be inadequate in equipping the teachers with the necessary knowledge and skills for the confident and masterful use of ICT in classrooms.
Table 4: Level of Competency of ICT Coordinators in Installing Computer System

<table>
<thead>
<tr>
<th>Installing Computer System</th>
<th>Mean</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Formatting hardisk of the computer</td>
<td>2.32</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>2. Installing Windows Operating system in the computer using CD/DVD</td>
<td>2.77</td>
<td>Competent</td>
</tr>
<tr>
<td>3. Installing Windows Operating system in the computer using Flashdrive or USB</td>
<td>2.09</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>4. Installing Microsoft Office Programs like Word, Excel or other application in the computer</td>
<td>3.41</td>
<td>Highly Competent</td>
</tr>
<tr>
<td>5. Installing Antivirus in the computer like Avira, Avast, McAfee, etc..</td>
<td>3.59</td>
<td>Highly Competent</td>
</tr>
<tr>
<td><strong>Overall Mean</strong></td>
<td><strong>2.84</strong></td>
<td><strong>Competent</strong></td>
</tr>
</tbody>
</table>

Table 4 shows the level of competency of ICT coordinators of Silang II in Computer Hardware Servicing under Installing Computer System as **competent** with an overall mean of **2.84**. Result shows that ICT Coordinators are **highly competent** in **Installing Microsoft Office Programs like Word, Excel or other application in the computer** and **Installing Antivirus in the computer** with a mean of 3.41 and 3.59 respectively. They are also **competent** with a mean of **2.77** in **Installing Windows Operating system using CD / DVD**. However, **Formatting hardisk of the computer** and **Installing Windows Operating system in the computer using Flashdrive or USB** got a **fairly competent** results with a mean of **2.32** and **2.09** respectively.
Table 5: Level of Competency of ICT Coordinators in Computer Networking

<table>
<thead>
<tr>
<th>COMPUTER NETWORKING</th>
<th>MEAN</th>
<th>VERBAL INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Creating straight-through and cross-over network cable.</td>
<td>1.64</td>
<td>Incompetent</td>
</tr>
<tr>
<td>2. Connecting two computers using network cable</td>
<td>1.82</td>
<td>Incompetent</td>
</tr>
<tr>
<td>3. Sharing a folder and file in the network.</td>
<td>1.73</td>
<td>Incompetent</td>
</tr>
<tr>
<td>4. Sharing a printer in the network.</td>
<td>1.77</td>
<td>Incompetent</td>
</tr>
<tr>
<td>5. Installing and configuring Router.</td>
<td>2.05</td>
<td>Fairly Competent</td>
</tr>
<tr>
<td>OVERALL MEAN</td>
<td>1.80</td>
<td>Incompetent</td>
</tr>
</tbody>
</table>

Table 5 shows the level of competency of ICT coordinators of Silang II in Computer Hardware Servicing under Computer Networking interpreted as incompetent with an overall mean of 1.80. Finding shows that ICT Coordinators are fairly competent in Installing and configuring Router with a mean of 2.05. However, the rest of the items under Computer Networking got an incompetent results in Connecting two computers using network cable with a mean of 1.82, Sharing a printer in the network with a mean of 1.77, Sharing a folder and file in the network and Creating straight-through and cross-over network cable with a mean of 1.73 and 1.64 respectively.

This affirms the claim of Truscott (2003) that technology requires new skills and knowledge to be mastered. Adaptation to it would only be possible based on a sound understanding of the principles and concepts of ICT. In another study by Barnett (1994), he reported that teachers who started out their careers in an era when technology was not available would be difficult to convert to become users of modern technology.
Problem 3. What ICT training program can be designed from the results of the study?

Table 6: PROPOSED ACTION TRAINING PROGRAM for ICT Coordinators of Silang II

<table>
<thead>
<tr>
<th>COURSE CONTENT</th>
<th>SPECIFIC OBJECTIVES</th>
<th>METHODOLOGY</th>
<th>OPERATING DETAILS</th>
<th>MATERIALS</th>
<th>BUDGETARY REQUIREMENTS</th>
<th>TIME FRAME</th>
</tr>
</thead>
</table>
| ASSEMBLY / DISASSEMBLY | 1. To remove and connect hardisk in the system unit  
2. To remove and connect RAM in the system unit  
3. To remove and connect power supply in the system unit  
4. To remove and connect Video card in the system unit | Working Desktop computer that will be utilized during the training by the participants.  
The Smartboard and LCD Projector with Doc Camera in the ICT laboratory will be used by the Trainer during the training. | The participants of the training will be the ICT Coordinators of Silang II District.  
The training will be done through batches with 10-15 participants per batch.  
The venue of the training will be the ICT room of the Lalaan Central School in the district of Silang II  
Resource persons are the IT experts in Computer Hardware Servicing | Desktop Computer  
Hardisk, RAM, Power Supply and Video Card  
LCD Projector  
Doc Camera | Meals for the resource persons and members of the Training Committee  
Computer parts like Hardisk, RAM, Power Supply and Video Card  
Supplies like bond papers, flash drive, CD/DVDs to be used during the training  
Honoraria for resource persons  
Miscellaneous for printing and reproduction of handouts and modules | April - May |
| INSTALLING COMPUTER SYSTEM | 1. To format the hardisk of the computer  
2. To Install Windows Operating system in the computer using Flashdrive or USB | Working Desktop computer that will be utilized during the training by the participants.  
The Smartboard and LCD Projector in the ICT laboratory will be used by the Trainer | The participants of the training will be the ICT Coordinators of Silang II District.  
The training will be done through batches with 10-15 participants per batch.  
The venue of the training will be the ICT room of the Lalaan Central School in the district of Silang II  
Resource persons are the IT experts in Computer Hardware Servicing | Desktop Computer  
Hardisk, FlasDrive  
Windows Operating Installer  
LCD Projector | Meals for the resource persons and members of the Training Committee  
Hardisk,  
Supplies like bond papers, flash drive, CD/DVDs to be used during the training | April - May |
As an output of this study, a proposed ICT Training Program for ICT coordinators of Silang II is hereby presented by the researcher. Based from the findings of the study, the proposed ICT Training Program will focus on the topics of the different areas in Assembly / Disassembly, Installing Computer System and Computer Networking. This will enhance and address the gap the assessed ICT Computer Servicing Skills of the respondents with Competent, Fairly Competent, and Incompetent results.

The Proposed ICT Training will be implemented last for in a span of 3 months. Each
focused course content area will be given one month training and where ICT coordinators will participate in the District of Silang II, using the available ICT room in the schools. The training will be conducted by the trainers expert in Computer Hardware Servicing, with the help of the District ICT coordinators as the facilitators. Different activities will be done in conducting the training that will serve as an application of all the topics that will be discussed in the training. The participants will be given an actual assessment to determine if the knowledge and skills that were presented in the objectives of the training were attained by the ICT coordinators.

CONCLUSION

In the light of the foregoing findings, the study showed that ICT Coordinators are competent in Assembly / Disassembly and Installing Computer System. Some items under Assembly / Disassembly and Installing Computer System have a fairly competent results like removing and connecting hardisk, RAM, Power Supply and Video Card in the system unit, formatting hardisk and installing Window operating system in the computer using flash drive and CD should be improved further.

Moreover, there is a need to improve on the level of competency of ICT coordinators in Computer Networking with an Incompetent result such as creating straight-through and cross-over network cable, connecting two computers using network cable, sharing files, folder and printer in the network and installing and configuring router.

With all these findings taken from the study, there is a need to propose an ICT Training Program for ICT Coordinators in the District of Silang II.

RECOMMENDATION

In line with the findings of the study, the following recommendations are made:

The study recommends that the District of Silang II should make an improvement in the level of competency in Computer Hardware Servicing of ICT coordinators into different areas
and make it a priority goal in the District Faculty Development Program.

A similar study should be conducted every year in order to assess the level of competency of ICT coordinators annually.

The proposed ICT training program should be implemented by the administrators in every elementary school in Silang II district because of a need to improve the level of competency of ICT coordinators in Computer Hardware Servicing in the areas of Assembly / Disassembly, Installing Computer System and Computer Networking that will give a positive result in the maintenance and utilization of the computers in the school.

REFERENCES


Effective, Adaptable Materials for Teaching Heat Transfer Concepts

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Heat transfer is a a core course for engineering students. There are a number of well documented misconceptions commonly held by students in the area of heat and energy, including confusion over factors which impact the rate at which energy is transferred and factors impacting how much energy is ultimately transferred (rate vs. amount) and confusion over how important color is to radiative heat transfer (radiation). Even though most students complete undergraduate courses in this area and can successfully manipulate the relevant equations, they may still falter on the underlying concepts. Our previous work demonstrated that inquiry-based laboratory activities based upon a predict, observe, reflect model were capable of repairing student misconceptions in this area more effectively than traditional lecture.

While previous work showed these activities to be highly effective, it was challenging for them to be adopted at other institutions. Pressures on laboratory space, equipment expense, and student and faculty time meant that even brief activities such as ours are impractical in some settings. For the current study, we re-created activities in four additional forms designed to address faculty adoptability concerns: faculty demonstration, student-performed simulation, faculty demonstration of simulation, and as a thought experiment. These were tested at several institutions and all interventions resulted in a higher level of student post-course conceptual gain than did traditional lecture controls. The most effective intervention is still student-performed laboratory activities, although students in all experimental groups out-performed students in control groups lacking any activities. Packets describing all activities for all five approaches are freely available through the AIChE Concept Warehouse (http://jimi.cbee.oregonstate.edu/concept_warehouse/) , and interested faculty are encouraged to download and try any materials they would like to try in class. The materials are free for faculty use.
Title: The Effects of Dual Enrollment Programs on Social and Emotional Learning, College Readiness, and the Graduation Initiative/Imperative

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Abstract

For the past twenty-nine years, California State University, Sacramento currently referred to as Sacramento State University (CSUS) has operated a dual enrollment program; Accelerated College Entrance (ACE). This successful program allows interested and qualified high school students the opportunity to take university courses concurrently with their high school curriculum either on-campus, or off-campus (with their partnering high schools). Interviews illuminate emergent themes describing how ACE students perceive themselves regarding the likelihood of graduating from high school, of transitioning to a four-year college rather than a two-year college, of taking less basic skills courses in college, of persisting in postsecondary education, and of accumulating more college credits?
Submission Title: The Technology Driven Student: How to Apply Bloom’s Revised Taxonomy to the Digital Generations

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Currently there is a growing concern of educating the modern digital student. As of now, the landscape of education can be considered that of a revolution with technology being the engine powering it. The proliferation of technology has given birth to the biggest generational gap since the induction of rock and roll music, however the field of education has yet to structure teaching and learning to match the millennial generation. The authors do not propose an update to Bloom’s Revised Taxonomy, but call attention to the need of adapting the revised taxonomy to a new generation of students.

This paper presents an overview of the evolution of Bloom’s Original Taxonomy to Bloom’s Revised Taxonomy to the start of what is termed Bloom’s Digital Taxonomy. In addition, the authors argue that current restrictions on the use of technology in the classroom, although well intentioned, fail to build a connection between the classroom and reality. Education has been a cornerstone of human life and success, and if educators are to keep the interest of the youth, adaptation and modification may be necessary.
Relationship between Subject-specific and Generic Competencies: Evidence from a Survey on Japanese Universities

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Abstract

This paper aims to clarify the relationship between subject-specific competencies (SSC) and generic competencies (GRC) using the results of a questionnaire survey conducted in 2015, which asked students, academic staff, and graduates of Japanese universities about graduates’ SSC in six university subjects and GRC. The empirical results show that recognition of SSC and GRC has a positive relationship with different levels of correlation among stakeholders and subjects; the relationship in students shows relatively weak ties compared with that of other stakeholders, as well as that of both Chemistry and Mechanical Engineering subjects. Factor analysis indicates the existence of factors that impact both SSC and GRC in all subjects with heterogeneous structures by subjects; five fields excluding Business have fewer relationships based on commonalities between SSC and GRC such as information and communication technology skills and internationalization, but Business has a closely intertwined relationship between SSC and GRC.

1. Introduction

Competency is becoming a key concept in transferring higher education achievement from academic studies to workplaces and across career sequences. In this paper, competencies are defined as the capability to link individual attributes, including knowledge and skills, to the demands of tasks and activities as defined precisely by Gonczi [1]. Recently in Japan, accompanying this educational trend and changing in-house company education under the stagnation of the Japanese economy, significant attention has been given to the competencies acquired by university graduates, especially generic competencies (GRC) such as problem solving and critical thinking [2–4].

Following the increasing attention on GRC, Japanese universities have begun to teach them by setting up new classes separately from subject-specific education, which is the method to achieve the aims of universities to educate students in subject-specific knowledge and skills, i.e., subject-specific competencies (SSC). However, the best way to introduce GRC instruction is currently debated.

The authors question the current educational argument for GRC because we consider that teaching GRC should come after the clarification of the basic mechanism and characteristics of competencies. Based on this problem, the current paper aims to clarify the relationship between SSC and GRC as a very basic mechanism by using the results of a questionnaire survey conducted in 2015, which asked students, academic staff, and graduates of Japanese universities about graduates’ SSC in six university subjects and GRC.

The empirical results show that recognition of SSC and GRC has a positive relationship with different levels among stakeholders and subjects; the relationship between SSC and GRC in students show relatively weak ties compared with that of teachers and graduates, as well as that of both Chemistry and Mechanical Engineering subjects compared with those of other subjects.

The remainder of this paper is organized as follows. Section 2 describes the results of the literature review and introduces the research questions. Section 3 explains the method, and section 4 summarizes the results. Section 5 concludes.

2. Literature review

Japanese universities have attempted to cultivate GRC in students by setting up new classes separately from subject-specific education. For instance, recent survey results show that the number of universities that provide GRC classes have increased steadily (442 universities [61% in total] in 2009 and 566 [76% in total] in 2015); however, these classes are categorized under the subject of career education [5]. The ease of introduction could be the reason for new classes, according to Kawaijuku [6].

However, researchers in the field of education have disagreed on the appropriate method of introducing GRC. Ogata [7] insists that teaching GRC alone deprives students of the opportunity to cognize the relevance of subject-specific learning for
their future working career and the students acquire weak skills in thinking and learning attitudes because of GRC instruction’s weak base in academic learning. Sugihara [8] was concerned with the current GRC education, which was described as losing its real-world context and was simply packaging methods without “realization” because acquiring GRC became the aim instead of a method for learning academic knowledge and skills. However, the criticism against the introduction of new classes does not appear to be successful enough to be supported by academic staff in charge of subject-specific education. One of the reasons for this lack of support could be based on the unclarified mechanism of competencies.

Previous studies have partially shown the relationship between SSC and GRC. For instance, in a comprehensive literature review, Camara et al. [9] concluded that there was a close relationship between study achievement and transferable abilities. González and Wagenaar [10] also described qualitatively that GRC are interpreted differently by researchers in different academic fields and are distinguished from SSC unclearly. This is consistent with Jones [11], who concluded that researchers in different disciplines understand GRC differently. These results suggest that two types of competencies have positive relationships with a variety of subjects.

Previous studies targeting Japanese students have analyzed GRC based on their respondents’ academic fields [12–15]. For instance, Yamada and Mori [12] and the Prog Hakusho Project [13] found that students studying either education or health possessed more GRC, such as higher ability for socialization and self-expression, than did colleagues from other majors. The GLU12 Universities Tuning Working Group [14] concluded that students’ recognition of the importance of competencies were relatively close to that of teachers, but far from that of business personnel. These results indicate the possibility of heterogeneous recognition of GRC depending on academic fields and higher education stakeholders. In Japan, however, former studies have not investigated SSC in depth, other than the participation in the OECD’s Assessment of Higher Education Learning Outcomes [16]. To the best of our knowledge, no studies have explored the relationship between SSC and GRC in Japan. Therefore, the current study set up the following research questions to clarify it empirically in the various perspectives of Japanese university stakeholders:

**Research question 1:** Is the relationship between the recognitions of SSC and GRC positive?

**Research question 2:** Is the relationship between the recognitions of SSC and GRC heterogeneous by university subjects or stakeholders?

### 3. Method

#### 3.1. Sample

A questionnaire survey was conducted from January to March 2015. Data were collected from 2,553 stakeholders of seven universities in Japan (1,850 students, 351 academic staff, and 352 graduates within 5 years after graduation). The students’ academic achievement levels may be relatively higher than the standard achievement of university students in general and homogeneous among the sample because these selective universities were chosen based on the type of research performed. The survey targeted six subjects: Physics, Chemistry, Mechanical Engineering, Civil Engineering, History, and Business. Table 1 shows the number of participants by subjects and stakeholders.

**Table 1** Number of participants

<table>
<thead>
<tr>
<th>Subject</th>
<th>SSC</th>
<th>GRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>501</td>
<td>642</td>
</tr>
<tr>
<td>Chemistry</td>
<td>349</td>
<td>480</td>
</tr>
<tr>
<td>Mechanical</td>
<td>602</td>
<td>847</td>
</tr>
<tr>
<td>Engineering</td>
<td>192</td>
<td>296</td>
</tr>
<tr>
<td>History</td>
<td>152</td>
<td>194</td>
</tr>
<tr>
<td>Business</td>
<td>78</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>642</td>
<td>1,059</td>
</tr>
</tbody>
</table>

#### 3.2. Questionnaire

The questionnaire was based on the one used by the Tuning Academy in Europe [10], which was translated into Japanese and changed slightly to follow the Japanese context. Each questionnaire included SSC and GRC sections. The number of competencies was 31 in GRC and varied in SSC among the six subjects: Physics, 23; Chemistry, 24; Mechanical Engineering, 24; Civil Engineering, 24; History, 33; and Business, 24. For each competence, the respondents were asked to indicate the strength of their opinion about the importance of acquiring it before graduating from university on a Likert scale from 1 (weak) to 4 (strong).

### 4. Results

#### 4.1. Relationship between competencies

This section shows the result of the analysis on the relationship between SSC and GRC. Although the SSC lists are completely different among the subjects, the authors consider the lists as being comparable regarding them as expectations of
experts in the field to be achieved during university education.

Table 2 shows the recognition of the importance of both SSC and GRC by stakeholders. The respondents evaluated SSC slightly higher than GRC at 0.03. Graduates evaluated both competencies lower than did students and teachers. Students evaluated SSC higher than GRC at 0.05, teachers evaluated them almost equally, and graduates evaluated GRC higher than SSC at 0.05. On average, the difference between stakeholders is quite small.

Table 2 Importance of competencies

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Numbers</th>
<th>SSC Mean</th>
<th>SD</th>
<th>GRC Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>1,926</td>
<td>3.20</td>
<td>0.46</td>
<td>3.15</td>
<td>0.42</td>
</tr>
<tr>
<td>Teachers</td>
<td>342</td>
<td>3.14</td>
<td>0.43</td>
<td>3.15</td>
<td>0.41</td>
</tr>
<tr>
<td>Graduates</td>
<td>336</td>
<td>3.09</td>
<td>0.51</td>
<td>3.10</td>
<td>0.38</td>
</tr>
<tr>
<td>Total</td>
<td>2,504</td>
<td>3.17</td>
<td>0.47</td>
<td>3.14</td>
<td>0.41</td>
</tr>
</tbody>
</table>

A scatterplot of means for SSC and GRC is shown by the stakeholders in Figure 1 and by the subjects in Figure 2. Their correlations are shown in Table 3. Figure 1 indicates the positive relationships between SSC and GRC for all types of stakeholders. Table 3 also shows the different levels of correlations among stakeholders. For instance, the correlation of students is around 0.3, which is almost half of both teachers and graduates at around 0.6. The scatterplot of means for the field also shows the same tendency. The relationships between SSC and GRC for all subjects are positive, but with different levels. The amount of correlation is smaller in Chemistry and Mechanical Engineering at around 0.3 than others showing at 0.6 in Business, at more than 0.5 in Civil Engineering and History, and at around 0.4 in Physics. Therefore, the results conclude that there is a positive relationship between SSC and GRC at different levels in stakeholders and subjects.

Figure 1 SSC vs GRC by stakeholders

Table 3 Correlation between SSC and GRC

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Correlation SSC Academic Subjects</th>
<th>Correlation GRC Academic Subjects</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>0.31***</td>
<td>Physics</td>
<td>0.41***</td>
</tr>
<tr>
<td>Teachers</td>
<td>0.65***</td>
<td>Chemistry</td>
<td>0.29***</td>
</tr>
<tr>
<td>Graduates</td>
<td>0.58***</td>
<td>Mechanical Engineering</td>
<td>0.33***</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>Civil Engineering</td>
<td>0.56***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>History</td>
<td>0.51***</td>
</tr>
</tbody>
</table>

Note: *** 1%, **5%, *10% significance levels

4.2. Relationship between the pair of competencies

The different levels of relationships among subjects could be grounded on the relationships between pairs of competencies. We analyzed the relationships between pairs of competencies by subjects, targeting students who were the majority of respondents (72.9% of total), considering the different levels of relationships among stakeholders. Figure 3 shows the correlation and significance of each pair of competencies in GRC and SSC, where each matrix includes 1,458 correlations at least, i.e., the number in Physics is 1,458 based on the formula (31 GRC + 23 SSC)²/2. The color cell means that the P-value is under 0.05 where the null hypothesis that the correlation is zero is rejected.

As shown in Figure 3, two types of relationships are identified: First, a strong relationship within either SSC or GRC (triangles on the upper left side and on the lower right side), but a weak relationship between SSC and GRC (square shape on lower left side). In Figure 3, Chemistry and Mechanical Engineering subjects are categorized into this type with a clear shape of green triangles and white squares. Physics is also categorized into this category with relatively weak characteristics. Second, a relationship without clear differences as opposed to the first type. Business is categorized clearly into this type, but Civil Engineering and History are not categorized into these two types. The results indicate a heterogeneous structure among subjects. Although
the relationships between each pair of competencies are interesting, they are not easily understood from the correlations of pairs. The structure of competencies will be discussed in the following section using the results of factor analysis.

![Diagram of Competency Relationships](image)

**Figure 3 Correlation between competencies**

### 4.3. Structure of competencies

This section shows the results of factor analysis to clarify the structure between SSC and GRC. We focus on the factors that impact on both SSC and GRC (FBTH). The factor analysis used the maximum-likelihood method and promax rotation to target all three types of stakeholders. Kaiser’s criterion sets up the number of factors as one or more eigenvalues in a normalized correlation matrix.

Table 4 shows the number, ratio, and the factor order of FBTH based on the degree of contribution. Business shows a different tendency to other subjects. For example, the number of FBTH is 6 in Business, which is around 40% of the total; however, it is 3 in Civil Engineering and History, and 1 or 2 in the remainder, which is at most 23.1% of the total. The highest order of FBTH in Business is the second order, whereas other subjects do not have that kind of higher order of factors.

<table>
<thead>
<tr>
<th>Fields</th>
<th>Number of factors</th>
<th>Number of FBTH (ratio)</th>
<th>Number of SSC (ratio)</th>
<th>Number of GRC (ratio)</th>
<th>Factor order of FBTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>10</td>
<td>2 (20.0%)</td>
<td>4 (40.0%)</td>
<td>4 (40.0%)</td>
<td>4, 6, 8</td>
</tr>
<tr>
<td>Chemistry</td>
<td>12</td>
<td>2 (16.7%)</td>
<td>4 (33.3%)</td>
<td>6 (50.0%)</td>
<td>1, 7, 12</td>
</tr>
<tr>
<td>Mechanical</td>
<td>10</td>
<td>1 (10.0%)</td>
<td>3 (30.0%)</td>
<td>6 (60.0%)</td>
<td>9</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>13</td>
<td>3 (23.1%)</td>
<td>5 (38.5%)</td>
<td>5 (38.5%)</td>
<td>7, 8, 13</td>
</tr>
<tr>
<td>History</td>
<td>15</td>
<td>3 (20.0%)</td>
<td>7 (46.7%)</td>
<td>8 (53.3%)</td>
<td>7, 8, 10, 13</td>
</tr>
<tr>
<td>Business</td>
<td>15</td>
<td>6 (40.0%)</td>
<td>2 (13.3%)</td>
<td>7 (46.7%)</td>
<td>2, 7, 8, 10, 13</td>
</tr>
</tbody>
</table>

Table 5 Correlation of different types of factors

<table>
<thead>
<tr>
<th>Field</th>
<th>Physics</th>
<th>Chemistry</th>
<th>Mechanical Engineering</th>
<th>Civil Engineering</th>
<th>History</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBTH and FBTH</td>
<td>0.22</td>
<td>0.22</td>
<td>0.06</td>
<td>0.10</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>FSSC and SSC</td>
<td>0.24</td>
<td>0.41</td>
<td>0.12</td>
<td>0.25</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>FGC and FGRC</td>
<td>0.29</td>
<td>0.59</td>
<td>0.33</td>
<td>0.29</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>FSSC and SSC</td>
<td>0.23</td>
<td>0.07</td>
<td>0.80</td>
<td>0.18</td>
<td>0.20</td>
<td></td>
</tr>
<tr>
<td>FBTH and FGRC</td>
<td>0.27</td>
<td>0.04</td>
<td>0.29</td>
<td>0.18</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td>FGC and FGRC</td>
<td>0.18</td>
<td>0.16</td>
<td>0.22</td>
<td>0.15</td>
<td>0.23</td>
<td></td>
</tr>
</tbody>
</table>

Note: The figure shows the mean of correlations

We analyzed the contents of FBTH by subjects. Regarding the natural science fields, in Physics, two factors were categorized into FBTH among 10 factors: the fourth factor is named as social responsibility and the eighth is experimental skills with safety consciousness. In Chemistry, two factors were categorized into FBTH among 12 factors: the tenth factor relates to internationalization both in FSSC and FGRC, and the twelfth relates to the development of the latest research technology in SSC with a negative sign and international work in GRC with a positive sign, which means that these competencies were regarded as being contradictory attributes. The fifth factor in Mechanical Engineering was categorized into FBTH among 10 factors, which include usage of information and communication technology (ICT). Mechanical Engineering has high factor loading in both ICT usage and spatial presentation in SSC as well as ICT usage in GRC. Three factors in Civil Engineering were categorized into FBTH: seventh, applying knowledge; eighth, internationalization; and thirteenth, interpersonal skills.

Regarding the humanities, arts, and social science fields, three factors in History were categorized into FBTH: seventh, internationalization; ninth, ICT usage; and twelfth, social relationship, which relates to social responsibility in SSC and 10 GRC that are
relatively related to interpersonal and collaborative work. Business has six FBTH among 15 factors. The second factor is named as business leadership, which relates to 10 SSC and two GRC with communication and self-criticalness. The sixth factor is the improvement and innovation of business, the tenth is the understanding of business background, the thirteenth is organizational understanding, the fourteenth is the understanding of baseline systems in business, and the fifteenth is collaborative work.

In summary, all six subjects have at least one FBTH, but the number and order of correlations based on the degree of contribution are varied. For instance, there are two FBTH ranked tenth and twelfth among 12 factors in Chemistry and only one ranked fifth among 10 factors in Mechanical Engineering. However, there are six FBTH ranked starting at second among 15 factors in Business. The competencies of FBTH are also varied by subjects. There are commonalities in FBTH: internationalization, interpersonal/collaborative skills, ICT usage, and social responsibility. When these competencies are included in the lists of both SSC and GRC, they tend to be identified as FBTH. However, FBTH in Business indicates different characteristics, which show the more complicated and intertwined relationship between SSC and GRC.

5. Conclusion and discussion

The paper aimed to clarify the relationships between SSC and GRC using the results of a questionnaire survey conducted in Japanese universities in 2015, which asked students, academic staff, and graduates about graduates’ SSC in six university subjects and GRC. The empirical results show that recognition of the importance of SSC and GRC has positive relationships at different levels among stakeholders and subjects. The relationship between SSC and GRC in students shows relatively weak ties compared with that of the other stakeholders, as well as both Chemistry and Mechanical Engineering subjects.

Factor analysis indicates the existence of FBTH in all subjects with heterogeneous structures by subjects, and differences in the number, order, and contents of FBTH. FBTH in the five subjects, excluding Business, are at most three, lower order, and with common contents such as internationalization, ICT usage, and interpersonal/collaborative skills. There are different characteristics shown by FBTH in Business: up to six, higher order as the second, and more complicated and intertwined relationship between SSC and GRC. These results could explain the various recognition of the importance of SSC and GRC by subjects.

The finding showing the positive relationship between SSC and GRC indicates that GRC could be acquired with SSC using subject-specific education in the universities. However, with the heterogeneity of relationships by the subject, the level and contents of GRC in graduates varied by subject. If the whole university attempts to educate students in GRC, the university stakeholders need to pay attention to the varied outputs by discipline and address these outputs appropriately.

The limitation of the generalization of the result is because of a limited sample. The data targeted only selective universities so that a wider targeted sample is necessary to describe the situation in Japan. There are two future research themes: an investigation using participant attributes, such as age, sex, or career plan; and further understanding the background of the results that the current paper shows. For instance, the current paper visualizes the differences in students’ recognition from that of teachers and graduates, but the reason for this difference is not clear. One interpretation for this difference is the more impact of longer years belonging to the higher education and assimilation, but it is necessary to analyze this interpretation using evidence.

10. References


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and Return Knowledge to the Society)”, Tamagawa University Press, Tokyo, 2011.


Intersections In The Band Room: Contemporary Strategies In A Traditional Setting

Prepared for the 2017 Hawaii International Conference on Education, Honolulu

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Word Count: 3,629 (with References)

Abstract

The ideas and studies around the concepts of student engagement in the classroom is an ongoing phenomenon. What works for one group of students in one year may or may not work for another group in another time. Schools are constantly evolving and striving to reach all students. The school band room is no exception. Strategies studied and recommended by scholars at the Marzano Research Lab have shown to increase students’ active involvement in classrooms, so why not borrow and implement these in the band room? This article aims to provide some background about the music education profession, which will lead to the utilization of Marzano engagement strategies in one music classroom. It involves perspectives from both a teacher and a student.

Keywords: music education, engagement, band, praxial music, aesthetic
Introduction
In Marzano’s (2007) *The Art and Science of Teaching*, the framework around student engagement is identified as one of the most important considerations of classroom teachers. Does this include the band class? Aren’t the band students inherently engaged when they are playing? Perhaps when students are ‘doing’ they are engaged; but are they always engaged during the ‘learning’ opportunities? Author 1 suggests that a particular axiology is inherent to his program design, one that places importance on new strategies for a changing sociology, while Author 2 reflects on ways the recommendations have been implemented in the band class. Generally acknowledged, axiology refers to the role of an individual’s values to his study or process; specifically, being cognizant of the ways these values influence the development, process, or conclusion to a study or implemented operational process (Tomar, 2014; Hesse-Biber, 2010; Engle, 2009; Ponterotto, 2005).

This article is a joint effort between a California music educator (Author 1) and a public school student (Author 2). Using the school band as the classroom environment, within a phenomenon of student engagement, we address a brief history of a broader sociology of music education, along with so-called student engagement strategies promoted by the Marzano Research Labs. Reflections of experiences in the band class are offered from Author 2’s student perspective, within the framework of the article developed by Author 1.

Serving the populous
Public schools are collections of people, representing the plurality of our regional communities. As such, a praxial approach to music education must have a place in our professional practices. As schools are intended to educate the populus, they are generalist institutions by nature. Music is part of our lives in different ways and serves different purposes (Väkevä & Westerlund, 2012).

With the diverse student base, there should be many ways to approach music education. During the 1960s and 1970s, Kaplan (1978, 1966, 1963) addressed the music education profession as needing to become broader in scope - a time when the national music education professional association was establishing a narrower, aesthetic operating philosophy. The development of an aesthetic focus in music education has created a divide among educators toward an emphasis on aesthetics and the fine nuances identified with standard European classical perspective and an acknowledgment of “extra musical” functionality by others. Those acknowledging a praxial education generally recognize that music has value in other social, practical situations (Elliott & Silverman, 2012b). In her study, Kindall-Smith (2010) noticed that attention by administrators, as well as the general public, is primarily on concerts, activities, and teacher rapport with students—the extra-musical qualities. Often, praise of a program or of a teacher focuses on the types of events and performances or around how well students seemed to work with the teacher. Her observations identified descriptions about music events to emphasize the non-music aspects. For example, school administrators emphasized non-musical components of performance, such as:

- enthusiasm for performance
- costumes and sceneries (especially in musical drama productions)
• the contribution of the music toward the transmission of, or support of, cultural heritage or other non-music connections
• self-discipline and teamwork

Elliott’s (2012a, 2005) work around praxial music education, with its acknowledgment of societal, hence school, pluralism has enlightened my teaching practice. His work has caused me to engage in intentional actions that include deviations from aesthetic-centric-only practices in, what I call, my historically situated ensemble-based classes. Using the band as the formal organization of students to create class period X, my growth has been to honor the Euro-centric elements and methods of tone production, intonation, balance, blend, and interpretation of standard notation while also strategizing to provide individuals time during our class periods to explore personal interests, tutor each other, and to co-create through performing and/or writing. While the former provides a foundation of technical proficiency to engage in formal music-making with a common language, the latter provides opportunities for individuals to self direct toward addressing the 4 Cs of so-called 21st Century learning - collaborate, communicate, create, and think critically.

There must be a balance between serving students’ and communities’ interests and a decades old attention of “fulfilling a composer’s intent” as a performing group (Mantie, 2012, p. 113). Mantie contends that the school band is that—the school band, not the community band or orchestra. It is a place to learn, not solely an outcome-based source of entertainment for a larger community. Furthermore, he posits that the band has become—or is still—the primary format for secondary music education in the US. He argues that as bands became the primary medium for music instruction in US secondary schools, the discourse around music education changed toward the band’s edification through exposure to so-called great repertoire rather than one of supplying music to create a sense of community and/or personal enjoyment. This seems to have been a part of the evolving change in public education accountability, which also was happening at the time MENC was determining the purposes and philosophies of music education.

Mantie (2012) criticizes the structure of school bands for its evolved design over time toward specific musicality to the exclusion of alternatives. I still believe this plays a role in students’ interests in performing, but it affects us on a larger scale for administrative review. Currently, students must be considered for their growth potential as a band student and not for the interpersonal enjoyment through the participation. The sentiment continues to be explored, as evidenced by Gibsons’s study (2015), which identified that band teachers, in general, were not “doing enough to engage students in the band activity” (p. 35), resulting in increased attrition, especially at the middle school level. Toward this phenomenon, Elliott and Silverman (2012b) suggest that music should and can be a participatory experience greater than the standard operating category that continues to recognize European classical music as the standard (p. 28).

Early in MENCs formal development, Kaplan (1966) suggested a broader approach to music education to better represent the broader base of society, especially with the Civil Rights movement nationwide. There were sentiments that suggested when
art and music are broadened, they will inevitably deteriorate in quality. This idea came about from the elitist viewpoint of excellence. So-called excellence is reserved for the few and with a broadening society, and a broadening base of participation, the so-called quality and excellence of an elitist group is washed away. Writing from the 1960s, as part of what he called the Cogno society, or a time of great societal thought transition, Kaplan (1966) advised that arts in education are for a wider audience, as creators and as consumers. Kaplan questioned if excellence in the arts and other interests have a unique meaning in a time of affluence (p. 7). He made a strong case about connecting the machine oriented industrial society from earlier, which he called the kilowatt society, to the aspects of art and any other aesthetic value. He supported the position that the essential logic of the machine is standardization. This is in disagreement with concepts of art as creative experiences and processes; yet standardization governs all aspects of education now, even in the arts and music, as evidenced by documents, such as the California Department of Education’s (2001) Visual and Performing Arts: Music Content Standards, as well as the National Standards for Arts Education through the Consortium of National Arts Education Associations. Now, 50 years since Kaplan (1966), there is a pronounced STEM (science, technology, engineering, and mathematics) (CDE, 2012) focus in schools as well as the movement toward pacing guides and standardized tests, including the development of music and fine arts-specific assessments, as evidenced by the Test Blueprint initiated in the state of Florida as part of that state’s compliance for the federal Race To The Top grant (CFFAE, nd). Production consumption, according to Mantie (2012), has altered the discourse of band participation from being viewed for its intrinsic value to that of the band serving a purpose toward something greater. Mantie says the fabricated dichotomy pits the praxis of band against its purpose, historically. He continues that the current practices favor a kind of musicality and relationship to music, with a focus on the large ensemble, over alternatives. This further supports what I call the elitism of our music education system, especially the instrumental music program, as evidenced by MENC practices, as well as by active contemporary music academicians. Mantie boldly states that current music educators involved with wind band pedagogy (bands) risk operating unethically without realizing it.

With that said, Author 1 is reminded that, as of this writing, he is employed in that specialist’s role. In other words, he is a band director. Does he jeopardize his livelihood with this perspective?

Elliott and Silverman (2012a) provoke the music education profession by saying that we should challenge habits and assumptions. Furthermore, through these challenges, disruptions to traditional or historical operations result in destabilizing and unsettling thoughts of professional practice. What does this look like in a practical setting?

The instrumental music classroom - “the band” or “the orchestra” - is comprised of students from the general school population. The engagement strategies to reach all students may be encouraged in the ensemble-based class, too. I believe that action steps to engage more students more often should be employed in the music room, modified as necessary. While the idea of engagement suggests that students are on task, becoming interdependent and at times autonomous among each other and with the content, the
“teacher as learning companion” is a description borrowed from adult education that suggests the climate is fostered such that students trust the mutual roles of the experience (Cranton & Wright, 2008, p. 33).

Schewe (2016) reminds us that phenomena, like engagement, are changing states of being and are affected by various environments. She continues that the development of engagement strategies should be goals toward the motivation of students. Marzano (2007) encourages action steps to promote physical activity, to challenge students’ thinking, and to stimulate attention. Anecdotally, I believe many of my colleagues would say they facilitate these actions albeit from their large ensembles seated in standard large ensemble formats. However, the large ensemble is not the only means of teaching and learning, and in some scholarly writing, it is now suggested that the focus of large ensemble instruction is detrimental to individual musicianship and growth, hence to the music education profession (Wiggins, in Kooistra, 2016; Mantie, 2012). This article is not going to defend or deny such position; however, this may be an example of the unsettling condition suggested by Elliott and Silverman.

**Art and Science of Teaching (Marzano, 2007)**

From the teaching and learning perspective, an impacting component of the Marzano & Associates research has been in the area of student engagement for learning. The Author 1 will identify three Marzano strategies and his use of these in the large ensemble class that complement a large group session and develop musical literacy without constant teacher-driven direct instruction. Author 2 provides examples, in retrospect, of how these strategies were implemented and realized within the instrumental music class.

**Physical movement**

An argument could likely be made that playing wind and percussion instruments is itself a physical activity. It is; and, there are other ways throughout the week to get students to move differently, engaging more muscles and enhancing greater blood flow. Author 1 intends to have students move to various areas in the room, and to other parts of the building. The small amount time to get elsewhere, to set up and organize within small groups changes the pace, briefly requires full body engagement, and contributes to collaboration and problem solving.

Breaking up the large ensemble by encouraging both like and unalike groupings to practice at various spaces within the room not only involves the act of moving, getting students out of the chairs, but it also adds to the students’ autonomy over how and where they engage in their student-led practice (Kooistra, 2016).

During class, Author 2 reflected on ways that her teacher would utilize physical movement by being a part of a strategy called sectionals. Sectional rehearsal is when you get up from your chair, and go play with your section of instrument in another space, often concealed from the main practice room. For example, Author 2’s section, the
trumpets, would usually go to the instrument storage room, where the trumpet section could practice in the smaller group setting. It's easy to say that the multiple sections utilized all the space that came with the music room. Sometimes a smaller section would even practice in the music office, an identified practice room, or in other small areas of the building. While this happened, the teacher would usually be helping other students with difficult parts of the music we were working on. Usually while playing all together we are sitting, but when in these sectionals, all of the students are standing. I think that with standing comes physical movement. Working on breathing and tone quality is a big aspect of music and standing helps both of those subjects.

As a student, Author 2 does not believe that music, or playing an instrument, is some sort of sport, but she does believe that all things require physical movement. Some instruments require more physical movement than others, but they all require a good amount. Not just in our band classes, but also with music groups all around the world, there is physical movement.

**Demonstrate enthusiasm for content**

Tone, demeanor, and exaggerated behaviors enhance critical situations and content areas. Good and Brophy (in Marzano, 2007) clarify that this intense enthusiasm refers to teachers’ means to identify why, to state their reasons as interesting, and emphasize the topics importance. They add that enthusiasm does not equate to “pep talks or unnecessary theatrics” (p. 113). As a teacher, the attempts to be enthusiastic and extensive in the teaching/learning dynamic have been identified by the co-author,

*Ever since my first day in concert band in 6th grade, my band teacher has been the most enthusiastic teacher I have ever had. He always seems eager to learn new things, even though he's the one that’s teaching us the new things. He is very interested in music and clearly loves his job. It is very important to have an enthusiastic, eager learning teacher because it makes the whole learning environment so much better. The band teacher always takes the time to talk about the music we are playing, like making sure we know how it should sound and the history of the song. I knew he was interested in what we were doing by the way he walked into class everyday. He had the biggest smile and was always kind and caring to every student. I don't know how he did it, but the band teacher made us actually want to learn more and more about music and its culture; not many teachers can have that be said about them. He knows how to teach, and he knows how to do it well.*

**Inconsequential competition/Mild pressure**

Competition with minimal or no rewards. Author 1 states that he is generally no longer a proponent of competition in the music setting; however, there can be benefits. He believes Marzano’s recommendation of inconsequential competition is influenced by mild pressure, another engagement strategy. By having individuals, sections, small groupings, and combos play for each other within the large ensemble setting, students are likely to experience a sort of camaraderie that is both supportive of, but also the pressure
of performing in front of one’s peers is an example of forced attention (Marzano, 2007, p. 102).

Author 2 adds that competition usually means striving for first place; in her class setting, however, it is intended to be about improving. From Author 2’s perspective, the class never focused on being first; only on our own strengths and how we could make the band better by working together with these strengths. We always competed against ourselves, trying hard to improve and get better as each day passed. Although a little healthy competition against other bands is a good thing, our bands are generally just happy to be playing and having the opportunities, whether in a competitive setting or not.

Furthermore, according to Author 2, by playing in our combos, we would take note of other combos if they were playing really well, but we also were impressed and happy for them. The incorporations of combos, as well as the occasional competition, were not to be number one, but to encourage self- and group-improvement, and to want to improve the band overall. All the band classes at our school had such a strong connections to each other that we were happy with our improvement as a group, whether or not we were in formal competition.

Fine

Over the years, different words have been used when referring to students’ on task behaviors. As a practitioner, Author 1 likes to think of our current trend toward engagement to mean not only that students are task-doing, but also that they are fully and actively engaged with their own learning. Having been in the profession for a good amount of time, I have encountered time and time again colleagues who opine that strategies of the day are not intended for or useful in the band room. I encourage any colleague who feels this way to acknowledge everyone’s evolution, including ours in the band room, and try reaching students in ways that may seem different; in most cases, that will be the point. Whatever we can do to reach our current students, reach out to and include new, future students, and sustain a relevant music education, we should. As Cranton and Wright (2008) identify in the field of adult education, being creative and innovative toward connecting with our students helps to develop the safe environment for students to become engaged and “to put the learner into the conversation” (p. 36).

As Reeve (in Marzano, 2007) suggested 10 years ago, “when engagement is characterized by the full range of on-task behavior, positive emotions, invested cognition, and personal voice, it functions as the engine for learning and development” (p.99).
References


Hesse-Biber, S. (2010). Feminist approaches to mixed methods research: Linking theory


*Action, Criticism, & Theory for Music Education*, (6)4, 96-108.
Abstract:

This essay provides conceptual and practical resources for navigating the emerging imperative of transparency in higher education in the US. First, we offer a distinction between consumer-centered and learning-centered transparencies. Second, we advance what we call a translucent pedagogy, the withholding of learning goals for some classroom activities, especially in critical humanities courses that focus on social justice. Finally, the essay concludes with case studies and recommendations for best practices.
Hawaii International Conference on Education

Title: Teacher attitudes toward economically disadvantaged and racial minority students.

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Abstract

Half of students in public schools qualify for free or reduced lunch and racial minorities are projected to outnumber White students in public schools by 2025. The shifts in student enrollment makes it pertinent for educators to be prepared to teach students from diverse backgrounds. The proposed workshop addresses elementary and secondary teacher attitudes toward racial minority and economically disadvantaged students. Attitudes of teachers have been linked to shaping student learning outcomes. Teacher attitudinal surveys can be administered as needs assessments. School districts could use their findings as implications for professional development opportunities to address potential deficits or misconceptions their staff may have.
Abstract

This study aimed to determine the efficacy of Massive Open Online Course (MOOC) camp in the Philippines in building community and continuing professional development. The researchers employed the descriptive method of research. The main data-gathering tool used in the study was validated self-made survey questionnaire. The participants of this study were 50 experienced MOOCers who attended MOOC camp in Mandaluyong City, Philippines. The data gathered were treated statistically using mean and Pearson R for the significant relationship between the demographic profile to the benefits of MOOC camp. Interviews were also conducted to gather more in-depth information to validate the quantitative data gathered from the survey questionnaire. Findings in the study revealed that many young professionals in their twenties are more concentrated and focused in their career wherein majority of them are women. The study also presented that MOOC camp is significant in building community, professional growth and career development, therefore MOOC is impactful if there is MOOC camp. It also showed that learners were satisfied in the activities MOOC camp provided and it was beneficial to them. Aside from getting the higher chance in completing the online course through MOOC camp the participants also are well motivated to help the community and themselves. MOOC camp can be a very good tool promoting Massive Open Online Course.
Introduction

The continuous demand of the 21st-century learners opens the door for Massive Open Online Course(s) in different Universities abroad. The University of Melbourne’s Graduate School of Education (MGSE) has launched a Massive Open Online Course – or MOOC – on how to give school children the skills to survive in a world of ever-changing technology (“Massive Classroom Opens Door,” 2014). In Dublin, the Minister and Education and Skills launched a new Massive Open Online Course called “21ST Century Learning Design” which will be used by teachers across the globe to help support the objective of bringing more technology skills into the classroom (Microsoft Europe, 2016). It became one of the newest ideas of education designed for extended learning and career development. MOOC is an interactive step-by-step course aimed at reaching an unlimited number of participants worldwide to create a community of lifelong learners (What is MOOC?). It allows people from the different region to access and study courses in their preferred universities. It is also a means of an empowering learning community and exchanging culture because the learners are capable of interacting with other people using different platforms like coursera, edX, canvas and etc.

The popularity of MOOC worldwide has reached the Philippines. In 2013, the first MOOC in the country was offered by University of the Philippines Open University (UPOU) in cooperation with wireless leader Smart Communication, Inc. (“Phl 1st massive open,” 2013). This became the latest trend of education in continuing professional development. The Philippines, among ASEAN countries, has been very active in studying MOOC program. Despite many challenges, they were able to produce the most number of participants successful in MOOC. Shaping the Way We Teach 1 and 2 were some of the courses that became eminent especially to teachers participating MOOC. These courses are hosted by the U.S. Department of State’s Office of English Language Programs in the Bureau of Educational and Cultural Affairs (Education and Exchanges program, US Embassy Manila Philippines). Through MOOC camp, offline meet-ups, thousands of participants around the Philippines successfully completed the course. As stated by the U.S Department of States Bureau of Educational and Cultural Affairs, MOOC Camp are most successful with weekly meetings. The increasing demand of learning through Massive Open Online Course would be more effective when there is camp (Fournier et. al., 2014). In an open learning environment, the control of learning no longer rests with an educational institution but with the learners themselves. In this case, the success of a learner through MOOCs rely mainly on his own motivation, therefore makes it as a Self-Directed Learning. However, MOOC camp helps the learner motivates himself to finish the course because people with shared vision surround them (Milligan et. al., 2013). When people learn through social knowledge, they collaboratively develop new knowledge artifacts and products. People learn by both drawing on and, at the same time, contributing
to collective knowledge. So, 'connecting' is only one of the series of actions learners have to take to learn in open, unstructured networks.

Researchers have already experienced to become the student of MOOC and Facilitator of MOOC camp. They believed that being part of this program, individual can automatically be part in building community and continuing professional development. However, the researchers believe that individual is well positioned to help himself to be a better person with the skills needed. This motivated the authors to conduct this study which focused on the efficacy of MOOC Camp in the Philippines. It discusses how it builds community and how it helps individual on their professional development.

Statement of the Problem

The purpose of this study was to determine how Massive Open Online Courses relate to the professional growth, community development and career achievement of the participants of MOOC.

Specifically, this study addressed the following questions:

1. What is the demographic profile of the respondents in terms of
   a. Age;
   b. Gender; and
   c. Educational Attainment?

2. What is the MOOC’s Camp benefit in terms of:
   a. Professional growth;
   b. Community development; and
   c. Career achievement?

3. Is there a significant relationship between the MOOC’s benefits such as professional growth, community development and career achievement to the demographic profile of the participants?

4. Based on the findings, what program can be proposed to enhance the awareness of the people about MOOC?

Paradigm of the Study

The input includes the demographic profile of the respondents such as: age, sex and educational attainment and MOOC variables such as: professional growth, community development and career achievement. The processed was to test the relationship between MOOC and its variables such as: professional growth, community development and career achievement. The output was enhanced MOOC Camp Curriculum.

Figure 1. Paradigm of the Study
Methodology

This study utilized the descriptive method of research to determine how Massive Open Online Course Camp relate to the professional growth, community development and career achievement of the participants of MOOC. The respondents of this study were the 50 participants of the Massive Open Online Course (MOOC) campers of Mandaluyong City. The survey dealt with the benefits of MOOC camp to their professional growth, community development and career achievement to have an enhanced program for people’s awareness about MOOC.

A survey questionnaire was the main data gathering instrument. The research questionnaire was composed of two sets. The first set was the Participants Information Sheet. It covered the demographic information of the respondents such as age, gender and educational attainment. The second set dealt on the level of benefits of MOOC Camp to their professional growth, community development and career achievement.

For items on the level of benefits of MOOC Camp to their professional growth, community development and career achievement, the weighted points, score range and verbal interpretation are as follows:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Range</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4.21 to 5.00</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>4</td>
<td>3.41 to 4.20</td>
<td>Generally true</td>
</tr>
<tr>
<td>3</td>
<td>2.61 to 3.40</td>
<td>Somewhat true</td>
</tr>
<tr>
<td>2</td>
<td>1.81 to 2.60</td>
<td>Generally not true</td>
</tr>
</tbody>
</table>
Results

Problem 1: What is the demographic profile of the respondents in terms of age; sex; and educational attainment?

Table 2: Demographic Profile of MOOCers in Mandaluyong City According to Age.

<table>
<thead>
<tr>
<th>AGE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 - 20</td>
<td>4</td>
<td>8.00</td>
</tr>
<tr>
<td>21 - 25</td>
<td>12</td>
<td>24.00</td>
</tr>
<tr>
<td>26 - 30</td>
<td>10</td>
<td>20.00</td>
</tr>
<tr>
<td>31 - 35</td>
<td>10</td>
<td>20.00</td>
</tr>
<tr>
<td>36 - 40</td>
<td>6</td>
<td>12.00</td>
</tr>
<tr>
<td>41 and above</td>
<td>8</td>
<td>16.00</td>
</tr>
</tbody>
</table>

Table 2 shows the age of the participants attending MOOC camp. The result shows that 12 or 24% of the participants’ age between 21-25 followed by ages between 26-30 and 31-35 years old both with 10 participants 20% of the total number of participants. However, there are 8 participants or 16% with the age of 41 years and above. It indicates that the most of the participants attending MOOC camp are within the range of 16 to 35 years of age.

Table 3: Demographic Profile of MOOCers in Mandaluyong City According to Gender

<table>
<thead>
<tr>
<th>GENDER</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>16</td>
<td>32.00</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>68.00</td>
</tr>
</tbody>
</table>

Table 3 shows the demographic profile of MOOCers in Mandaluyong City according to gender. Finding shows that among 50 respondents of MOOC camp, 34 or 68% of them are female and only 16 or 32% are male. This shows that there are more women who engaged in MOOC camp for their career development and community development.

Table 4: Demographic Profile of MOOCers in Mandaluyong City According to Educational Attainment.
Table 4 presents the educational attainment of MOOCers whereas 22 or 44% of the MOOCers gained Masters Unit or Degree, 19 or 38% of the course takers are under college level and 9 or 18% of them have doctorate units or degree. It points out that professionals are seeking for a new way of helping themselves develop their career and helping the community through MOOC camp. In addition, even a person attains the highest degree of education they urge for more to fully develop themselves as an individual and as a professional.

**Problem 2:** What is the MOOC Camp benefit in terms of professional growth, community development and career achievement?

Table 5: Benefits of MOOC Camp in Terms of Professional Growth.

<table>
<thead>
<tr>
<th>A. PROFESSIONAL GROWTH</th>
<th>Mean</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MOOC camp is dedicated to my career development.</td>
<td>4.50</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>2. The camp workshops are well planned, effective and interactive which allow learning and practicing new concepts.</td>
<td>4.52</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>3. MOOC content and strategies are very useful in my work.</td>
<td>4.36</td>
<td>Generally, true</td>
</tr>
<tr>
<td>4. MOOC helps me learn new information and skills which gain opportunities for professional growth.</td>
<td>4.58</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>5. I am satisfied with the activities MOOC offered in training and education.</td>
<td>4.50</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>6. I am satisfied that I have the opportunities to apply my talents and expertise.</td>
<td>4.40</td>
<td>Generally true</td>
</tr>
<tr>
<td><strong>OVERALL MEAN</strong></td>
<td><strong>4.48</strong></td>
<td>Always or almost always true</td>
</tr>
</tbody>
</table>

Table 5 shows the benefits of MOOC’s in terms of professional Growth. Finding shows that the participants believed that MOOC has benefits in their professional growth having an overall mean of 4.48 with a verbal interpretation of Always or Almost Always True. Among the items, participants said that **MOOC helps them learn new information and skills which gain opportunities for professional growth** with a mean of 4.58 followed by **MOOC workshops are well planned, effective and interactive which allow learning and practicing new concepts** having a mean of 4.52. It expresses that majority of them agree that MOOC camp is designed to help them build their career. Parallel to the studies of Bowon et. al. (2015), MOOC and MOOC camp promotes a framework of lifelong learning.
Table 6: Benefits of MOOC’s in Terms of Community Development

<table>
<thead>
<tr>
<th>B. COMMUNITY DEVELOPMENT</th>
<th>Mean</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MOOC camp gives me an idea on how to help my community as an individual.</td>
<td>4.20</td>
<td>Generally true</td>
</tr>
<tr>
<td>2. MOOC camp allows me to gain new friends and collaborate with others.</td>
<td>4.50</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>3. Many of my friends are encouraged to join MOOC camp since they find it very useful.</td>
<td>4.30</td>
<td>Generally true</td>
</tr>
<tr>
<td>4. MOOC camp gives me an opportunity to access practical resources that can help me to improve my community.</td>
<td>4.42</td>
<td>Generally true</td>
</tr>
<tr>
<td>5. MOOC camp gives me the opportunity to network with other similar groups.</td>
<td>4.44</td>
<td>Generally true</td>
</tr>
<tr>
<td>6. Through MOOC camp, I can involve myself to community engagement by training and serving others.</td>
<td>4.32</td>
<td>Generally true</td>
</tr>
<tr>
<td>OVERALL MEAN</td>
<td>4.36</td>
<td>Generally true</td>
</tr>
</tbody>
</table>

Table 6 shows the benefits of MOOC’s in terms of community development. Finding shows that the participants believed that MOOC has a benefit in the community development having an overall mean of 4.36 with a verbal interpretation of Generally True. Among the items, participants said that MOOC camp allows them to gain new friends and collaborate with others with a mean of 4.50 followed by MOOC gives them the opportunity to network with other similar groups having a mean of 4.44. Result also shows that most of the participants were encourage to join because of the usefulness of the program to their lives.

This result coincides on the presentation of Mrs. Rebecca Sagot during the TESOL 2016 at Baltimore Maryland. According to her, “to be successful in MOOC, we must conduct MOOC camps, identify the allies, leaders and resources, conduct meet-ups, form learning actions, cultivate mentors, keep the graduates engage, celebrate learning and pass it on.” In Davao Del Norte, Philippines, English teachers took Shaping the Way We Teach English 1 and 2 offered by University of Oregon wherein there were three batches of MOOC camps. During the first batch of camp, there was a 75% completion rate for the first course and 100% completion rate on the second course. Moreover, 98% and 97% were the completion rate for the second batch of Shaping the Way We Teach English 1 and 2. In addition, during the third batch of MOOC camp, there were 99% and 98.56% completion rate of the two courses. This clearly shows that the teachers are motivated and interested to study and finish the course when they are involved in a group activity.
Table 7: Benefits of MOOC camp in Terms of Career Achievement

<table>
<thead>
<tr>
<th>C. CAREER ACHIEVEMENT</th>
<th>Mean</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MOOC’s certification help me advanced my career application.</td>
<td>4.50</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>2. MOOC helps me better understand the nature of my work.</td>
<td>4.52</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>3. MOOC gives me the confidence in and outside my workplace.</td>
<td>4.36</td>
<td>Generally true</td>
</tr>
<tr>
<td>4. MOOC allows me to become an immediate asset to my workplace.</td>
<td>4.58</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>5. MOOC helps me develop my skills and advance my knowledge towards my career.</td>
<td>4.50</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>6. MOOC gives me the capability to inspire others by recognizing, developing, and applying their talents to reach their goal.</td>
<td>4.40</td>
<td>Generally true</td>
</tr>
</tbody>
</table>

OVERALL MEAN 4.36 Generally true

Table 7 shows the benefits of MOOC’s in terms of career achievement. Finding shows that the participants believed that MOOC has benefits in their career achievement having an overall mean of 4.36 with a verbal interpretation of Generally True. Among the items, participants said that MOOC allows them to become an immediate asset to my workplace with a mean of 4.58 followed by MOOC helps them better understand the nature of my work with a mean of 4.52. According to the unstructured interviews conducted by the researchers many of the participants used the certification in their application process and they found it very helpful since it gives them the edge among other applicants.

Problem 3: Is there a significant relationship of the MOOC’s benefits which are Professional Growth, Community Development and Career Achievement to their Demographic Profile in terms of age, gender and educational attainment?

Table 8: Pearson r Test on MOOC’s Benefits in Terms of their Demographic Profile.

<table>
<thead>
<tr>
<th>MOOC Camp Benefits</th>
<th>AGE</th>
<th>GENDER</th>
<th>EDUCATIONAL ATTAINMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Growth</td>
<td>0.02718</td>
<td>1</td>
<td>-0.52745</td>
</tr>
</tbody>
</table>
Table 8 shows the Pearson r Test on MOOC’s benefits in the Professional Growth, Community Development and Career Achievement in terms of their Age, Gender and Educational Attainment. Result shows that there is a weak and moderate positive significant relationship of the MOOC benefits in Professional Growth and Community Development with a value of 0.02718 and 0.68135 respectively to their Age. However, there is a weak negative significant relationship of MOOC benefit in Career Achievement with a value of -0.07292 to their Age. With regard to Gender, there is a perfect positive relationship of MOOC benefit in professional growth to their gender while there is a perfect negative relationship of MOOC benefit in community development and career achievement to their gender. Lastly, all the MOOC benefits have a negative significant relationship to their educational attainment.

**Problem 4:** What program can be proposed to enhance the awareness of the people about MOOC?

The result of the study revealed that MOOC camp is essential for an individual’s professional growth, community development and career achievement. The researchers proposed the following to enhance the awareness of the people about MOOC and MOOC camp.

**A. Collaboration of Organizations.** Different organizations such as RELO (Regional English Language Office in Manila) and British Council support and promote MOOC and MOOC camps, the Department of Education can work together with these organizations to raise awareness among interested students in taking courses that is suitable for their need. The effectivity of MOOC camp was seen in Davao Region, led by Ms. Rebecca Sagot who is working under Department of Education in Davao wherein part of teacher’s curricular activities is take MOOC and join MOOC camp. If MOOC and MOOC camp will be part of Department of Education in the Philippines nationwide it can produce more successful graduates in open education.

**B. Celebration of Learning.** It is a must have after finishing the course as a reward for those student who completed the program. A simple graduation or recognition program will boost students’ interest in taking MOOC and attending MOOC camp.

**C. Social Media Campaign.** Group page, and other form of social media greatly help the promotion of MOOC and MOOC camp. With the help of MOOC facilitator posting about MOOC and MOOC camp many are encourage to take MOOC courses.

**Conclusion and Recommendation**
Based on the result of the study, it showed that many professionals are eager and motivated to learn new ways of developing themselves. Most of these professionals are characterized by women in our society. MOOC as a new tool of learning must be supported by MOOC camp, this camp is highly significant in developing one’s professional growth, community and career.

The study recommends that the Department of Education must work with different organizations to raise more awareness of MOOC and MOOC camp. Celebration of learning as a reward is also commendable as it increases student’s eagerness in joining the program. Further and more in-depth studies on MOOC camp can be done to support the effectiveness of MOOC camp in the Philippines.

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Implementing the Co-Preceptor Clinical Model for
Mutually Beneficial Partnerships in Graduate Nursing Education

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Abstract

Partnerships between academics and practice are essential to educate, orient, and ingrain students into the advanced practice nurse’s role. In this dichotomous relationship students lack equal consideration as a major stakeholder in the educational processes. This paper presents a practical approach for addressing the academic preparation of advanced practice nurses using the Mutually Beneficial Partnership framework that acknowledges this interprofessional relationship between student, preceptor, and faculty as stakeholders in preparing advanced practice nurses. Each stakeholder is considered an equal partner with a common goal of a well prepared advanced practice nurse to care for patients. The Faculty Co-preceptor Clinical Model used within the Mutually Beneficial Partnership framework is examined. Functioning within the framework are the major tenets of the Co-preceptor Clinical Model. The model is influenced by the framework, and the fit of both are discussed. It is hypothesized that promoting the use of the model within the framework will meet the needs of faculty, preceptor, and student experiences in clinical courses, which result in benefits to student, preceptor, facility, and academe. The principles described in the framework and model can guide the advanced practice clinical experience.

Keywords: Framework, mutually beneficial partnership, clinical co-preceptor, model, advanced practice, preceptors, education.
Implementing the Co-Preceptor Clinical Model for
Mutually Beneficial Partnerships in Graduate Nursing Education

The Mutually Beneficial Partnership (MBP) is a framework that has been established across domains and has successfully been applied to the discipline of nursing education. The framework recognizes needs of the three major stakeholders in nursing education as an interprofessional partnership that functions at the point of patient care. Emphasis is placed on these relationships to achieve the common goal of a well-prepared graduate ready for present and future challenges in advanced nursing practice. The MBP represents a practical approach to partnerships at the level of the stakeholders involved to provide guidance in the development and implementation of the advanced practice clinical experience.

Need for the Framework

The steady increase in the number of student enrollments in advanced practice nursing programs coupled with the need to recruit and retain qualified preceptors and training sites for students make it necessary to develop academic-practice partnerships to strengthen and guide clinical based educational experiences. The changing professional nursing roles are demanding the development of new and innovative practice models. To date, no framework exists to address students, faculty and preceptors as equal partners and stakeholders in the academic-practice relationship. The Mutually Beneficial Framework offers a practical approach to the interprofessional partnerships for advanced practice nursing education. Each stakeholder strives for the common goal of a well-prepared graduate to safely and competently care for patients.

In the United States, reports about nursing and nursing education from sources, such as the Institute of Medicine’s (2011 The Future of Nursing: Leading Change, Advancing Health have made recommendations for expanding clinical practice education through partnerships
between academic leaders and health care organizations. These recommendations emerge as the existing US workforce is presented with multiple challenges. In recent months, the Affordable Care Act and Medicare/Medicaid has undergone intense scrutiny as the newly elected administration takes over the US government healthcare programs. The anticipated changes to the existing healthcare system will likely retain the nursing professions place as providers of quality patient care to fill the gap in health care services.

Filling these vacancies has resulted in an increased need for clinical placements to prepare the next generation of advanced practice nurses. This reality coupled with an aging faculty has nursing programs struggling to graduate the number of students needed to meet the rising demand for care (Everett, 2016). A sense of urgency to create mutually beneficial partnerships has emerged to address some of these challenges.

**The Mutually Beneficial Partnership Framework**

Mutually beneficial partnerships (MBPs) are defined as collaborations with identified roles and responsibilities between academics (faculty), students and practice partners (preceptors) within the healthcare community to achieve a common goal (Curwood et al., 2011). Within the MBP framework, the advanced practice nursing student is considered an equal partner in achieving the common goal of preparing a well-qualified advanced practice graduate. Such partnerships with clear expectations and goals can achieve success more efficiently together than separately. This functional relationship is the foundation for the MBP framework for advanced practice clinical nursing education. The MBP as applied to advanced practice nursing education may be depicted as seen in Figure 1.
Traditionally, clinical experiences occur in diverse healthcare settings where patients are provided a wide variety of services. Many of these services are provided by advanced practice nurses. To prepare those providers to deliver the services patients need, clinical practice experiences are irreplaceable for hands on training. Those clinical experiences take place in the healthcare community with a preceptor as the direct line supervisor in partnership with academic faculty.

As an outcome of these practice experiences, students’ must show competencies for providing safe, quality care within the scope of their respective licensing. These clinical experiences allow graduate nursing students to apply theoretical knowledge to the real patient in
the real world of healthcare. This model of clinical learning has been utilized in many programs of nursing education at all levels of academic preparation (Sedgwick & Harris, 2012).

While other clinical education models exist in undergraduate education, the preceptor-based model is primarily used in advanced practice nursing clinical education. The preceptor-based experience has been shown to produce better student outcomes when compared to other models of clinical education (Sedgwick & Harris, 2012). Preceptors can provide relevant, first-hand insights and knowledge to create appropriate clinical experiences and activities for students. These abilities are hypothesized to achieve better educational outcomes than other approaches by closing the gap between theory and practice.

Preceptors that are educationally and experientially qualified and eager to serve are like *gold*. Qualified effective preceptors improve critical thinking, problem solving, decision-making, clinical judgment, and prioritizing and time management skills (Sedgwick & Harris, 2012). Bashford (2002) found that through interactions with preceptors, students learn to recognize subtle changes indicating early warning signs or symptoms of change in condition. Students report gains in self-confidence and improved skills. Effective preceptors can also minimize negative student learning experiences and increase positive learning which can result in attracting the students to the healthcare facility for future employment. Everyone in the preceptor environment notices the student’s work ethic, quality of patient care, communication skills and professional behavior. These are all qualities desired in a team member (Bashford, 2002).

Some advanced practice registered nurses (APRN) may be reluctant to serve as a preceptor based on misconceptions or a previous negative experience with students. For advanced practice nursing students, selection of a qualified preceptor may be their responsibility. These factors can result in ‘warm body syndrome’ (Daigle, 2001) of preceptor selection. This
syndrome addresses the selection of a preceptor out of desperation instead of a willingness to serve in the role. Although not ideal, this ‘warm body syndrome’ has been utilized by many students to meet clinical placement requirements expected of advanced practice nursing education programs. This approach to preceptor participation and selection emphasizes the need for a true partnership.

The Mutually Beneficial Framework can assist in overcoming obstacles by recognizing the needs of preceptors and clarify misconceptions. This partnership can assist in maintaining preceptors and a quality clinical practicum experience. The framework can be used to create best-practices for clinical practicum experiences to educate highly-qualified advanced practice nurses. This model may be applied to any advanced practice nursing program academic-practice partnership and may be generalized to other clinical practicum related programs. It is a model that has evolving from educational experiences and other disciplines using partnerships to improve their outcomes (Bond, 2014). This is an original nursing education conceptual model to be added to the existing literature as a resource to support an effective clinical learning environment from the perspectives of the stakeholders.

**Partnerships in Nursing Education**

Creating mutually beneficial academic-practice partnerships is not a new concept. De Geest et al. (2011) completed a review of the literature from studies across the globe that addressed academic-practice partnerships in nursing. The authors reviewed 114 articles concluding that mutually beneficial goals and the exchange of resources were conditions leading to success across the globe. Other disciplines, such as public health, are implementing academic-practice partnerships with many of the same goals as nursing (Erwin et al., 2016).
The majority of literature on academic-practice partnerships in nursing education has focused on pre-licensure programs. Two examples of academic-practice partnerships for pre-licensure students are Designated Education Units (DEUs). Many programs of nursing have adopted DEUs or variations (Murray & James, 2012; Pearson, Wyte-Lake, Bowman, Needlman & Dobalian 2015; Todero, Long & Hair 2015). They have been shown to benefit the academic partner by providing expanded educational opportunities in the clinical environment (Murray & James, 2012). Using the DEU model, staff nurses are added to the teaching and learning process as clinical instructors or preceptors. Faculty members serve as coaches for the staff nurses to interact with students. The DEU model addresses needs of academics and the health care facilities but overlook those of the individuals representing these entities at the patient’s bedside. While these models add great value to the pre-licensure programs, advanced practice programs work primarily within a preceptor-based model with one-on-one experiences where the preceptor guides the student and serves as a role model for future practice. These models lack the characteristics needed for learning experiences in advanced practice nursing education. To date, no model exists to guide advanced practice nursing education. The existing models and frameworks fail to recognize individual needs of preceptors, students and faculty. Preceptors are essential for advanced practice nurses to achieve competencies necessary to provide safe, quality care to patients.

Studies on advanced practice nursing clinical experiences are limited. In the one study surveying advanced practice students and preceptors, the top three perceived characteristics of importance from both groups were clinical competency/judgement, positive role model and communication skills (Knisely, Fulton, Friesth, 2015). Their study surveyed students (N = 78) and preceptors (N = 278) in a Clinical Nurse Specialist program on 21 preceptor characteristics
that were needed for an effective clinical experience. Both preceptors and students rated clinical competency/judgement, positive role modeling and communications as the top three characteristics for effective clinical experiences.

**Effective Partnerships**

Academic-practice partnerships should be based on mutual trust and respect, shared knowledge, and goals (Everett 2016). Todero et al. (2015) adds clear communication as a key element to successful partnerships. The authors also recognize significant challenges of partnerships at the institutional level. Differences in mission, organizational structure, and accountability are often encountered. In addition, mutual trust and respect, effective leadership, clear communication and a clear vision from key stakeholders are essential for success. The shared goals should be mutually beneficial for each stakeholder while ensuring the clinical practice environment provides practitioners with the experiences needed for success.

**Stakeholders**

Key stakeholders of the MBP share a clear vision of creating a clinical practice experience that will result in a well-qualified advanced practice nurse. The major stakeholders within the advanced practice educational process include the student, academic institution and the preceptor. Each partner has a major interest in the outcome, which are practice-ready advanced practice nurses. Academia views students as an investment in leadership, institutional visibility, and a product of excellence in teaching by faculty participating in the academic process for APRNs. From a business perspective, academia also views students as revenue sources and student success as marks of success or failure of curriculum. If pass rates on certification examinations is poor, academia is on ‘probation’ until corrected. They cannot afford to get it wrong! Academia cannot afford to accept students who are not robust enough to
finish the program. Student attrition is reflected on the bottom line of nursing program budgets. So, student selection and resilience are important student attributes when academic institutions recruit student candidates.

Faculty are major stakeholders in student learning. They bear the burden of curriculum development, quality improvement, and program revisions to meet the needs of advanced practice nursing students. DNP programs are facing program and curricular evolution more rapidly than programs can manage in a timely way (AACN, 2015a, 2015b; National Organization of Nurse Practitioner Faculty (NONPF), 2016). This puts faculty in the middle of ‘knowing’ the direction of education, and actually implementing those changes. In academe, change takes time. This puts an undue burden on faculty to ‘teach’ in the present, and plan/develop for the future. Courses are changing, preceptor requirements are being examined with pressure to develop competencies that must be met and verified as evidence of advanced practice preceptor qualification, and clinical affiliation agreements are legal documents with onerous jargon requirements that some clinical facilities within the community are not willing to accept.

As stakeholders, students need supportive, learning environments to foster a successful outcome. Studies about outcome of APRN practice are easy to find, but qualitative studies about the internal drive for nurses to become nurse practitioners is presumed. It may be reasons related to humanitarianism, increased autonomy, pay, responsibilities, job security, or a desire to excel in their profession. Programs are created with those assumptions in mind. However, from a personal perspective, a need for broadening practice, slowing down in practice, or an opportunity to ‘give back’ to future generations of nurses may uncover unexpected results. Nonetheless,
when a registered nurse decides to pursue higher education, there are some basic rights to accompany the pursuit.

Students need a competent, qualified preceptor that can provide opportunities for students to learn in real-world situations. First, students should be able to ‘be wrong’ without consequences. In saying that, they need preceptors and faculty who recognize the importance of supervision and facilitation of learning. The ultimate responsibility for student learning falls on the shoulders of faculty, but without student investment, and competent preceptors, their mission will fail.

Second, students need mentorship in addition to preceptorship. Preceptors have a collaborative role with established competencies and student outcome expectations. They are responsible for teaching the core professional skills. However, they may evolve to the role of mentor. Mentorship involves both academics and clinical practice. The mentor may be faculty, the preceptor, or it may be someone else in their circle that is willing to be a role model, teacher, sponsor, counselor, and friend. The mentor focuses on both the professional development of the student but also they develop a caring relationship over time.

Third, students have a variety of skills and experiences and they should be recognized as having these commodities by faculty and preceptors. Graduate nursing programs need to provide a seamless progression from baccalaureate education to graduate degrees. It must take into consideration years of practice, types of clinical experiences, and possible specialization while at an RN level of practice.

Preceptors accept the position for many differing reasons (Usher et al., 1999), but primarily they agree to become preceptors to give back to their profession and to train the future generation of nurse practitioners (Bourbonnais & Kerr, 2007). Typically, there is little or no
compensation for the role. It is an extra duty placed on busy providers. They must fit the learning needs of the APRN student into a tightly scheduled day. Preceptors may or may not be recognized by their organization. The benefits may not be readily apparent unless the preceptor markets their abilities to the clinical facility. Bourbonnais (2007) describes the many demands made upon today’s busy advanced practice nurses. Preceptors report more difficulties in accommodating students. APRN must meet daily patient visit targets, manage the required documentation, and provide healthcare to increasingly complex patients (Wiseman, 2013). This seemingly never ending process requires excellent management skills.

Academia has no method beyond awards to recognize preceptors who excel in their efforts. The concept of ‘free’ preceptors provided by facilities and individuals for academic programs may require re-tooling. If requirements for verification of competencies, orientation to the role, licensure and certification verification, and facility approval prior to signing on as a preceptor become the standard, it may become increasingly difficult to find qualified preceptors.

Clinical facilities are stakeholders in that they provide time, space, and tolerance for the arduous process of advanced practice professional skills acquisition. They may be called upon to allow the student access to the electronic health record (EHR). In a large facility with proper procedures in place, this may easily be accomplished. However, in small clinics, each provider (or student provider) who requires a password to access the EHR may be an added expense to the facility. This becomes a matter of economics. One student per year may not break the budget, but three students may adversely affect it. It can be a limitation in student learning. In order to learn diagnostic reasoning skills, students must have access to the full EHR, including medical history, medications prescribed current and past, as well as results of all diagnostic studies. This should be negotiated with academia at the time a clinical affiliation agreement is presented for
signature. Preceptors should have a mechanism for providing feedback and recommendations for changes in clinical requirements and curriculum development. A community member representative of multiple facilities needs to be present and a voting member of curriculum development decisions made by faculty in academia.

Clients/patients are the most important of all stakeholders! They are a measure of the outcome of learning, preceptorship, and skill acquisition. They entrust their lives to care by their provider. They should not be viewed as guinea pigs for students, but collaborators in their care. Students need to become aware of the need to “ask the patient what they feel will help” as an important last question in the ailment interview. It is amazing how well versed clients/patients have become about their care and health maintenance. Clients likewise need input into the education process for graduate nursing students. They are part of the community - a major part! A simple questionnaire sent to clients/patients could provide valuable information for academia, and it would in essence provide true collaborative practice.

Preceptors practice in health care facilities located within the geographical proximity where students complete the clinical practicum requirements. These health care facilities are provided with opportunities to employ well qualified graduates from advanced practice programs by allowing the program of nursing access for the purposes of clinical placements. The potential exists to decrease orientation costs as well. Stout et al. (2016) reported reduced orientation time and a savings of $257,400 for 26 interns that resulted from a partnership. Those partnerships can provide a mechanism for continuous learning for nurses in the practice setting as well as those in academic programs (Todero et al., 2015).

Preceptors also view the student as a potential partner in providing advanced practice nursing to the community. Likewise, the student has an opportunity to assess the health care
institution, preceptor and the community as potential colleagues and for employment. As you can see, partnerships benefit the health care organization with lower orientation costs, a readily available pool for recruitment and potential improved retention.

Programs of nursing education partner with healthcare facilities to work together to meet the needs of each other and the student to achieve the expected outcomes of the clinical practicum experience. This describes a true partnership where the stakeholders all benefit from the relationship. The MBP as a framework for clinical education recognizes the needs of each of the stakeholders to achieve the common goal of preparing a well-qualified advanced practice nurse. The MBP utilizes a preceptor-based educational strategy to promote role formation for the advanced practice nurse.

**Significance of Framework to Grant**

A MBP framework will guide the establishment of partnerships with practice sites in minority, rural and medically underserved communities, which meets the objectives of the Advanced Nursing Education (ANE) grant. Using this framework, professional preceptors and students are mutually responsible for facilitating learning to meet clinical objectives. Adult learning principles of motivation and participation are inherent aspects of the MBP. Advanced practice registered nursing (APRN) students are more likely to consider clinical facilities as future employers because they feel more qualified to evolve into an advanced practice role. Likewise, community partners feel they are an integral part of educating APRNs. Academic partners will have a larger supply of preceptors in a variety of specialties. Preceptors feel satisfied with the process, and preceptors are more willing to participate with future APRN students.
Co-Preceptor Clinical Model

The steady increase in the number of student enrollments in Doctor of Nursing Practice (DNP) graduate advanced practice nursing (APRN) programs coupled with the need to provide qualified preceptors and training sites for students make it necessary to develop enhanced academic-practice partnerships and implement innovative practice models. One model adapted from Giddens et al., 2014 was an attempt to re-envision clinical graduate nursing education. With permission, two grant members re-conceptualized Giddens' Clinical Education Model with additions of competency requirements for preceptors and students. DNP students arrive in the clinical area post standardized preclinical education and competency assessment that demonstrates readiness for clinical practice. The revised model incorporated both American Association of Colleges of Nursing The Essentials of Master’s Education in Nursing (2011), and The Essentials of Doctoral Education for Advanced Nursing Practice (2006) and AACN White Papers (2015a, 2015b) which provide guidance and structure to curriculum for graduate nursing programs. The Co-Preceptor Model requires preceptors and faculty to be co-preceptors. Preceptors are referred to as co-preceptors, and faculty are referred to as faculty co-preceptors. Thus, the model has evolved to improve student learning outcomes and enhance clinical education experiences to benefit faculty, preceptors and students. See figure 2.
There are seven tenets of the CCM. This model builds in entrustable professional acts, standardized assessment, interprofessional education, and innovative education practices. The entrustable professional acts are still to be identified. A modified Delphi study is underway to glean from current preceptors what those entrustable professional acts will be. Examples may be documenting as an APRN student in the electronic medical record, completing history and physical examinations without direct supervision, determining correct billing codes. Skills may include suturing and performing and interpreting diagnostic tests. So what’s different about clinical education using this model? The tenets describe the unique contribution of the model. See Table 1.
The MBP is a framework with an overarching structure that describes the academic-community-preceptor relationship, responsibilities, and unique goals. Further, within the MBP, there is another partnership directly between preceptor, student and faculty that focuses on needs of all parties. This partnership is a subsidiary of the original academic-practice partnership. In order to accurately depict the complexity of the MBP, the model must function as a model within the MBP academic-practice framework has been extended to the subsidiary partnerships of the preceptors, faculty and students in a MBP as a unit, for clinical partners the heart of

Table 1. Major Tenets of Co-preceptor Clinical Model

<table>
<thead>
<tr>
<th>Tenet</th>
<th>Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Partnership collaboration</td>
<td>Work together to design a new clinical education system with the purpose to fill practice and academic needs.</td>
</tr>
<tr>
<td>2. Standardized pre-clinical preparation</td>
<td>Rigorous simulation prior to clinical site placement so APRN students are preceptor ready</td>
</tr>
<tr>
<td>3. Standardized student assessment</td>
<td>Onboarding assessments to eliminate redundancy while focusing on individual student needs.</td>
</tr>
<tr>
<td>4. Entrustable professional Activities (EPAs)</td>
<td>Skills that can be entrusted to students when competent, so students can make a meaningful contribution to practice.</td>
</tr>
<tr>
<td>5. Immersive clinical experiences</td>
<td>Dedicated site for an extended period of time, to allow CAPSTONE projects to emerge from clinic needs. Faculty preceptor provides clinical scholarship integrating academic and clinical expertise. Faculty preceptor provides oversight for student capstone project. Student capstone project co-designed with clinical placement site to meet site objectives.</td>
</tr>
<tr>
<td>6. Interprofessional Education (IPE) for team-based care</td>
<td>Students achieve specific interprofessional competencies within clinical education experiences so they are qualified providers upon completion of the academic degree.</td>
</tr>
<tr>
<td>7. Innovative Education Practices</td>
<td>Incorporating technology into clinical practice. Clinical preceptor and faculty preceptor co-design curriculum, clinical experiences, student/preceptor orientation, program evaluation</td>
</tr>
</tbody>
</table>
MUTUALLY BENEFICIAL PARTNERSHIPS

learning. See figure 3.

**Figure 3. Mutually Beneficial Framework for Co-Preceptor Clinical Model**

Putting the MBP framework around the CCM can serve as a guide for educators, health care facilities and students in redesigning the current system of clinical education. While quality clinical experiences continue to be a challenge, development of academic-practice partnerships with a mutually beneficial goal can assist in the clinical placement process. The model supports the idea that students with a positive clinical experience are more likely to be employed by that facility after graduation. Students and new graduates make career choices when they have good experiences in a healthcare setting. Bashford (2002) reminds preceptors that the educator role is
an extremely rewarding experience. Stakeholders in the educational process must work together to achieve the common goal of producing a well prepared advanced practice nurse. Preceptors feel pleasure and satisfaction watching the students improve their advanced diagnostic skills. Colleagues and other team members have a heightened sense of job satisfaction and energy as a result of seeing the student’s smiling face, energy, and interest in learning (Bashford, 2002).

**CONCLUSION**

Many authors recognize the partnership that is created between preceptors and students; and preceptors and faculty in the clinical setting (Knisely et al., 2015). The MBP can potentially enhance the clinical experience and professional development of advanced practice nurses in the continually evolving practice environment. In addition, the model can assist advanced practice nursing programs to meet the recommendations set forth by leaders in health care. Commitment to the academic-practice and the clinical partnership using the model will better prepare advanced practice nursing students’ for the provider role and provide opportunities for employment.
References


Fibonacci Numbers: Can They Predict Growth in Children Age Zero to One?

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Abstracts:  
Research states that Fibonacci numbers represent an expression of growth (trajectory) in the physical world of our planet. Music research speculates that such expression manifests in musical compositions in a variety of cultural contexts. I have found that Fibonacci series relates to acoustics and human perception of sound. I presented my findings since 2003 in national and international conferences in Sydney, Melbourne, Hawaii, Wellington, Dunedin and Auckland. As at 20 weeks time in the fetal stage of human existence, adult-size inner ear is already developed (Woodward, 2011) – and patterns apply (Patterson, 1986), I raise the hypothesis that similar patterns of growth may apply to zero to one year old children, following a predictive trajectory, i.e., of Fibonacci numbers. In the workshop presented I will creatively utilize my findings following a literature review and document analysis design. The topic addresses child development, music education and general education issues but not limited to, inviting specialists in cross-disciplines (education) research, sciences, humanities and others to partake and contribute to the research project.
Much of the content for this paper comes from my experience in higher education, starting with my time as an undergraduate studying English literature and finishing after pro tem contract work as a university administrator at Kwantlen Polytechnic University (KPU). The context for this paper and presentation is both the Canadian and American higher education systems. Some of the Canadian context is provided by the recent re-engineering of higher education funds to support the trades and technology skills gap in British Columbia. The Department of Education’s College Scorecard, which helps to frame the debate around the government’s performance-based funding of higher education in the United States, provides some of the American context.

I have been employed at KPU for the past ten years and I have held various senior management positions, such as the Dean of Trades and Technology and, most recently, the Associate Dean of Arts. In these two roles, I witnessed a significant boost in funding for career-focused, technical programs in one Faculty along with a contrasting stagnant funding model for the other (note: at KPU, the Faculty of Arts includes the Fine Arts, Social Sciences and Humanities). Whilst working as the Associate Dean in the Faculty of Arts, it became evident to me that not only was funding flat, but enrolments across the Arts disciplines were also down. According to Sheldon Rothblatt (2016), “Statistics are compiled to prove that student interest in the humanities and liberal arts is not only waning: it has almost disappeared” (p. 35). How these statistics are compiled and interpreted notwithstanding, the message is clear to the government agencies responsible for funding higher education: do not invest in the liberal arts. The purpose of this paper and its corresponding presentation is to not only support the movement of defending the liberal arts but also keep the momentum of support going. I aim to prove that a liberal arts education is, in
fact, a worthwhile endeavour for university students because it will ultimately help them to achieve success; I hope the governments responsible for funding public institutes of higher education will realize this and consider increasing funding for the liberal arts.

Before proceeding any further, it is important to establish what is meant by the term “liberal arts”. As Mark Roche (2010) explains, the term originated from the medieval concept of the *artes liberalis* and it was originally comprised of the three basic arts known as the *trivium*, which focused on language, oratory and dialectic skills. Roche goes on to explain that the *trivium* was later expanded to include four “advanced mathematical-physical arts: geometry, arithmetic, music and astronomy” (p. 5); however, I will limit my definition of the liberal arts to exclude the subsequently added *quadrivium* and STEM subjects as, at least at the university where I work, Science, Technology, Engineering and Math are taught in Faculties outside of the Faculty of Arts. Henry Shuldiner (2016) goes back to Ancient Greece to identify the purpose of a liberal arts education when he writes, “the liberal arts were intended to produce the ideal citizen: a person of intelligence, with sensible moral judgment and the ability to reason” (para. 4). Shuldiner goes on to give that definition modern context by explaining that, in today’s universities and colleges, the purpose of the liberal arts is to develop a well-rounded student who has the ability to make connections across disparate thoughts and ideas and who can relate to diverse fields of study. This laudable goal to develop well-rounded students and cultivate their ability to make connections across diverse fields of study is what precludes professional and technical programs from being included in the definition of “liberal arts”. Roche (2010) clarifies further: “In a contemporary liberal arts education, in contrast to the specialized orientation of professional or technical curricula, students receive a general education that is a broad grounding in the diverse disciplines” (p. 5). So, why are liberal arts programs struggling?

A few reasons why interest in the liberal arts is in decline are: 1) because of the perception that a liberal arts education does not lead to gainful employment; and 2) students are inclined to avoid disciplines that “appear to be disconnected from labor markets” (Rothblatt, 2016, p. 350).
However, there is plenty of evidence that proves liberal arts graduates earn, over the long run, just as much as those who choose professional degrees and research shows that they end up achieving similar employment levels at high-income jobs (Grasgreen, 2014). In order to demonstrate Grasgreen’s claims, it is necessary to look at the total arc of highly successful people’s careers; this will reveal that liberal arts graduates are competitive and those who supplement their education with further study (e.g. with programs that add management and/or technical skills to one’s curriculum vitae) are best positioned for success (Blumenstyk, 2016). According to Linshi (2015), there are plenty of “formerly disgruntled liberal arts majors” who have successfully conquered the Business world and he lists the CEOs of Disney, YouTube, Starbucks, Hewlett-Packard and HBO as high-profile examples (para. 2). A recent study conducted by Richard Detweiler (cited in Education Advisory Board, 2016b) revealed that liberal arts graduates not only tended to be more successful, particularly in terms of holding leadership and/or elected positions, but they were also more inclined to feel fulfilled over the long term. Scott Jaschik (2016), citing Detweiler’s study, affirms that a liberal arts degree, when compared to other degree programs, produces graduates who have greater odds of being a leader, show an interest in the arts and culture, are viewed as ethical and lead “a fulfilling and happy life” (para. 4).

The American report (Humphreys & Kelly, 2014) on which many of Grasgreen’s claims are based does qualify liberal arts majors’ successes by highlighting: 1) their salaries still lag behind those who majored in STEM subjects, particularly in the late-career stages; and 2) liberal arts majors who also hold advanced degrees are responsible for keeping the comparative earnings close. However, the report also makes it clear that liberal arts majors are far and away the most successful at meeting employers’ expectations. And why is this the case? The simple answer lies in the fact that a significant number of managers (e.g. up to half of managers surveyed by PayScale and Future Workplace in a recent survey) feel new graduates commonly lack “critical-thinking, writing, and presenting skills” (Education Advisory Board, 2016c, para. 1). The development of these “soft skills” is considered to be the “bedrock of a liberal-arts education” (Education Advisory Board, 2016a, para. 3) and so it should be no surprise then that the largest
U.S. tech hubs in Silicon Valley, Seattle and Boston “are discovering that liberal arts thinking makes them stronger” (Anders, 2015, para. 6).

A few of the major challenges facing publicly-funded universities today is how most do not receive adequate funding and, to make matters worse, how focus has shifted away from the liberal arts to programs that lead directly to employment. Daniel Kleinman (2016) contends that the precipitous decline in support for public universities, coupled with “widespread calls for occupationally oriented higher education” in conjunction with “a focus on curricula that will provide students with employment-ready skills”, has created an environment where the liberal arts is “broadly and regularly attacked as economically irrelevant” and perceived to be an “unaffordable” luxury (p. 86). To illustrate Kleinman’s point, here is a list of a few of the newest programs at KPU: an Acupuncture Diploma, a Brewing and Brewery Operations Diploma, a Commercial Beekeeping Certificate program, and a Post Baccalaureate Diploma in Technical Apparel Design. These highly specialized professional programs were specifically designed with industry input and employment outcomes in mind and their approval was dependent upon favorable labour forecasting. Of course, it is important to point out that these are not degree programs and, as such, they do not have the same depth and breadth requirements as bachelor’s degrees at KPU--for which completion of liberal arts credits is normally a graduation requirement. However, the point I wish to make here is that, in an environment of scarce resources, it is difficult to not only launch new liberal arts programs but also support under-subscribed existing ones. Unfortunately, this lack of support for the liberal arts is further exacerbated by the ways governments determine funding for public universities in both Canada and the United States.

While I was the Dean of Trades and Technology at KPU, the provincial government introduced their new initiative called “B.C.’s Skills for Jobs Blueprint: Re-Engineering Education and Training”. In this document, the government claimed the need for “a shift in education and training to better match with jobs in demand” and it was reported that there would be a “major shift in resources” where a ten-year plan would target labour market priorities, resulting in a $3
billion overall shift to trades training over the next ten years (MacDonald, 2014, slide 9). As Kleinman (2016) argues, “political leaders have proposed policies that would provide budgetary benefits to occupationally oriented higher-education initiatives, while punishing liberal arts or humanities programs and students” (p. 86). In the United States, performance metrics that clearly illustrate how budgetary benefits can be achieved by occupationally-oriented higher education initiatives are utilized by both the College Scorecard and performance-based funding models.

The College Scorecard enables the Department of Education to collect data based on “graduate loan repayments and default rates in addition to earnings six and ten years after graduation” (Megan Adams, 2016, p. 13). According to Adams (2016), College Scorecard data has been incorporated into the annual college rankings for the *Wall Street Journal* and *The Economist* and this enables students and parents to make college decisions based on Return on Investment (ROI). Jerry Logan and Janel Curry (2015) report that the Scorecard was developed in response to demands for a way to determine ROI for a college education and Ann Schnoebelen (2013) declares that the Scorecard “highlights a real shift in the national conversation about college, away from college as a liberal education to a professional education” (para. 8). The problem is that the ROI for a liberal arts education is not immediately apparent post-graduation. As stated earlier, liberal arts graduates earn, over the long run, just as much as those who complete professional degrees (Grassgreen, 2014) but it may take more than a decade before the true ROI is reflected in a liberal arts graduate’s earnings. Another recent development that works against the liberal arts is the use of performance-based funding models because they, much like the Scorecard, also focus on student employment outcomes and salaries. Adams (2016) claims that 38 states have either transitioned or are transitioning to performance-based funding for two- and four-year institutions and this means that “new graduates’ salaries can incentivize institutions to prioritize majors in professional fields that earn high wages over other important, but lower-wage fields in the liberal arts” (p. 12).
Since there is plenty of research that shows liberal arts graduates are not disadvantaging themselves when it comes to long-term career prospects (Anders, 2015; Blumenstyk, 2016; Grassgreen, 2014; Linshi, 2015) it is now important to prove to students, parents and government funding agencies that a liberal arts degree is, in fact, worth pursuing. I have already mentioned that employers are looking for employees who have the soft skills that are taught in the liberal arts and this bears further discussion.

Hart Research Associates (2013) conducted a series of employment surveys on behalf of the American Association of Colleges and Universities (AAC&U) and the surveys revealed that employers wanted universities to put more emphasis on the following learning outcomes: critical thinking and analytical reasoning = 82% wanted more emphasis; complex problem solving and analysis = 81% wanted more emphasis; written and oral communication = 80% wanted more emphasis; and the application of knowledge and skills in real-world settings = 78% wanted more emphasis (p. 8). It is also noteworthy that, according to Hart (2013), 93% of employers surveyed agreed that “a candidate’s demonstrated capacity to think critically, communicate clearly, and solve complex programs is more important than his or her undergraduate field of study” (p. 4). Brian Casey, President of DePauw University, a nationally ranked Liberal Arts College founded in 1837, would add creativity and the ability to think for themselves to the list of skills that students are taught in the liberal arts (Belkin, 2014). Pursuant to the Hart Survey, the AAC&U published a report that confirmed 93% of employers think communication skills and critical thinking are more important than a student’s undergraduate major and added that 80% of employers believe students should acquire a broad, liberal arts-based education (AAC&U, 2014).

So, where do we go from here? It may continue to be difficult to convince a student to major in philosophy but what a university and its professors can do is show how the skills acquired in the liberal arts disciplines can not only help students get jobs but also facilitate advancement in their careers. While writing about the vice president of Wake Forest’s Office of Personal and Career Development, Susan Dominus (2013) reveals that Andy Chan’s philosophy is: “if
universities want to preserve the liberal arts, they have a responsibility to help those humanities majors know how to translate their studies into the work world” (para. 7). In other words, it is important to emphasize the real-world relevance of what students are learning and connect key competencies to specific employment outcomes. According to Starbucks CEO Howard Schultz, “No one ever helped me see the value in the knowledge I was gaining” (para. 4) and this caused him to not only question the value of his undergraduate degree in Communications but also prompted him to take Business classes in his senior year. Perhaps it would have helped Schultz if, at the time, professors explicitly told him why what he was learning is important and explained how it will help him in the future.

I will admit that I did not have the foresight to see the long-term value of a liberal arts degree while I was completing my undergraduate degree in English literature. I also fully realize that not all students have the time, inclination or resources to pursue an undergraduate degree in the liberal arts and it is certainly not for everyone. However, for those who have a genuine interest in the Arts, it would be a shame if they were dissuaded from pursuing a liberal arts education because of a seemingly poor ROI. Even though I completed a professional degree in Law and followed that with a graduate degree in Business, I can state conclusively that the ROI I have personally experienced from my liberal arts degree proves that it was money well spent. Indeed, I find that, especially while working in a senior management role, I frequently rely very heavily on the writing, communication, critical thinking and analytical reasoning skills I developed while studying the liberal arts. In the end, I feel it is up to educators to convince the detractors and critics that an investment in the liberal arts is part of a long-term strategy that will payoff eventually and, since the competition for funding has been raging on for quite some time and is likely to continue, it is vitally important that supporters of the liberal arts persistently battle for resources and recognition.

Another approach for educators is to create and promote, in conjunction with their respective institutions, adaptable and flexible programs that integrate technical skills with a liberal arts focus and, vice versa, add liberal arts soft skills to a technical and/or professional program.
Wiart (2016) asserts that soft skills, or “foundational skills”, are those that are fostered in a liberal arts setting and it has been proven that these are the skills employers want (AAC&U, 2014; Hart, 2013). A good example of an integrative program at KPU is the certificate in NGO and Nonprofit Studies as it allows students to take courses in both the Faculty of Arts and the School of Business concurrently. In fact, there are a number of Canadian universities that have successfully integrated the Arts with technical programs and these include: Concordia University’s “STEM to STEAM” program, which adds Arts to tech education; University of Ottawa’s Digital Humanities program, in which humanities and engineering students work on projects together; McMaster University’s ArtSci program, where professors across the university’s six faculties teach in the program; and a host of other programs that are based on “diversification of knowledge, not specialization” at universities like Trent University, the University of Guelph, McGill and the University of New Brunswick (Wiart, 2016, para. 25).

As evidenced above, a way to successfully bridge the liberal arts and technical programs together is by developing programs that focus on the diversification of knowledge rather than specialization; this will not only benefit undergraduates by exposing them to the soft skills employers want but they will also be learning field-specific skills as well. According to David Attis (2016), institutes of higher education can ensure student career success by following best practices such as: offering opportunities for “integrated career exploration”, creating “career-aligned tracks”, encouraging students to acquire supplementary certificates from on-campus professional schools and developing “co-curricular opportunities to integrate work experience with academic coursework” (para. 9). Clearly, the higher-education marketplace has evolved and it continues to change rapidly. What this means is that universities must adapt should they wish to survive. My hope is that survival is not at the expense of the liberal arts.

In conclusion, I leave you with the most compelling reasons why students should study the liberal arts:
• A liberal arts degree will help graduates get a job because they will acquire the soft skills that employers want
• Students receive a broad education that is grounded in diverse disciplines, which makes them more adaptable, innovative and creative
• Over the long run, liberal arts graduates earn just as much as their professional degree counterparts
• Liberal arts graduates are not only more likely to hold leadership roles but they are also more inclined to feel fulfilled over the long term

So, there you have it. Now please go out there and be a champion for the liberal arts!
REFERENCES


It is often assumed that Japan is a modern, middle class, homogenous country with high performing students and dedicated teachers. While for the most part this image holds true, it is not universal, though the mythology of it being so is clung to by the vast majority of Japanese. To be different or unique is not easy. Compliance with unstated, but universally held, standards is the norm. Individuals who deviate from what is viewed as being a “real Japanese” often are marginalized; this is particularly true in schools.

Immigrants, usually called Newcomers, who do not know the strict rules of protocol, which are a large part of Japanese culture, often find themselves at a loss as to how to catch up, blend in, or even disappear amidst the sea of people that populate urban Japan. For the purpose of this talk, I will focus on the education of Nikkei children from Latin America, how they came to be in Japan, why they underperform academically, as well as a bit of context regarding schooling in Japan.

Among people of Japanese ancestry, the Nikkei, are immigrants to Japan from Latin America. Most are from Brazil but others come from Peru, Colombia, Cuba, etc. Sao Paolo has the largest Japanese population outside of Japan. These Nikkei are ethnically Japanese whose grandparents left Japan in the early 1900s, or were sent by the government, to work in the coffee plantations in need of laborers after the diminished supply of Africans slaves and European migrants. At this time Japan was an impoverished nation with a very large rural population that it could not feed as well as an expanding military. Perceiving the need to increase its resources and limit its population, Japan exported to Latin America many poor farmers and those considered “undesirable.” Meanwhile other Japanese were sent as colonists to Korea and Taiwan to exploit resources and export food back to Japan.

Jumping ahead three generations to the 1980s we find a very different Japan, one that
leads the world in economic productivity and pays some of the highest wages in the world. It is also one of the most expensive places to live. Japanese people in the 1980s were not inclined to do the low level laboring work that brought them to this point of affluence. The government considered increasing the number of immigrants to perform what is known as the dirty, dangerous, and difficult work. The first attempts at admitting non-Japanese were not successful; the cultural clashes caused too much disharmony.

So the government looked to Latin America where settlements of Japanese people had lived for generations. Assuming that these people would be less disruptive to contemporary society, they were invited to “return home.” The problems with this notion proved many: for the most part the Nikkei by this time did not speak Japanese; they spoke either Portuguese or Spanish depending on the country of settlement. They had adopted many customs and ways of acting. And, as they soon found out, they were stigmatized by people in Japan who wanted nothing to do with them. They were and are viewed as foreigners, *gaijin*, or outside people. But they did not know this at first. Lured by high wages offered by corrupt brokers who exploited them, Nikkei arrived to serve as a “flexible workforce,” meaning accepting temporary work, mostly in factories, without benefits and threat of deportation. Their children faced very different but equally challenging obstacles that I will highlight here.

**Methodology**

The research took place in Kanagawa Prefecture, near Tokyo, and in Osaka, with a brief time in Nagoya. Over the course of two years I conducted 101 interviews: 45 in the Tokyo area, 53 in Osaka, and 3 in Nagoya.

My access to these communities was facilitated by an elaborate network of connections that I do not have time here to relate. Suffice it to say the network began in 1996 and continues to this day, including a variety of scholars, teachers, principals, professors, translators, community activists, as well as many “typical” Japanese people who do not fit into any of these categories.

I have organized my findings from this research around the following themes that address issues that limit the access of Newcomer youth to the Japanese educational system.

**Lack of persistence in school.**

*Not compulsory*

Free and compulsory education lasts for nine years starting in primary at age six and ending after middle school, age fifteen. All Japanese young people of school age are required to be registered and attend some form of schooling. However, the law does not apply to foreigners. They may attend but they are not required. According to a special report on immigration only 50% of Newcomer youth finish junior high school and go on to senior high school. This is in a country where the average high school attendance rate for Japanese Nationals is 98%.

While the figure for high school attendance might be surprising to some, the number of
Newcomer children not in school in some parts of the country grades 1-8 is even more striking. One interview revealed that as many as 40% of junior high school and some elementary Newcomer youth in Aichi prefecture are not in school.

Situation is paradoxical since access to high school in Japan has become easier over the last ten years due to the decline in number of school age youth and the need to keep schools open and teachers employed. New flexible admissions policies have been put in place where interviews and teacher recommendations are taken into consideration along with exam scores. But such procedures have also led to increased screening by high schools who prefer to not accommodate students with special needs. Many Newcomer youth fall into this category and either do not enter high school or drop out soon after they make a start.

**HS high costs/low quality**

Senior high school, moreover, is not a part of Japanese compulsory education for anyone, and comes with added expenses, including tuition fees. Most Japanese families accept these costs as part of what it means to acquire an education, but for Newcomer families the financial burden for schooling beyond junior high school can appear significant, especially if it gains them access to only the lowest ranked senior high schools, leaving them with little status and few skills to trade on the open market and even less chance to access a good university.

Another reason for the lack of persistence in school is the disconnect between the two systems.

**Disconnect between two school systems**

*4-hr day vs. extended day*

In Brazil, as is true of many developing countries, the school day is divided into four-hour shifts to accommodate all the children needing to attend. Depending on the school, there could be two or three shifts: morning, afternoon and evening, depending on the grade level. Children spend more time at home with their family. In Japan, school goes on all day, with organized required clubs after school, on weekends and during school holidays. Evenings are frequently set aside for private tutoring in the form of *juku*, often a train ride away. Adjustment to such constraints on a child unfamiliar with a life that centers solely on school can be difficult at best.

**Role of Preschool**

Almost every Japanese child attends preschool beginning at age 3, or earlier, where they learn not only how to socialize appropriately with their peers, but how to do school. Most of these preschools are subsidized by the government. Newcomer children who enter elementary school at age 6, which is the norm for Japan, without 3 years of preschool, are not only left behind academically, but also left outside of the immensely important
informal Japanese system of social grouping that continues through life.

**Age placement**

Japan is very organized around the age of people. Children, regardless of ability, are placed with their own age. For Newcomers this does not always make sense if they arrive without knowing any Japanese language, which is true for the vast majority of young people. Parents can, however, request that a child be put in a lower grade to enable the child to catch up. But once this decision is made, the child must stay with this class. Children who go into a lower grade, often find that their size and maturity make them stand out and soon they want to change classes, but cannot. If ostracizing and *ijime* (bullying) become too much to bear, they find a way to move on their own accord, out of the system, and into the streets.

**Senior High School = 15 yrs of age**

Students arriving in Japan at high school age face yet another educational glitch. In Japan you cannot start high school before age 15. After 9 years of education, you then take the high school entrance exam and if you pass move onto some form of secondary schooling. All high schools are ranked and admission is based on your exam score. But Brazil and Peru have 8 years of required education, and children finish at age 14. So if a child arrives in Japan at age 14, they have to go to night school for 1 year and then apply for the high school exam. Night school is very different from day school, often used for children who have to work during the day. Moreover, even if a child has had one year of high school in Latin America, s/he will start in the first year of high school in Japan.

**Time in country = test**

Special compensation, however, is made for young people who have been in Japan less than 3 years. They can enter high school by way of evaluation and recommendations. They do not have to take the regular high school entrance examination. It is an odd kind of reward, since most of these students are unable to read Japanese, cannot keep up with the curriculum, and usually drop-out. However, if a child has lived in Japan for more than three years, s/he must take the regular Japanese exam to enter high school, the test that all other Japanese take.

Unable to pass the exams, few Newcomer students enter high schools that will prepare them to live a productive life in Japan. Entering an already highly competitive job market where youth unemployment is alarmingly high, and job offers are down 80% over the last ten years. Newcomer youth are often left on the streets to fend for themselves. With few skills and no certificates, these young people are often doomed to a life of manual work in factories and construction sites, in jobs their parents never would have imagined doing themselves back home in Latin America.

**Language**

Intimately entwined with persistence in school is language. Seen as one of the major
reasons for high dropout and low performance, language is perhaps one of the most contentious issues discussed by teachers in schools with large immigrant populations, both in terms of learning Japanese and maintenance of the “mother tongue.” Like many immigrant communities around the world, Nikkei children are born and families raised in isolated ethnic enclaves where few adults speak Japanese.

Parental Participation

While language plays a significant role in terms of parental participation in children’s education in any country, in Japan the situation is compounded by long-held expectations that mothers not only assist in their child’s schooling but also learn along side of them. If a parent cannot do so, then supplemental lessons, in some form of juku are expected. Children of parents who cannot afford the time or the money to meet these demands, enter school with a deficit and fall farther and farther behind. For parents unfamiliar with the language, school system, or relevant customs, the link between school and home inevitably breaks down.

Mother language

The debate over maintenance of one’s mother tongue is complex. Some parents believe that if a child is born in Japan, their mother tongue is Japanese. And that the purpose of schools is to teach Newcomers how to learn Japanese better and faster. Others feel that without knowledge of one’s home language, in this case Portuguese or Spanish, children are not able to maintain communication with family and community, as well as potentially lose their identity and culture. The difference between these views is one of location. Newcomer parents know their children need to be able to function in Japanese if they are ever to survive and succeed in Japan. However, parents also need their children to be fluent in the home language to not only facilitate their communication but to assistance them in the daily routines of life, which leads to the next factor that impedes academic achievement: additional responsibilities placed on the child.

Additional Responsibilities

Children fend for themselves

It is common for both parents of Newcomer youth to work. This is not the norm for the typical Japanese family, where the mother stays home and focuses her energy, for good or ill, on the education of the child. Newcomer parents also often work split shifts or at night, leaving children to fend for themselves or care for younger siblings. Many interviews discussed the problem of children arriving at school with no breakfast, having to leave before their parents were awake. In addition, children are needed as translators for parents, at the parents’ workplace, hospital, immigration office, etc. Teachers complain that children are frequently allowed to be absent from school to carry out these functions, and that they are too young to take on these responsibilities. Such assumption of power by young people, combined with lack of enforcement of compulsory education laws, leave children prey to the vicissitudes of urban life, including drugs, prostitution, gangs, and petty crime.
Early marriage and teen pregnancy.

Another possible result of spending more time on the streets than in school, as well as having more unsupervised time at home, is the potential for early sex and teen pregnancy. Teen pregnancy at age 15 or 16 increases burdens not only on the young parents but also the grandparents who are themselves still of working age and cannot assist with the care of the new child. This is happening at a time when many Japanese youth are deferring pregnancy and marriage until their 30’s.

Dysfunctional families.

The dysfunctionality of Nikkei families is one of the most prevalent topics discussed among social workers, immigrant community workers, and foreign liaison officers, although rarely openly discussed among school teachers.

Years of separation.

Every Nikkei child seems to have had some experience of separation within the family. I am told “If there is 1 child in a 100 who has not experienced family separation, it would be a miracle.” For some, it is only from the father as he travels first to Japan to begin the process of getting established. Usually the mother follows and later sends for the children. During this period, the child is left with grandparents, relatives, friends or neighbors in Latin America. The main reason for left behind children is the lack of child care; there is nowhere for the child to stay when the parents are working in Japan. This is also one of the initial sources of child abuse.

Domestic violence.

Nikkei men who arrive in Japan without wives, tend to quickly find other partners. I am told it is an issue of loneliness. But such actions result in domestic violence and retribution by wives, who then attempt to leave their husbands. In numerous interviews I am told that domestic violence, or DV, is rampant in the community, not just among foreigners but also between Japanese men and foreign women. Girls, in the schools where I have worked, are affected both directly (through sexual abuse) and indirectly by observing their parent’s chaotic lifestyle.

Guilt money for kids.

To compensate for their absence many parents send their left behind children money that they would normally never have access to. It is a way of asking forgiveness for their departure. But children with money and without guidance easily fall prey to criminals as well as bullies. They also become consumers in a variety of ways, including buying drugs. These problems are then brought to Japan when they rejoin their parents.

Crime
Even though it is common knowledge that the economic crisis, the layoffs, and temporary employment, have left many Japanese nationals in desperate conditions, (at times resorting to unacceptable behavior), crime tends to be seen as something committed by foreigners. Feeding on the public’s perception that foreigners are dangerous, the yakuza recruit heavily among marginalized Nikkei, as well as among Korean and Chinese residents. But a startling fact pertaining to Nikkei youth jumps from the pages of official statistics on Newcomers. While the overall number given for Chinese criminals is double that of Brazilians, crimes committed by youth (14-19) are 4x higher for Brazilians than for Chinese. There is something behind these data.

Some possible solutions:
- Collect accurate data on the conditions of the families of Newcomers in order to find out what is happening around these children.
- Create conditions in which Newcomer communities can come together to identify and solve their own problems.
- Train people to work as liaisons between the various communities and public services.
- Hire more translators and put them in key places such as hospitals, social welfare offices, schools, public services, etc. Make these positions real jobs.
- Do not rely solely on volunteers. Most Newcomers need to work and their time is limited. Volunteers cannot be held accountable in the same way as paid employees. Training cannot progress through stages if people come and go at will.
- Provide information in different languages.

In conclusion
The Nikkei are Japanese by blood. Their numbers are increasing every year. They have come to stay. If their children are not educated, there will be at least one generation, maybe two or three, lost to society. These dislocated people are taking Japanese citizenship in large numbers and will soon become invisible to statistics that count only non-Nationals as foreigners; they will become part of an ever increasing underclass of Japanese society.
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Equity in Education: Improving Access to Financial Aid for Low Income Students by Increasing FAFSA Completion in the University of Hawai‘i System

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Equity in Education: Improving Access to Financial Aid for Low Income Students by Increasing FAFSA Completion in the University of Hawai‘i System

Abstract
Research shows that although many students do not graduate because they cannot afford to do so, millions of dollars in financial aid are left untouched each year. The co-presenters will share interview and survey results from students and financial aid offices across the University of Hawaii System regarding financial aid barriers and best practices in addressing these issues.

Introduction

Equity: Emphasizing Equal Opportunity for Low-Income Students

The purpose of the University of Hawai‘i System (2016b) is to:

Provide all qualified people in Hawai‘i with equal opportunity for high quality college and university education and training.

Last year, students in Hawai‘i missed out on $10.4 million in federal financial aid. Approximately 45% of high school students in Hawai‘i do not complete the Free Application for Federal Student Aid (FAFSA) (Gill, 2016).

UH Manoa and UH West Oahu Leaver’s Surveys show that one of the main reasons students do not complete their education is due to financial reasons. We explored whether students were applying for and receiving the financial aid they need to continue their higher education and graduate, and if not, what the barriers are.

Our focus is on equity for low-income students and providing equal opportunity for them to attend and complete their education in the University of Hawai‘i System.

Barriers For Financial Aid Studied
Our primary research question was understanding the barriers to FAFSA completion. We researched the different phases in FAFSA completion and the reasons for non-submission at each phase.

In addition, we wanted to see if we could identify common best practices across campuses or unique strategies a subset of campuses were using that other campuses could benefit from.
Finally, from a student perspective, we wanted to learn what their reasons were for not completing the FAFSA, what they found most effective and whether there were common myths or misconceptions.

**Background/UH Strategic Initiatives**

University of Hawai‘i Strategic Directions and the Hawai‘i Graduation Initiative (HGI)

As part of the University of Hawai‘i Strategic Directions for 2015-2021 (2016a), the Hawai‘i Graduation Initiative (HGI) specifically states as a goal for the system to:

*Increase the educational capital of the state by increasing the participation and completion of students, particularly Native Hawaiians, low-income students and those from underserved regions and populations and preparing them for success in the workforce and their communities.*

Broad strategies outlined in the Hawai‘i Graduation Initiative include:

**HGI Action Strategy 1: Strengthen pipeline to improve college readiness and attendance**

Strengthen the pipeline from K-12 to the university to improve college readiness and increase college attendance.

- Institutionalize early college and “bridge” programs
- Expand outreach services and support to facilitate the completion of college admissions and financial aid applications

**HGI Action Strategy 2: Structural Improvements That Promote Timely Degree Completion**

Implement structural improvements that promote persistence to attain a degree and timely completion.

- Reduce gaps in college completion for Native Hawaiians, low-income and underrepresented groups. Strengthen and align financial aid resources, policies and practices for increased access and completion.

While not directly a focus of our study, some of our findings will reflect whether these strategies have been implemented successfully.
Comparing Graduation Rates of Low-Income Vs. High-Income Students

According to Anthony P. Carnevale and Jeff Strohl in *Rewarding Strivers* (2010), the top income quintile students scoring below-average in SATs (800-999) graduate at a 52% rate, compared with 44% for bottom income quintile students scoring the highest SAT scores between 1200-1600.

These findings mirror research by Fox, Connolly and Snyder (2005), which shows that students in the top 25% of income and bottom third of test scores graduated college at a higher rate at 30% than those in the bottom 25% of income and the top third of test scores at 29%.
By viewing test scores as an indicator of academic ability, students from lower income socioeconomic households graduate from college at far lower rates than students from higher socioeconomic households with similar academic abilities.

However, the disheartening lesson from the statistics is that students of superior academic ability, if they come from a lower-income household, are less likely to graduate college than students with poor or average academic ability, that come from a higher-income household.

These statistics indicate that a gap in financial assistance may be the reason for lack of college completion. This data corroborates with the results of the leaver surveys previously cited that financial reasons contribute to students not completing their degrees.

**FAFSA Completion Among Students Qualifying for Pell Grants in the State of Hawai‘i**

Simons and Helhoski (2016) estimated the number of graduating seniors who could have been eligible for a Pell Grant if they had filled out a FAFSA, but did not. The study assumed the rate
of Pell-eligible recipients is the same for students who didn’t complete the FAFSA as for students who did. For Hawaii graduating seniors, 45% of nearly 6,000 students did not complete a FAFSA. Nerdwallet estimated that 2,847 would have been eligible, with an average award of $3,624 based on the students who were awarded Pell Grants.

Congressman Mark Takai (2015) referenced the same statistic- 45% of high school students do not complete their FAFSA - in an email newsletter on March 4, 2016, inviting parents and students to four financial aid workshops.

The Role of Eligibility Information vs. Assistance in FAFSA Completion

Bettinger, Long, Oreopoulos, and Sanbonmatsu (2009) studied the effects of two strategies to help families complete their FAFSA. They found that providing families with information only about their eligibility and options resulted in substantially worse completion than providing families with information and assistance in completing the FAFSA. From the abstract:

H&R Block tax professionals helped low- to moderate-income families complete the FAFSA, the federal application for financial aid.

Families were then given an estimate of their eligibility for government aid as well as information about local postsecondary options.

A second randomly-chosen group of individuals received only personalized aid eligibility information but did not receive help completing the FAFSA.

Comparing the outcomes of participants in the treatment groups to a control group using multiple sources of administrative data, the analysis suggests that individuals who received assistance with the FAFSA and information about aid were substantially more likely to submit the aid application, enroll in college the following fall, and receive more financial aid.

These results suggest that simplification and providing information could be effective ways to improve college access. However, only providing aid eligibility information without also giving assistance with the form had no significant effect on FAFSA submission rates.

Equity in Education

A look at Pell Grant Recipients across campuses, shows that less than 30% of students at UH Manoa received Pell Grants, while nearly 50% of students at Hilo received Pell Grants, and less than 45% of students at UH West Oahu received Pell Grants. The chart below indicates that students who did receive Pell Grants were positively correlated with degree completion.
Therefore, if more students filled out the FAFSA and were eligible to receive Pell Grants, degree completion could increase.

**Methodology**

We conducted individual interviews with representatives from Financial Aid Offices and students from across the UH System, as well as with P20. We also surveyed students within the UH System with an online survey.

**Interviews with Offices Across System and P20**

For the one-on-one interviews, we met with someone from every campus in the system. This included offices on every island and a variety of institutions from community colleges to four-year campuses. The interviewees were all well versed in financial aid on their respective campuses.
We spoke with representatives from:
- UH-Manoa
- UH-West Oahu
- Hawai'i Community College
- Honolulu Community College
- Kapi'olani Community College
- Kaua'i Community College
- Leeward Community College
- Maui College
- Windward Community College
- P20

We asked them a variety of questions, centered around:
- What strategies were currently used to encourage students to apply for financial aid and how successful did they feel each one was?
- Were students taking full advantage of financial aid available to them?
- What were common reasons students did not fill out their FAFSA?
- Were there any common themes, myths or misconceptions students had about FAFSA/Financial Aid?

Interviews were conducted in person, on the phone and via email. We learned the common strategies and challenges faced by the campuses. In addition, we learned that campuses had unique situations based on their student population and the community they served. Follow up questions were asked and results documented.

Interviews with Students

We met with students at the Manoa and Windward campuses. Interviews conducted with students centered around their individual experience with financial aid and FAFSA, and what kind of experiences they had with STAR and scholarships.

Follow-up questions were asked based on the students’ responses, focusing on finding out what kind of knowledge they had about financial aid and FAFSA, what struggles they had, who specifically was most helpful and what parts of the process were easy or difficult. Follow-ups also encouraged more detail about other specific types of financial aid - loans, grants and working on campus.
Online Student Survey Across the UH System

A survey was sent out across the entire system. We received nearly 2000 responses. We asked questions to gauge the students’ understanding and opinions of the financial aid process. The full survey instrument and analysis can be found in the appendix.

Results

Interviews-System-Wide Financial Aid Offices

We reached out to individuals at every campus in the system. We received responses from and interviewed members from each island. Every campus in the system was represented.

Strategies being used on campus, in community, and main challenges are summarized below:
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<td>Completing The FAFSA</td>
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Campus Strategies

The most common on-campus strategies reported included:

- Sending emails and reminders to students.
- Posting banners and flyers on campus.
- Providing one-on-one advising, both walk-in and by appointment.
- Organizing a variety of workshops: FAFSA Specific, Scholarship Workshops, and Financial Aid embedded in other workshops such as New Student Orientation.
- Additional programs that provided on campus services supporting Financial Aid included TRIO and Hulili.

Less common on-campus strategies included:

- “Financial Aid Lab” to provide students with a place to get help specifically with FAFSA. This pilot program aims to provide more targeted resources for financial aid when students are applying for financial aid.

Community Strategies

Common community strategies reported included:

- Community Workshops. A variety of workshops in conjunction with PACFAA (Pacific Financial Aid Association), College Goal 808, TRIO and Gear Up. It was reported that the best turnout appeared to be workshops held when the whole family was available such as on evenings and weekends, and at high schools in the community where the students are. TRIO goes into high schools during the day and was reported to be very successful.

Less common community strategies included:

- Workshops with High School counselors to prepare them to speak with high school students
- Including professors and accounting students in community workshops to assist with filling out FAFSA
- Partnering with peer mentors who go to high schools directly and work one-on-one with students. These peer mentors assist with applications as well as financial aid.

Challenges Reported

Common challenges reported were:

- Misconceptions about eligibility. The most common concern reported was that many students thought they would not be eligible, or did not realize what was taken into account for eligibility.
- Application was difficult. The second most consistent challenge reported was that students found the application overwhelming, or difficult to fill out. It was noted this was more pronounced amongst first-generation students.
- Verifications not completed. The third most consistent challenge reported was students had many challenges with verification, such as confusing it with rejection, or not realizing additional steps were needed.
- Lack of response via email and web notifications. It was commonly reported that students were not checking email, were confused by emails they received or did not know how to check email. Similar challenges were noted regarding web notifications in the online student system.
- Timely tax information not available. Reasons varied from parents not doing their taxes, to parents not being in the picture to provide tax information, to parents having but not wanting to provide the tax information.

Less common challenges that were reported included:
- Not knowing what financial aid could be used for. Some campuses reported students did not realize financial aid was not just for tuition, but could also be used for living expenses and books.
- Stigma of financial aid. There were misconceptions reported that some students felt financial aid had a stigma of welfare, that some students felt there was a stigma associated with being poor and that some students felt a sense of pride prevented them from applying from financial aid, a sense that they should pay for school on their own.
- Staffing vs demand. Additional staff would be helpful for one-on-one advising, additional community workshops and more outreach to students. It was consistently reported that staffing was a constraining factor.
### Table 2 - Common Misconceptions and Reality

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| I am not eligible. Reasons: my parent’s income, VA, I have already paid tuition this semester. | ● Students may be eligible based on a combination of income, total college expenses (not just tuition) as well as number of children in college, family size.  
● In addition, rules change. Students are eligible now to use both VA as well as financial aid.  
● Just because you paid tuition and fees, doesn’t mean you no longer qualify. You can apply even after paying for your tuition. |
| I was not eligible before, so I will not be eligible in the future. Or, I was granted aid before, so I am done with FAFSA. | ● Students must re-apply every year and eligibility is re-assessed every year.  
● As the students’ financial situation changes, they may qualify where they did not in the past. |
| Once I submit the FAFSA, I’m done.                                            | ● Students need to be aware that further actions may be required such as Verification.  
● A related misconception is when students are admitted but have some kind of outstanding issue with financial aid, they continue with their classes but leave it unresolved. They need to see the financial office to get it resolved, or they may end up with a hold that impacts their education and prevent registration the next semester. |
| If I accept financial aid, it means my family is poor. It is welfare/an entitlement. | ● There is no stigma with financial aid. Part of this may stem from in other countries you don’t have to apply for FAFSA or financial aid - other countries the higher ed is just free. |
| Financial aid is only for tuition.                                            | ● Financial aid can be used for books, fees, tuition and also living expenses |
| Financial aid is a separate thing I take care of.                            | ● Financial aid is part of the bigger picture which includes admissions and enrollment.  
● Students need to apply for admission to the campus where you will be receiving aid. Due to federal regulations, certain information cannot be shared across campuses so students must keep this in mind for financial aid and admission. |
| It costs money to apply                                                       | ● Applying is free |

**Student Interview Results**

We conducted four interviews with students who completed the financial aid process. The interviewees received varying amounts of Pell Grants, loans and other scholarships.
Much of the feedback we received mirrored the results of the interviews with the campus offices.

- The FAFSA process was difficult and took longer than they expected
- Workshops were helpful, but the most helpful was one-on-one advising and speaking with someone. This included the Hulili program and financial aid offices.
- One student reported that if not for their financial aid, they would not be attending school
- Getting tax information from the parents was one concern noted
- One student noted that getting help from their counselor in high school helped them to complete scholarship applications and earn scholarships
- There was a general concern about understanding the financial process. One student noted being scared and embarrassed to ask
- One student noted that it would be nice to have better reminders to know when different things were due.

System-wide Student Survey Results

- **Income.** 70% reported household incomes of less than $50,000 a year. 90% of students with household incomes under $50,000 received financial aid. Students in the lowest income bracket were the most likely to stop out of college.
- **Working.** 33% percent reported working on campus while 45% said they work off campus. Around 30% said they do not work at all.
- **Financial Aid Importance.** 90% said that financial aid was very important to them when applying to college. 76% said financial aid was very important when deciding whether or not to enroll.
- **Financial Aid Difficulty.** Those who said they experienced financial difficulty reported the reasons for their situation: 64% said their family could not contribute enough and near 50% said their financial situation worsened. Another 1/3 reported that they did not qualify for financial aid and so experienced financial difficulty. ¼ of students said they stopped out of school because of financial difficulty.
- **Cost of College.** More than 1/2 of students reported the cost of college was higher than anticipated.
- **Difficulty filling out the FAFSA.** 30% said it was not difficult at all to fill out the FAFSA form. 35% it was somewhat difficult. Only 5% said it was very difficult.
- **Taxes.** When applying for financial aid, 47% said they used their parents taxes for the FAFSA form and 53% used their own taxes. 30% reported that it was not difficult at all to file their taxes or their parents' taxes. 35% found it somewhat difficult. Only 10% found it very difficult to file their taxes.
- **Process.** The majority who did not apply for financial aid thought that they didn’t qualify. A little over 1/3 did not apply because they did not understand the process. Another 20% said it was too difficult a process while another 20% missed the deadline.
• Financial aid barriers. The majority of students said that tax preparation was a barrier although only a third found this to be difficult. Half of the students reported that parental income information was a barrier. Being dependent to their parents was a barrier for 30%.

• Assistance. Near 1/2 said they received help from the Financial Aid office, 1/4 from financial aid workshops and 19% from their high school counselor. 33% reported receiving help from other sources (open-ended responses).

Discussion

What Is Being Done Now And How Effective Is It?

Here are some common approaches being used now, and their reported effectiveness from the campus financial offices perspective specifically with regards to completion of FAFSA:

• Web-based FAFSA calculators. Not Effective. All campuses have a web-based calculator available on their website. Consistently, they reported that the calculators were confusing for students and parents alike and they did not feel it was an effective strategy for increasing FAFSA completion. It was noted however that it was a requirement to have such a calculator available.

• Online Notifications: Emails and Information on Student Information System when they log in. Low Effort for Staff, Low Effectiveness. Campuses consistently reported sending some kind of follow up emails, specifically for cases such as students who filed incomplete FAFSAs, students who need to reapply, students selected for verification. Consistently, they reported a concern that students either 1) do not check their email regularly or 2) do not know what to do once they receive the email. The consensus reported was that they continue to use this tool though it is not very effective.

• One-on-one counseling with students and/or parents. Most Effective. Campuses consistently reported that the one-on-one advising was most effective, but the challenges noted were that not everyone comes in for one-on-one advising, and if many students did come in then staff available would be the scarce resource. Campuses also reported that parents were welcome to come with the student, though many students did not know that.

• Financial Workshops on Campus and In Community. Highly Effective. Held on Weekday Evenings and Weekends when parents are available to attend as well. Larger Workshops on Campus where Finances is one subject covered along with enrollment, admissions is also Highly Effective. Held on Saturdays, or in conjunction with new student orientation. Timing is at the beginning of the year (January/February). March is the Priority Deadline so try to get them before that, This works well for those who come in - but not everyone comes in. Next year, some campuses trying an April/May
workshop as well because by then most people should have filed their taxes. Before they get here – the Pacific Association for Financial Aid Administrators-College Goal 808 goes out and helps students do the FAFSA.

Effectiveness of Distributions

It was consistently reported that Pell Grants specifically are not all being utilized, because students are not applying for financial aid. The financial aid officers felt that campus-specific aid was being utilized. If one student did not receive the aid a different student would, and in rare cases when all aid was not expended, the money would roll over to the next year to be used.

Recommendations

Based on the interviews we conducted with financial aid offices, students and the survey, our recommendations are:

- **Continue and expand community workshops and community outreach.** Community workshops and mentorship in the community were consistently reported as being highly effective strategies, and staffing was the limiting constraint. These workshops often take place on evenings and weekends when families are available and are done in addition to normal business hours maintained by staff. Campuses also reported getting requests each year from high school counselors, community based organizations and such to provide staff to do financial aid presentations. However, with the staff available offices cannot say yes to everyone who asks, let alone actively seeking out opportunities to educate the community on financial aid.

- **Related to the above: Community assistance for tax return completion.** There is a huge need in the community to help with the tax return before filling out the FAFSA. Probably more assistance with tax prep would be helpful, but now that the FAFSA has changed, the income tax info might not be as important.

- **Ensure financial aid is addressed as early as possible (such as in high school).** FAFSA completion strategies should be intrusive. Learning about college and financial aid should be part of the high school curriculum.

- **Provide resources to walk people through the FAFSA.** Many of the concerns came down to needing more resources for one-on-one advising and walking parents/students through the process. Some examples include initial FAFSA completion, assisting with verification, and getting current students to re-apply early. Additionally, when students ask their friends or family for help vs financial aid staff it causes misconceptions to spread - do not want them to just ask their friends.
Less reliance on email (unless able to somehow improve the response to email). Currently the scalable solution used for many communications, including reminders, is either email or in some cases physical mail, but it was consistently reported that there is not good response from emails. It is possible that this is further complicated due to income, as it was anecdotally reported that many lower income students were not as familiar with email.

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Bibliography


Appendices
Appendix A: Financial Aid Survey
Appendix B: Financial Aid Survey Results
Appendix A: Financial Aid Survey

1) Please indicate which campus you are attending:
   a) UH Manoa
   b) UH West Oahu
   c) UH Hilo
   d) Hawai`i Community College
   e) Honolulu Community College
   f) Kapi`olani Community College
   g) Kaua`i Community College
   h) Leeward Community College
   i) University of Hawai`i Maui College
   j) Windward Community College

2) Please choose the appropriate household income level:
   a) Less than $50,000 a year
   b) $50,000 to $74,999
   c) $75,000 to $99,999
   d) $100,000 to $149,999
   e) More than $150,000

3) How many hours per week did you have paid employment while in college or university?
   On campus:
   a) 0 to 10 hours
   b) 11 to 19 hours
   c) 20 to 30 hours
   d) Over 31 hours a week
   Off campus:
   a) 0 to 10 hours
   b) 11 to 19 hours
   c) 20 to 30 hours
   d) Over 31 hours a week

2) How important was financial aid to you when you applied for college or university?
   a) Not important at all
   b) A little important
   c) Somewhat important
   d) Very important

3) How important is financial aid to you in deciding whether or not to enroll for next semester?
   a) Not important at all
b) A little important

c) Somewhat important

d) Very important

4) Have you ever stopped out of school because of financial difficulty?

a) Yes

b) No

If yes, please describe your experience:

5) Please check the following reasons for financial difficulty:

a) My family could not contribute enough

b) My financial situation worsened

c) I lost my financial aid

d) I lost my job/could not find a job

e) I did not qualify for financial aid

6) Have you ever applied for financial aid?

a) Yes

b) No

c) I’m not sure

7) Why haven’t you applied for financial aid?

a) I didn’t think I would qualify or receive financial aid

b) I didn’t think I would need financial aid

c) It was too difficult a process

d) I did not understand the process

e) I missed the deadline

8) Did you turn in your application by the deadline?

a) Yes

b) No

If not, please describe why you did not apply on time:

9) Did you receive financial aid?

a) Yes

b) No

c) I’m not sure

10) How difficult was it to fill out the financial aid form (FAFSA)?

a) Very difficult

b) Somewhat difficult

c) A little difficult

d) Not difficult at all

Comments (if any):
11) When applying for financial aid whose taxes did you use for the FAFSA?
   a) Parents’ taxes
   b) My own taxes

12) Are you claimed on someone else’s taxes or are you independent?
   a) I am a dependent
   b) I am independent

13) How difficult was it to file your parents’ / your taxes?
   a) Very difficult
   b) Somewhat difficult
   c) A little difficult
   d) Not difficult at all
      Comments (if any):

14) What were the barriers to applying for financial aid?
   a) Tax preparation
   b) Parental income information
   c) Not knowing where the forms are
   d) Being claimed as a dependent by a parent/guardian

15) How likely are you to apply for financial aid in the future?
   a) Not likely at all
   b) A little likely
   c) Somewhat likely
   d) Very likely

16) Please tell us any sources of help when filling out the FAFSA. Check all that apply.
   a) High school counselor
   b) High school teacher
   c) Financial aid workshop
   d) College Financial Aid office
   e) College faculty
   f) Other: please describe

17) In what ways could UH have offered more support to you to encourage/help you to apply for financial aid?

18) How familiar are you with the following types of financial aid?
   · Scholarships/grants from a university or college
   · Student loans (Federal Stafford loans, Federal PLUS loans, private loans)
   · Pell Grants
   · Federal Work Study
   · Tax credits
VA Educational Benefits
Supplemental Education Opportunity Grants
Hawaii Community Foundation scholarships
Hawaii businesses/Kamehameha schools etc.

a) Not familiar at all
b) A little familiar
c) Somewhat familiar
d) Very familiar

19) What types of financial aid did you expect to receive? Check all that apply.
a) Scholarships/grants from a university or college
b) Student loans (Federal Stafford loans, Federal PLUS loans, private loans)
c) Pell Grants
d) Federal Work Study
e) Tax credits
f) VA Educational Benefits
g) Supplemental Education Opportunity Grants
h) Hawaii Community Foundation scholarships
i) Hawaii businesses/Kamehameha schools etc.
j) Not sure
k) Decline to answer

20) What types of financial aid did you receive/are you receiving? Check all that apply.
a) Scholarships/grants from a university or college
b) Student loans (Federal Stafford loans, Federal PLUS loans, private loans)
c) Pell Grants
d) Federal Work Study
e) Tax credits
f) VA Educational Benefits
g) Supplemental Education Opportunity Grants
h) Hawaii Community Foundation scholarships
i) Hawaii businesses/Kamehameha schools etc.
j) Not sure
k) Decline to answer

21) How did the actual cost of college compare with what you originally anticipated?
a) A lot less than I anticipated
b) Less than I anticipated
c) About what I anticipated
d) Higher than I anticipated
e) A lot higher than I anticipated
22) How familiar were you with deadlines for applying for financial aid?
   a) Not familiar at all
   b) A little familiar
   c) Somewhat familiar
   d) Very familiar

23) How did you find out about financial aid opportunities?
   a) High school counselor
   b) Online search engine
   c) College or university website
   d) Brochures or printed material from a college or university
   e) College or university admissions office
   f) College or university financial aid office
   g) Family
   h) Friends
   i) Teachers
   j) Other: please describe
   k) I didn’t look for financial aid information

24) How helpful were each of these sources of information in finding out about financial aid opportunities?
   · High school counselor
   · Online search engine
   · College or university website
   · Brochures or printed material from a college or university
   · College or university admissions office
   · College or university financial aid office
   · Family
   · Friends
   · Teachers
   · Other: please describe
   a) Not helpful at all
   b) A little helpful
   c) Somewhat helpful
   d) Very helpful

25) How easy was it to find information about financial aid for college?
   a) Very easy to find
   b) Easy to find
   c) Difficult to find
   d) Very difficult to find

26) How would you rate the quality of information about financial aid that you found?
a) Excellent
b) Good
c) Fair
d) Bad
e) Terrible

27) How would you rate the amount of information about financial aid that you found?
a) Too much information
b) Just the right amount of helpful information
c) Not enough information

28) What would you have liked to have more information on or help with when researching financial aid?
a) Application process
   i) Tax returns
   ii) FAFSA
b) Deadlines and other requirements
c) Scholarships and financial aid options
d) Tuition and other college costs
e) Repayment of finances
Appendix B: Financial Aid Survey Results

Executive Summary

Financial aid is an important factor in students’ decisions to attend and stay in college. However institutional data across the University of Hawai‘i system shows that the percentages of students receiving financial aid are low in comparison to the population of students who are more likely to qualify for financial aid. Because of the positive effects of financial aid on student retention, this survey was designed to investigate student financial aid experiences and why some students do not apply.

The survey was sent out to approximately 50,000 students of University of Hawai‘i universities and community colleges who are at least 18 years old during the Spring 2016 semester. Of 1948 respondents across the UH system, 1890 students consented to participate in the survey. Highlights from survey findings include:

- The majority of students (69 percent) reported household incomes less than $50,000 a year.
- Financial aid is important to 90 percent of students when applying to college. A quarter of students reported they stopped out of school because of financial difficulty, most commonly because student families could not contribute enough, financial situations worsened, or they did not qualify for aid. Many of these students noted that attending college would be impossible for them without financial assistance.
- 95 percent of students said they applied for financial aid; others did not apply because they did not think they would qualify for or receive financial aid or because they did not understand the process.
- 96 percent of students who applied reported that they turned in their application on time. Most students who missed the deadline did so because taxes were not filed in time, especially parents’ taxes.
- 87 percent of students received financial aid, while 11 percent did not. Majority of students expected to receive federal grants and university aid but fewer students actually received these types of aid.
- About two-thirds of students found the FAFSA form to be at least a little difficult to fill out, primarily because of the tax portion and finding the form confusing in general.
- The majority of students said that tax preparation and reporting parental income information were barriers in the financial aid process. Being considered a dependent of their parents was also a barrier although about 52 percent of students said they are independent and used their own tax information when applying for aid.
- Students received help in the application process mainly from the Financial Aid office with fewer students reporting help from financial aid workshops, high school counselors, family members, and friends.
• The majority of students wanted more information and help with scholarships and financial aid options, filing taxes, and understanding deadlines, requirements, and tuition and other college costs. They find financial aid and admissions offices, family, and the internet at helpful sources of information.

Student Participants

Of 1948 respondents across the UH system, 1890 students consented to participate in the survey. 1786 participants identified which campus they are attending. Almost a third of the participants attend UH Manoa, 15 percent attend UH Hilo, and 14 percent attend UH West O`ahu. Leeward had the most participants amongst the community colleges.

*Figure 1. Percentage of participants by University of Hawai`i campus (n=1786)*

The majority of students, or 69 percent, reported household incomes of less than $50,000 a year. Almost 8 percent of students surveyed report household incomes above $100,000 a year.

*Figure 2. Percentage of participants by reported household income level (n=1759)*
About 33 percent of participants reported working on campus while 45 percent said they work off campus. Approximately 100 students work multiple jobs, both on and off campus. Another 29 percent said they do not work at all (see Figure 3 on the next page).

Figure 3. Percentage of students reporting paid employment (n=1775)

<table>
<thead>
<tr>
<th>Employment Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>On campus: 1 to 10 hours</td>
<td>11.4</td>
</tr>
<tr>
<td>On campus: 11 to 19 hours</td>
<td>13.5</td>
</tr>
<tr>
<td>On campus: 20 to 30 hours</td>
<td>6.2</td>
</tr>
<tr>
<td>On campus: Over 31 hours</td>
<td>2.1</td>
</tr>
<tr>
<td>Off campus: 1 to 10 hours</td>
<td>6.7</td>
</tr>
<tr>
<td>Off campus: 11 to 19 hours</td>
<td>10.9</td>
</tr>
<tr>
<td>Off campus: 20 to 30 hours</td>
<td>12.7</td>
</tr>
<tr>
<td>Off campus: Over 31 hours</td>
<td>15.5</td>
</tr>
<tr>
<td>I do not work at all</td>
<td>28.8</td>
</tr>
</tbody>
</table>

Importance of Financial Aid

About 90 percent of students said that financial aid was very important to them when applying to college. Slightly fewer students (76 percent) said financial aid was very important when deciding whether or not to enroll.
Financial aid was so important that a quarter of students reported they stopped out of school because of financial difficulty. Those who said they experienced financial difficulty reported the reasons for their situation and had a chance to comment on their answer. The top reasons for financial difficulty were that student families could not contribute enough (64 percent) or that their financial situation worsened (48 percent). Many students noted in the comments that attending college would be impossible without financial assistance. Highlights from student comments include:

- Students reported that their parent income was too high to receive aid and their families either could not afford school or would not pay for school. Some students were independent but their parents' income was still considered in financial aid decisions.
- Nearly 170 students said they dropped out because they could not afford going to school due to the cost of living, bills, not receiving enough aid, not wanting to take out loans, and needing to take time off to work to pay for school again. Some students would take just a semester off while it took others years to come back to school after working and saving up. The relationship between school and work was difficult for a majority of students. Students could not afford school with only part-time jobs but could also not focus on school and succeed while working fulltime.
- About 50 students shared that they had to stop school in order to work and/or support their families, either children or ailing parents and family.
- Students who did not qualify for financial aid said it was due to parent income but also low grades, previous degrees, or their part-time student status.
- Small groups of students said they experienced difficulty and dropped out because of bad experiences with their financial aid office, being unaware of financial aid opportunities, or personal health issues.
All students reported how their anticipated cost of college compared to the actual cost. More than half reported it was higher than anticipated. Just over a third of students felt that it was about what they anticipated.

The Application Process

Students were asked a series of questions describing their application process and experience. The following describes the findings from these questions:

- **Application:** Of 1776 students, 95 percent reported that they applied for financial aid. About 4 percent said that they have never applied and 2 percent said they were unsure.
On-time application: 96 percent of students who applied reported that they turned in their application by the deadline. The majority of those who did not apply on time were still waiting for their or their parents’ taxes to be filed. Some parents filed for an extension or W-2 forms did not come in on time. Some students noted that having the financial aid deadline before the deadline for tax filing created problems for them. Other reasons for missing the deadline included not knowing about the deadline or having to reapply every year, late application to school or late acceptance notice, questioning if they would qualify for aid and so not applying, and mistakes on application forms.

Difficulty of FAFSA: Students did not find the FAFSA form to be very difficult to complete. About a third of students said it was not difficult at all to fill out the FAFSA form. Another third felt it was a little difficult and a quarter reported it being somewhat difficult. Only 5 percent said it was very difficult (see Figure 7 on the following page). Students said the FAFSA form was difficult mostly because of the tax portion and waiting for parents’ taxes to be filed. Suppling parent information was difficult for some because their parents do not support their schooling or they are independent. Other students said it was confusing and time consuming.

Figure 7. Percentage of students reporting difficulty of filling out the FAFSA form (n=1607)

Tax Filing: When applying for financial aid, 47 percent said they used their parents’ taxes for the FAFSA form and 53 percent used their own taxes.

- Related to this, 52 percent said they are independent and are not claimed on another’s tax forms while 48 percent are dependents and claimed by someone else.
- A third of students reported that it was not difficult at all to file their taxes or their parents’ taxes. A third found it difficult and a quarter found it somewhat difficult. Only 10 percent found it very difficult to file their taxes. Problems with filing taxes were due to disability, not being able to afford tax preparation help, being inexperienced or a first time filer, not receiving W-2s in time, and complications with military tax filing or VA paperwork.
• **Reasons for not applying:** Only about 5 percent of students did not apply for financial aid. They did not apply because they did not think they would qualify for or receive financial aid (62 percent) or because they did not understand the process (39 percent). Figure 9 shows why students did not apply for aid.

Figure 9. Percentage of students reporting why they did not apply for financial aid (n=95)

- I didn’t think I would qualify or receive financial aid: 62.1%
- I didn’t think I would need financial aid: 13.7%
- It was too difficult a process: 20%
- I did not understand the process: 38.9%
- I missed the deadline: 18.9%

• **Barriers to financial aid:** The majority of students said that tax preparation was a barrier although only a third found this to be difficult. Students said it was difficult because they had to wait for W-2s and tax filings, especially for their parents. Half of the students reported that parental income information was a barrier. Being dependent to their parents was a barrier for 30 percent. Some students said that things weren’t as difficult once they were over 24 years old so they did not have to include parent information anymore.
• **Help in the application process:** Students shared where they received help when applying for financial aid (see Figure 11). Near half of the students said they received help from the Financial Aid office, a quarter from financial aid workshops and 19 percent from their high school counselor. 33 percent reported receiving help from other sources, most often from family members but also from friends, online sources, workshops, and even tax preparers, accountants, and bank officers. Many students said that they figured things out on their own.

![Figure 10. Percentage of students reporting various barriers to financial aid](image)

![Figure 11. Percentage of students reporting receiving help when applying for financial aid by source](image)
Financial Aid Awarded

About 87 percent of students received financial aid, 10.8 percent did not receive aid, and 2.4 percent were not sure. Reasons reported for not receiving financial aid include:

- Parent income too high
- Ineligibility due to low GPA/grades, too many credits, or already possessing a degree
- Not meeting financial aid or tax filing deadlines
- Still waiting for financial aid decision or dispersal

Students were also asked about what aid they expected to receive and what aid they actually did receive. About 79 percent of students expected to receive federal grants while only 65 percent reported receiving it. 65 percent expected to receive financial aid from their university but only 46 percent did receive it. Students’ expectations and receipt of loans were nearly the same at about 50 percent (see Figure 13).

Almost half of students were very familiar with federal grants while a third were very familiar with scholarships and student loans. Students were the least familiar with VA educational benefits followed by Hawaii Community Foundation and Kamehameha Schools scholarships (see Figure 14).

Figure 13. Percentage of students reporting expected aid and actually received aid by type (n=1605)
Figure 14. Percentage of students reporting familiarity with financial aid by type (n=1630)

Improving Assistance with Financial Aid

Students would have liked more information or more help with scholarships and financial aid options. About half wanted help and information regarding filing taxes, deadlines and other requirements, and tuition and other college costs (see Figure 15). Some students requested more information on eligibility requirements for aid and scholarships (i.e. credit maximums, minimum credit loads per semester, etc.) and more information on the financial aid decision process and timing, especially when aid or loans are dispersed late and/or at different times.
Students want to know more information about financial aid processes and opportunities. Figure 16 shows students find financial aid offices, online search engines, family, and admissions offices the most helpful to find out financial aid information.

### Figure 16. Percentage of students reporting how helpful various sources are in informing about financial aid opportunities, by source (n=1582)

<table>
<thead>
<tr>
<th>Source</th>
<th>Not helpful at all</th>
<th>A little helpful</th>
<th>Somewhat helpful</th>
<th>Very helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school counselor</td>
<td>21.2</td>
<td>11.5</td>
<td>15.0</td>
<td>19.6</td>
</tr>
<tr>
<td>Online search engine</td>
<td>8.6</td>
<td>20.2</td>
<td>30.0</td>
<td>24.9</td>
</tr>
<tr>
<td>College/university website</td>
<td>10.7</td>
<td>24.3</td>
<td>32.4</td>
<td>23.6</td>
</tr>
<tr>
<td>Brochures, printed material from a college/university</td>
<td>15.9</td>
<td>22.1</td>
<td>25.8</td>
<td>16.6</td>
</tr>
<tr>
<td>College/university admissions office</td>
<td>15.2</td>
<td>18.3</td>
<td>25.7</td>
<td>22.0</td>
</tr>
<tr>
<td>College/university financial aid office</td>
<td>10.3</td>
<td>15.8</td>
<td>24.1</td>
<td>37.2</td>
</tr>
<tr>
<td>Family</td>
<td>15.1</td>
<td>16.6</td>
<td>21.0</td>
<td>29.7</td>
</tr>
<tr>
<td>Friends</td>
<td>15.5</td>
<td>17.7</td>
<td>22.5</td>
<td>25.1</td>
</tr>
<tr>
<td>Teachers</td>
<td>18.5</td>
<td>16.8</td>
<td>19.5</td>
<td>20.0</td>
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</tbody>
</table>
The Impact of an Integrated STEM After-School Program on Elementary Students’ Beliefs About the Role of the Teacher

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Abstract

The beliefs that students hold about the role of the mathematics teacher are important because they can affect students’ ability and willingness to persevere in solving non-routine problems that are prevalent in integrated science, technology, engineering and mathematics (STEM) education. This case study describes the beliefs about the role of the mathematics teacher of fourth and fifth grade students at a Title I Elementary School in a large Southwestern school district. The elementary students participated in a five-day afterschool program focused on integrated STEM (Science, Technology, Engineering, and Mathematics) Model-Eliciting Activities.

Data collected included a pre and post-questionnaire, five focus groups and six individual interviews selected so that there were two high-, two middle- and two low-achieving students. Interviews and focus groups were done before and after the afterschool program as well as after the completion of each MEA.

Participants initially believed that the teacher should always explain new material first but that the teacher should let students figure out practice problems and then only help the students after they got stuck on the problems. In the post- interviews and focus group the majority of participants believed that the teacher should at times let students figure out problems for themselves before explaining the problems. This is promising for the implementation of integrated STEM education because students’ beliefs about the role of the teacher profoundly affect their ability to solve non-routine problems frequently encountered in integrated STEM education.
The Impact of an Integrated STEM After-School Program on Elementary Students’ Beliefs About the Role of the Teacher

Our society is increasingly more dependent on science, technology, engineering and mathematics (STEM) disciplines. The United States Bureau of Labor Statistics (BLS) (2009) reported that in 2018 over 8.5 million jobs will be in STEM fields and 80% of the jobs in the future will require technology. Currently, there is no evidence to suggest that this trend will change. Being able to understand and apply mathematics is essential for the other STEM subjects. Even if an individual does not pursue a STEM career, they need to have some degree of STEM literacy, including mathematics literacy, to participate in society. The mathematics necessary to be successful in everyday life is different from the mathematics currently taught in schools (Lesh & Doerr, 2003; NAS, 2014). In order to better prepare students for the mathematics they will use later in life, students should be given opportunities to participate in integrated STEM education, which can also give them productive beliefs about mathematics.

Students’ beliefs about the role of the mathematics teacher are important because if students believe it is the teachers’ job to transmit knowledge, students may play a more passive role in their mathematics learning (Kloosterman, 1996). In order to meet the goals of the National Council of Teachers of Mathematics (NCTM, 2000) including communication, connections, and problem solving; as well as the U.S. Common Core State Standards for Mathematical Practices (Common Core State Standards Initiative, 2010) including make sense of problems and persevere in solving them, construct viable arguments and critique the reasoning of others, and model with mathematics, students must be engaged participants in mathematics.
This case study describes the mathematics-related beliefs, about the role of the mathematics teacher, of fourth and fifth grade students at a Title I Elementary School in a large Southwestern school district. The elementary students participated in a five-day afterschool program focused on integrated STEM (Science, Technology, Engineering, and Mathematics) mathematical modeling activities. This study is important because students’ beliefs affect their problem solving behaviors and are shaped by school mathematics curriculum and instruction as well as the socio-mathematical norms that students encounter (Yackel & Rasmussen, 2002).

Model-Eliciting Activities

The activities used in this study were Model-Eliciting Activities (MEAs). MEAs are open-ended problems where students answer to a client and create complex solutions that are generalizable to different situations (Lesh & Doerr, 2003; Lesh & Zawojewski, 2007). In MEAs, students use mathematics that is similar to the mathematics used to solve real-life problems (Lesh & Doerr, 2003). In order to solve MEAs it is necessary for students to mathematize or interpret real-world situations (Lesh et al., 2000) thus developing higher-order thinking skills (Stohlmann, Maiorca, & Olson, 2015). According to Lesh and Doerr (2003), mathematizing is the process of “quantifying, dimensionalizing, coordinatizing, categorizing, algebratizing, and systematizing relevant objects, relationships, actions, patterns, and regularities” (p. 5).

MEAs are implemented in a standard format that includes opening reading or video, readiness questions, problem statement, group work time, presentations, and time for revision or reflection. The opening reading or video is done so that students are able to become familiar with the realistic context of the MEA. Readiness questions ensure that
students have understood the opening video or reading and also for them to begin to think about the problem that they will solve. The problem statement gives groups their specific question they will be answering. Groups work together and then present their solutions. Finally, groups are given time to revise their solutions and reflect on the mathematics they used and how well they worked in their group.

MEAs are problems where groups create realistic models using different representations (Lesh, 2000). Some models are designed to represent complex mathematical situations using technology and can be simpler representations of more complex situations using symbols, graphs, or language (Lesh & Doerr, 2003). While there are multiple models or solutions to MEAs, all of these models can be developed using the four-step iterative process: describe, manipulate, translate (or predict) and verify (Lesh, Doerr, Carmona, & Hjalmarsön, 2003). In order to solve a MEA, students will complete several iterations of this process and will often refine, revise and extend powerful mathematics constructs not ordinarily taught in the traditional classroom setting (Hamilton et al. 2008; Lesh, & Doerr, 2003). MEAs can also be used to integrate STEM subjects by students applying their mathematics and/or science knowledge through the engineering design process as they plan, test, and revise their models (English, 2010). The skills that can be developed through an integrated STEM approach-- including critical thinking, innovation, and communication—are valuable for any career that a student may pursue (National Academy of Sciences, 2014).

**Integrated STEM**

As society becomes more advanced, science, technology, engineering and mathematics (STEM) are becoming more prevalent. New knowledge in STEM fields is
rarely composed of just a single content area because STEM fields are highly inter-
related (Stohlmann, Moore, & Roehrig, 2012). The National Academy of Sciences (NAS)
(2014) described this inter-relatedness,

Scientists use technological tools to conduct experiments and mathematics and
statistics to interpret the data produced by those experiments; engineers draw on
scientific knowledge and mathematical reasoning to develop and model potential
design inventions and solutions; technologists who build and maintain the
products and systems designed by engineers must understand the scientific and
mathematical principles governing their operation. (p. 20)

Even if individuals will not be working in a STEM field, it is important for them to
receive an authentic education that includes integrated STEM because students need to
develop the life skills necessary to succeed in a society that is strongly dependent on the
many applications of integrated STEM. Although there has been increased focus on
STEM education, there remains some disagreement as to what exactly STEM or the
integration of STEM education is (National Academies, 2014). For this study, integrated
STEM is defined as the combination of at least three of the STEM fields through natural
connections in the subjects. In the MEAs used in this study, mathematics and/or science
concepts were developed through the engineering design process and technology was
incorporated as a tool students could use to help to solve MEAs.

Although there are only a few quantitative studies that examined integrated
STEM education, Becker and Park (2011) conducted a meta-analysis to examine the
effects of integrated STEM education. Becker and Park (2011) found that teaching
integrated STEM had a positive effect on student achievement, where as students who
were taught using the traditional teaching methods had no such effect. The researchers also found that integrated STEM education was a more effective teaching strategy than separately teaching the subjects. They indicated “due to the lack of a comprehensive review regarding the effects of integrative approaches among STEM subjects on academic achievement, many teachers are unaware of the benefits of the integrative approaches for student learning” (p. 23). They also found that “various types of integrative approaches could serve as bridges between the theoretical learning of mathematics and science and the practical learning of technology and engineering” (p. 32).

Venville, Wallace, Rennie and Malone (2012) conducted a qualitative research study that described the implementation of integrated science, technology and mathematics in a school environment where these subjects were taught in separate classes. The researchers wanted to know what this would do to student learning. Participants were separately introduced to concepts in their mathematics, technology and science classes and in an after-school program the researcher used technology-based projects to integrate mathematics and science concepts. The researchers found that although it was challenging, teachers with subject-specific backgrounds could work together to provide students with opportunities to learn in an integrated setting. The researchers also found that student learning were enhanced when students were able to apply the knowledge they learned in their separate classes together.

The Common Core State Standards for Mathematics (CCSSM, 2010) suggest students should be able to connect and use mathematics in other contexts, such as engineering and science (NAS, 2014). One goal of the CCSSM is to provide students with the skills and
knowledge to succeed in our technological society and the ability to compete in a global economy. The CCSSM standards for mathematical practice include: the ability to make sense of problems and persevere in solving them; abstract and quantitative reasoning; construct and critique arguments; mathematical modeling; use suitable mathematical tools; attend to precision; the ability to identify and use patterns and structures; and identify and use repeated reasoning. There is a new emphasis on mathematical modeling and the ability to apply these skills to nonmathematical concepts. The CCSSM emphasize a more student-centered teaching approach rather than the teacher-centered approach used in traditional mathematics education. The CCSSM can provide students the opportunity to explore mathematics curriculum and develop higher-level thinking skills (CCSS, 2012). The interaction with other students through collaboration can provide students with the social context necessary to develop a deep understanding of mathematics and the ability to work in teams. **Student beliefs about the role of the teacher**

Students’ beliefs about the culture of their mathematics classrooms influence their problem-solving abilities (McLeod, 1989, 1992; Underhill 1988). This can be seen as students’ responses to non-routine problems are profoundly affected by their views of their role and the teacher’s role in the classroom (McLeod, 1989). For example, students who believe that the teacher’s role in the classroom is to transfer knowledge to students and it is the student’s responsibility to receive it will struggle solving non-routine problems. In MEAs the role of the teacher is to facilitate learning and the student needs to construct their solution independently of the teacher (Lesh & Doerr, 2003). In this setting students might initially struggle because their beliefs about mathematics classroom
culture are being challenged. Also, students who believe that mathematics is being able to do computations quickly and efficient, may not be interested in problems that cannot be solved quickly with a straightforward procedure (Kloosterman, 1996).

For Kloosterman (1996), the role of the teacher was examined from the students’ perspectives. The traditional view of a teacher is a lecturer and the person who provides correct answers. Kloosterman (1996) taught a class to fourth grade students on non-routine problem solving. In this course, Kloosterman did not give students the correct answers because the author wanted to develop the students’ own intuition and skills. The author found that the students’ beliefs about the role of the teacher caused cognitive dissonance. This led to student dissatisfaction and some students’ refusal to work in this class. Kloosterman (1996) stated that students who believe the teachers’ role in the classroom is to transmit knowledge might be less motivated to learn when they are in a classroom where they are required to construct their own mathematical knowledge. Kloosterman (1996) found that most students believed that the role of the teacher was to transmit knowledge and provide students with the answers.

Methods

Participants and Setting
**The School.** The school was purposefully sampled because it was a Title I elementary school with a diverse student population in a large, Southwestern school district. The elementary school serves a diverse student population of 840 students; approximately 82% are minority students. Seventy-seven percent of the students receive free and reduced lunch and approximately 24% of the students are classified as English Learners.

**The Participants.** Twenty-four participants were sampled from the overall fourth and fifth grade populations. There were 11 fourth grade students, 4 boys and 7 girls, and 13 fifth grade students, 6 boys and 7 girls. Eight students identified themselves as white, nine Latino, two Asian, two Black, one Pacific Islander and two as bi-racial. Eighteen students received free and reduced lunch, five students were labeled as English Learners (ELs) and one student was on an Individualized Education Program (IEP).

The Criterion Referenced Test (CRT) scores were collected for all participants. The CRT is a standards-based test that is used to measure specific skills that students should have for third through eighth grades (Great schools, 2014). The CRT scores are separated into the categories *exceeds the standard* for scores greater than 400, *meets the standard* for scores between 300 and 400, and *approaching the standard* for scores that were less than 300. The students’ previous CRT scores were used to determine the achievement levels of students so that all levels were represented in semi-structured interviews that were conducted. Using the CRTs, six participants were purposefully sampled to participate in interviews so that there were two high-, two middle- and two
low-achieving level students. Nine participants were classified as high achieving because their CRT scores were identified as *exceeds standards or meeting the standard* with a score greater than 350. Eight participants were classified as middle achieving because their CRT scores were *meets the standard* with scores between 300 and 350. Four participants were classified as low achieving because their CRT scores were *approaching the standard* and two participants were classified as no score because they did not have CRT scores from the previous year (see Table 5).

*Table 1. Classification of Participants by Ability Level*

<table>
<thead>
<tr>
<th>Achievement Level</th>
<th>High</th>
<th>Middle</th>
<th>Low</th>
<th>No Score Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chris</td>
<td>Wyatt</td>
<td>Ashley</td>
<td>Robbie</td>
<td></td>
</tr>
<tr>
<td>James</td>
<td>Becka</td>
<td>Dawn Marie</td>
<td>Mike</td>
<td></td>
</tr>
<tr>
<td>Katie</td>
<td>Mitchell</td>
<td>David</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zach</td>
<td>Beth</td>
<td></td>
<td>Jakob</td>
<td></td>
</tr>
<tr>
<td>Jennifer</td>
<td>Amy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kelly</td>
<td>Mia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elizabeth</td>
<td>Francesca</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joseph</td>
<td>Piper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Pseudonyms have been used to protect the identity of the participants*
Research Context

**The After-School Program.** The program met after school at the elementary school for five weeks. Each session was 2.5 hours long. There were 24 participants who were grouped in fours at six tables for each of the activities. The facilitators included a teacher from the elementary school, the researcher and occasionally another graduate student.

**Day 1.** During the first session participants completed a questionnaire and the Marshmallow Challenge (http://www.marshmallowchallenge.com). The Marshmallow Challenge was used as the first activity because it introduced the participants to the engineering design process and working in groups. In the Marshmallow Challenge participants are given 20 pieces of spaghetti, a yard of string, a yard of tape and a marshmallow. Using only the given supplies, participants were given 20 minutes to build the tallest freestanding structure with the marshmallow on top. After students completed the Marshmallow Challenge they were introduced to the engineering design process and then were given an opportunity to rebuild their marshmallow structures.
Day 2. On the second day participants completed the Survivor MEA (Maiorca & Stohlmann, 2016). In this MEA students were asked to design a shelter that was sturdy, water resistant, and spacious enough for people to survive while stranded on an island. The mathematical topics that this MEA focused on were estimation and mathematical reasoning, proportional reasoning, and problem solving. Students had to work in dissimilar measurement scales and convert between scales. Students also had to make decisions about whether or not a solution meets the needs of a client.

First students were given a video to introduce some science content and set the context for the MEA (FlowMathematics, 2013). Then the students were asked to first answer the readiness questions individually and then share their answers with the whole group. Students were then given the problem statement and given time to build their models. The models were tested to see if they could withstand wind and rain. Students then wrote their letters to the client, shared out their solutions with the rest of the group and completed the student reflection forms.

Day 3. Students completed the Rocket MEA, adapted from Try Engineering’s Water Rocket Launch Activity (2010). In this MEA participants were asked to design a water rocket for Virgin Galactic using everyday materials. This MEA addressed the engineering design process, numerous science standards and the Common Core Standards of Mathematical Practice: make sense of problems and persevere in solving them, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically and attend to precision (CCSSM, 2010).
Students also had to make decisions about whether or not their solution met the needs of a client.

Students were given a background article and took turns reading it aloud to the whole group. Then they answered the readiness questions. Students then were given the problem statement that was read aloud as a whole group and were given time to build their models. After participants built their models, the rockets were taken outside and launched. The participants then returned inside, shared their thoughts on their modeling process with the rest of the participants, wrote their letters to the client, and then completed student reflection forms.

Day 4. Students participated in the Mars Rover MEA, adapted from NASA’s Mars Pathfinders Egg Drop Challenge. Students were asked to design a capsule that protected its payload when dropped. This MEA focused on mathematical reasoning and problem solving. Students demonstrated an understanding of the challenges of soft landing a spacecraft on Mars, made decisions about whether or not a solution met the needs of a client, and communicated the solution clearly to the client.

The students first watched a short video that established the context for the problem. Students then answered readiness questions and as a whole group read out loud the problem statement. Students were then given the remaining time that day to build their models. Initially students were provided a basket that had samples of the materials they could use to build their rovers. Before students were able to begin building the rovers they had to determine what materials they could use that were within the allowed $300 budget. Participants then purchased their items from the classroom teacher. Participants were allowed to buy additional items if their budget permitted but were not allowed to
return any items that were already purchased. During the next meeting of the after-school program the rovers were dropped from the roof of the elementary school.

**Day 5.** The last day of the program began with the participants testing the Mars Rovers, designed during the previous session. The researcher dropped the rovers off the roof of the elementary school while the participants observed from the ground below and timed how long it took for each rover to fall from the roof to the ground. After all of the rovers were dropped the participants returned to the classroom and then used the data collected to calculate the rate the different rovers were traveling while they fell to the ground using the \( distance = rate \times time \) formula. Each group then wrote a letter to their client, shared their strategies with the rest of the participants, and completed student reflection forms.

After the Mars Rover MEA was completed the participants completed the Freighter MEA, adapted from Lee’s (2014) Tinkering with Buoyancy Activity. In this MEA participants were asked to design a boat that could hold the most freight with the least expense to the boat-building company. The mathematical topics that this MEA addressed were estimation and mathematical reasoning, as well as problem solving. Students also had to make decisions about whether or not a solution met the needs of a client.

In this MEA students watched a video to introduce the context of the problem, answered readiness questions, and then as a whole group read the problem statement out loud. Participants were then given time to design and test their model and write their client letter. After participants completed the Freighter MEA they completed the post-questionnaire survey.
Data Collection and Analysis

In case studies it is important to collect documents, artifacts, interviews and observations (Bernard & Ryan, 2010; Creswell, 2013; Marshall & Rossman, 2010; Yin, 2014). The purpose of this section is to describe the questionnaire, interviews, focus groups and classroom observation that were used in this study.

Instruments

Questionnaire. The questionnaire was developed by modifying the Indiana Mathematics Beliefs Scale, which was originally developed to measure the mathematics beliefs that were “related to motivation and thus achievement on mathematical problem-solving” (Kloosterman & Stage, 1992, p. 109) of secondary and college-age students. Kloosterman and Stage (1992) stated, “each scale should be measured separately and there is no overall scale” (p. 114). The original survey was aligned to seven beliefs, including the role of the teacher. The original questions that were prepared were initially given to three mathematics educators at the collegiate level, including Kloosterman, to determine if the questions were related to the beliefs that they were supposed to measure. Kloosterman suggested that questions regarding the category, the social context that mathematics is learned, be removed because elementary aged students would provide inconsistent answers for what it means to do group work. Therefore the questions that related to this belief were removed from the survey. The modified survey was given to two elementary schoolteachers to determine if the wording was developmentally appropriate for the students. After the wording was determined developmentally appropriate the survey was piloted with 91 fifth grade students to determine the validity of the instrument. Crohnbach’s Alpha is used to determine the internal consistency of an
instrument (Tavakol & Dennick, 2011). According to Tavakol and Dennick acceptable values of Crohnbach’s alpha range from 0.7 to 0.9. For this instrument a Crohnbach’s alpha of 0.71 was calculated.

All students in the after-school STEM program completed the questionnaire that consisted of 24, five-point Likert-scale items and three open-ended questions that measured their mathematics-related beliefs (Appendix C). This questionnaire was completed on the first and last day of the after-school program. Students were given 20 to 30 minutes to individually read and answer the questionnaire.

Kloosterman (2003) stated that Likert-scale items provide a baseline measurement of students’ mathematics-related beliefs. Likert-scale items on this survey were both positively and negatively written. An example of positively written item is, “The teacher lets students figure things out for themselves.” An example of negatively written item is, “All knowledge comes from the teacher.”

Interviews. Bernard and Ryan (2010) stated that semi-structured interviews are a useful tool to interview children. Semi-structured interviews produce a lot of qualitative data (Creswell, 2013; Marshall & Rossman, 2011). Kloosterman and Stage (1992) believed that interview questions were more effective than just Likert-scale items, “More open-ended measures might pick up on factors not mentioned in this instrument [Likert-scale items] but such measures also have the risk of not getting to some of the key factors mentioned in the literature” (p. 262). Semi-structured interviews were conducted before and after the program, as well as after each activity. Participants at high-, medium- and low-achievement levels were purposefully sampled from all students participating in the after-school program. These semi-structured interviews were audio taped and conducted
before the school day began. Example question from the pre and post semi-structured interviews included, “Are there times where teachers should let students figure things out or should they explain everything?” Example questions from the semi-structured interviews that were conducted after each activity included, “What math did you use to solve the problem?” and “Did this activity change the way you think about mathematics?” Non-scripted follow-up questions were used as necessary to provide the researcher with more details.

Focus Groups. According to Bernard and Ryan (2010), focus groups provide a sense of a group’s dynamic; allow students’ responses to build off of each other; and provide the researcher with rich data. Marshall and Rossman (2011) thought that beliefs and attitudes were socially constructed and that participants needed to listen to other peoples’ beliefs in order to better form their own. Participants who might not be able or willing to comment about their mathematical beliefs would feel safe in the focus groups to disclose their feelings.

Focus groups were conducted before the interviews and after-school program as well as throughout the program. Focus groups ranged in size from four to 12 participants. All focus groups were video taped and occurred before or after-school. Example questions on the focus group interview protocol included, “How is mathematics used in your everyday life?”, “How is math connected to other subjects?”, “Describe mathematical modeling,” “How is mathematics learned?”, and, “Describe what the role of a math teacher is?” The focus groups were conducted after each activity and used the same questions as the interviews that were conducted after each activity.
Observations. To better explain the change (or not) in the participants’ beliefs about the role of the teacher, the math classes of the students who participated in the after-school program were observed. Only the participants who were in my study were observed; this included interactions with other students and their teacher. One classroom observation was made for three teachers that lasted the entire instructional period, which ranged from 30 to 70 minutes. During these observations only written notes were taken.

Data Analysis
An inductive approach was taken when analyzing the qualitative data (Bernard & Ryan, 2010). Grounded theory was selected as the method of analysis because, according to Bernard and Ryan (2010), the purpose of grounded theory, “is to let understanding emerge from the close study of the texts” (p. 288). According to Charmaz’s constructivist grounded theory (2008) the objective is to understand a phenomenon rather than to explain a new theory. Data were coded inductively from the bottom up using open, axial and selective coding.

Methodological Rigor. There are eight strategies that can be used to validate a qualitative research study: (a) prolonged engagement and persistent observation, (b) triangulation, (c) peer review and debriefing, (d) clarifying research bias, (e) negative case analysis, (f) member checking, (g) rich, thick description, and (i) external audits (Creswell, 2013; Maxwell, 2013). Creswell (2013) recommended that researchers use at least two of these procedures to ensure validity. To ensure validity for this study, rich data were collected and multiple data sources were used to triangulate the findings.
**Rich Data.** Maxwell (2013) stated, “such data generally require verbatim transcripts of the interviews, not just notes on what you felt was significant. For observation, rich data are the product of detailed descriptive note taking (or videotaping and transcribing) of specific, concrete events that you observe” (p. 126). The interviews and focus groups were recorded and transcribed in their entirety. During classroom observations detailed field notes were taken.

According to Yin (2014), the reliability of a case study is increased when the data are organized and analyzed using a computer assisted qualitative analysis software. NVivo was used to analyze the interviews and focus groups. This allowed the researcher to better observe themes that might not have been visible without the use of the software.

**Triangulation.** Triangulation was defined by Yin (2014) to be the merging of multiple data sources to establish the consistency of findings. Multiple forms of data such as focus groups, questionnaires, interviews and observations were used to triangulate the data.

**Results**

**Questionnaire**

A nonparametric Sign test was conducted to compare the pre and post scores for beliefs. There was no significant sign change between the pre (M= 3.522, SD = 0.657) and post (M=3.554, SD = 0.589) questionnaire scores for students’ beliefs about the role of the teacher (p > .10). Although there was no quantitative analysis performed on the individual questions in the survey, there were some changes in the participants’ responses. The researcher defined this change as an increase or decrease of four or more
participants in a category such as no opinion to the categories disagree a little or disagree a lot (see table 2).

Table 2. Beliefs about the Role of the Teacher

<table>
<thead>
<tr>
<th>Question</th>
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<th>Agree a lot</th>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
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<td>4</td>
<td>6</td>
<td>12</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>(4.3%)</td>
<td>(17.4%)</td>
<td>(26.1%)</td>
<td>(50%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
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<td>1</td>
<td>9</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.3%)</td>
<td>(4.3%)</td>
<td>(39.1%)</td>
<td>(26.1%)</td>
<td>(30.4%)</td>
<td></td>
</tr>
<tr>
<td>The teacher lets students figure things out for themselves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
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<td>4</td>
<td>3</td>
<td>8</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.3%)</td>
<td>(17.4%)</td>
<td>(13%)</td>
<td>(34.8%)</td>
<td>(30.4%)</td>
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</tr>
<tr>
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<td>3</td>
<td>2</td>
<td>9</td>
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<tr>
<td></td>
<td>(8.7%)</td>
<td>(13%)</td>
<td>(8.7%)</td>
<td>(39.1%)</td>
<td>(30.4%)</td>
<td></td>
</tr>
<tr>
<td>The role of the teacher is to provide answers to problems</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
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<td>2</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(39.1%)</td>
<td>(8.7%)</td>
<td>(17.4%)</td>
<td>(13%)</td>
<td>(21.7%)</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>2</td>
<td></td>
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<tr>
<td></td>
<td>(30.4%)</td>
<td>(13%)</td>
<td>(47.8%)</td>
<td>(8.7%)</td>
<td></td>
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<tr>
<td>All knowledge comes from the teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
For the role of the teacher is to facilitate learning 78.2% and 56.5% of the participants agreed with this statement on the pre and post questionnaire, respectively. However, on the post-questionnaire 39.1% participants had no opinion versus the 17.4% on the pre-questionnaire. The increase in the number of students who had no opinion could be due to students not understanding what the term facilitate meant. There was little to no change for the statement the teacher lets students figure things out for themselves. On the pre-questionnaire, approximately 35% of the participants either somewhat agreed or strongly agreed with the statement the role of the teacher is to provide answers to problems but on the post-questionnaire only 8.7% of the participants only somewhat agreed with this statement. It is important to note, 17.4% of the participants on the pre-questionnaire neither agreed nor disagreed with the statement the role of the teacher is to provide answers to problems but on the post questionnaire this number increased to 48%. For the statement all knowledge comes from the teacher only 33.7% of the participants disagreed with this statement on the pre –questionnaire while 43.4% of the participants disagreed with this statement on the post-questionnaire.

In the pre and post interviews participants were asked about their beliefs about the role of their teacher. Participants were asked if there were times where teachers should let students figure out problems or whether teachers should explain them first.
**Pre-interviews and focus group.** Seven of the 24 participants reported that the teacher should always explain new concepts first. James (H) said, “She should explain it first and then let us try and figure out how we are going to do it.” Jennifer (H) said, “she teaches us the lesson and then we do some problems with her and then she lets us do some problems on our own.”

Three participants said there were times when their teachers should explain concepts and also times when their teachers should let them figure things out first. James (H) said, “Umm… there should be some times where they should just let us figure it out and also some times when they should explain stuff.” Amy (M) said, “It’s a little bit of like half and half… Some days she knows we can do it by ourselves and some days… when we are learning something new she teaches it.”

Three participants reported that their teachers let them try problems first and then explain the problems. David (L) said his teacher lets him “figure out and then she explains what you did wrong and everything.” Katie (H) said, “She always lets us figure it out first, and then if we don't get it, she'll try to help us but she won't give it all away.”

When asked what the teacher should do when students were being taught a new concept, three participants said that the teacher needed to explain the content first,

*Interviewer: If you are introduced to something new should the teacher explain it first or should they let you figure it out?*

*James (H): She should explain it first and then let us try and figure out how we are going to do it.*

*Interviewer: And what happens if you get to a point where you are stuck and you don’t understand?*
James (H): I usually go up to the teacher and ask her for help.

Interviewer: Okay

James (H): Or I ask... umm... a friend for help.

Jennifer (H) said, “she teaches us the lesson and then we do some problems with her and then she lets us do some problems on our own.” Katie (H) also reported that her teacher explains new concepts first,

Katie (H): She teaches us first and then we all do it.

Interviewer: Okay, so she always teaches first?

Katie (H): Yeah.

In the pre interviews and focus group participants believed that the teacher should explain new material. They also believed that the teacher was the source of knowledge because they reported that if they were struggling they would go to the teacher for help. Only one participant reported that they would ask a classmate for help.

Post-interviews and last focus group. Three interview participants reported that the teacher should let students figure out how to solve problems. Chris (H) believed that his teacher should let him figure out how to solve problems. Chris (H) said, “They should let us figure it out because if they just tell us the answers we won’t learn it.” David (L) said that the teacher should “like let them figure out and then tell them what they did wrong.” James (H) also said that teachers should let students figure problems out and then explain how to solve the problem after the students have been given a chance to solve it.

Interviewer: Okay, so are there times where your teacher should let you figure things out?
James (H): Mmhuh (yes).

Interviewer: Okay, all right. Umm… can you give me an example?

James (H): Umm… at times our teachers help us out well… of when me and my friends are like stuck on a problem and we are working together on it and we can’t figure it out we can go up to Ms. XXXXX and ask her…umm… if she can help us and she says yes and so then we figure it out.

Interviewer: So then does she just tell you how or does she make you try to figure it out all by yourselves?

James (H): Umm… she makes us try and if we can’t get it then she helps us.

All seven of the participants in the focus group said that there are times when the teacher should let students figure problems out before explaining them. Only two of these participants were able to provide an example of an activity where the teacher had students do an activity first and then explained it. Both students were in the same class and described the same activity that was not observed by the researcher.

Interviewer: What were you guys thinking? Becka (M), Mike (N), what were you guys thinking? Does your teacher ever make you figure stuff out first and then tell you something new?

Becka (M): Sometimes.

Mike (N): Sometimes yeah.

Interviewer: Can you give an example?

Mike (N): The water. The pennies and the water and then she showed us a video on water tension.

Interviewer: Okay. So you did it first and then she talked to you about it?
Mike (N): We found out water tension is when a positive and a negative stick together and it feels hard. That's why when you do a belly flop it hurts.

Three participants reported that the teacher explains content and then lets them figure it out for themselves on tests. Amy (M) reported “Both. Like doing a lesson they help us but if a test if we ask them a question they ask us like do you remember the lessons we did the week before.”

One participant said that there were times when the teacher should let you figure out how to do math by yourself but the example that she provided was of the teacher explaining first and then having students solve problems:

Interviewer: is there a time when teachers let you just figure stuff out on your own or should they always give you the answer?

Ashley (L): Umm... what do you mean?

Interviewer: So you’re learning something new, is there a time where the teacher should let you try to figure things out. Like we kind of did in the after-school program... Is there ever a time where a math teacher should do that?

Ashley (L): Probably, yeah.

Interviewer: Can you think of an example?

Ashley (L): Cause well for example when the teacher is telling you to do this... you have to let them do it themselves cause they need to know for ... for like to know if they really know it then not just give an answer away cause you are not going to really learn that way.
Interviewer: Okay, when you are learning math then usually the teacher will work a problem with you and then she’ll give you a problem to do on your own for you to show you how much you know?

Ashley (L): Yeah.

Ashley still believed that the teacher is the source of knowledge. Although Ashley said that there were times where the teacher should let students figure things out on their own, she provided an example where the teacher explained material first.

Two participants in the focus group also said that there are times where the teacher should let students figure out problems for themselves, but these students provided examples where the teacher first explained and then had students work problems. Chloe (H) said, ”Like after the teacher teaches you and then she says, ‘Work on it by yourself’ but when you don't listen to the thing then you get in trouble.” Jennifer (H) agreed with Chloe (H). Jennifer (H) said, “like she [pointing to Chloe (H)] said, the teacher first teaches us and then she gives us a worksheet and we have to work some problems that we learned around that lesson.”

Five students stated that the teacher should explain new content. When Chris (H) was asked what the teacher should do when teaching a new concept he said that his teacher should explain it first:

Interviewer: When you are learning something new for the first time should your teacher give you something and let you struggle with it for a little bit or should she like show you how to do it first?

Chris (H): Show you how to do it first.

Interviewer: Okay so she is going to show you how to do a problem...
Chris (H): And then she lets us try three or four of them to see if we do the right algorithm.

Chris still believed that the teacher should always explain material to students. Amy (M) also stated that if they were learning new concepts the teacher should explain things first.

Interviewer: Okay, now what about if you have something brand new you are doing in class?

Amy (M): She helps us.

Interviewer: Is that always the way it goes? She shows you and then you guys do it together that way?

Amy (M): Yeah, like if we have any questions then we ask her and she helps us.

Interviewer: Now is there ever a time where she gives you something and lets you try to figure it out?

Amy (M): Not that much, she usually helps us with everything.

Amy believed that her teacher should always explain mathematics. In the pre-interviews and focus group, one participant reported that the teacher should both explain content and let students figure problems out for themselves. Three participants, who were not referring to learning new content, said that the teacher should let them try problems first then explain what they were doing wrong. Three participants said that the teacher should always explain new material.

During the last focus group and post-interviews, three participants said that the teacher should let students solve problems before explaining how to do them--referring to practice problems and not new content. Seven participants in the focus group said that
the teacher should let them figure out problems first; however, only two of these participants were able to provide a specific example where they were learning new material. Three participants responded that the teacher should always explain first and then let them practice. Three participants said that they should be allowed to figure problems out for themselves and then the teacher should explain the problems. However, these participants then provided examples of the opposite scenario. Five participants believed that the teacher should always explain new content.

**Conclusion**

Participants initially believed that the teacher should always explain new material first but that the teacher should let students figure out practice problems and then only help the students after they got stuck on the problems. Kloosterman (1996) found that students believed that the teacher was the source of knowledge. On the pre-questionnaire this was also found to be true with approximately 48% of the participants agreeing with the statement that all knowledge comes from the teacher while 18% of the participants stated that they had no opinion. However, on the post-questionnaire only 30% of the participants agreed with this statement and 26% said they had no opinion. Kloosterman also found that participants thought that the role of the teacher was to provide answers. This was not true for this study, as 48% of the participants disagreed with this statement on the pre-questionnaire. This was also true for the post-questionnaire because approximately 44% of the participants disagreed with the statement “the role of the teacher is to provide answers to problems.” In the post-interviews and focus group the majority of participants believed that the teacher should at times let students figure out problems for themselves before explaining the problems.
This is promising for the implementation of integrated STEM education because according to Hmelo-Silver (2004) the teachers’ role is more as a facilitator and not the source of all knowledge in the classroom. Lerman (1989) stated that learning begins with the student and not the teacher and Underhill (1988) suggested that student’ beliefs influence what is considered acceptable classroom behavior. Also, according to McLeod (1989), student beliefs about the role of the teacher profoundly affect their ability to solve non-routine problems like MEAs. So when students believe that they can construct their own knowledge this becomes the acceptable behavior and students learn the critical thinking skills necessary to succeed in society.
References


1. The Modern day village approach – Implementing Check & Connect from a Kiwi/ Pacific Island perspective to address dropout.

2. Authors: Daniel Samuta and Afa Mui.

3. Cluster 5 RTLB (resource teachers for learning and behaviour)

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Abstract

Currently under the Positive Behaviour for Learning branch (PB4L) at the Ministry of Education in New Zealand. Check & Connect is an early intervention approach to address drop out. Developed in 1990 by Dr Sandra Christenson et.al, at the University of Minnesota, Daniel and Afa have implemented the Check & Connect intervention program to cater to the context of their students. Based in West Auckland, New Zealand and with 90% of their referrals having links to Maori and Pacific heritage. Daniel and Afa have developed a culturally responsive model they call “The Modern Day Village Approach” to encourage school completion. This is a story of their journey over the last two years of implementing the Check & Connect program in West Auckland.

*Please note only Daniel will be presenting.
Panel Submission: 1111

Title of the submission.  
What Does the Future Hold for Catholic Education?

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6. Abstract and/or full paper

Panel Description (75 words or less):

Catholic education is a longtime valued and valuable institution in the US and the world. As the demographics of the US change and Catholic communities increase in countries with rising inequality, Catholic schools have an obligation and the opportunity to become an educational system with a global dynamic that serves all members. This panel explores the role of the Catholic university and K-12 system of schools in increasingly multiethnic and multilingual communities amidst economic inequality and social injustice.
Professional Development School Experiences and Culturally Sustaining Teaching

Dr. Joe Peters
Dean of Education, Georgia College, Georgia, USA

Dr. Becky McMullen
Interim Dean of Education, Fort Valley State University, Georgia, USA
Abstract

Culturally sustaining pedagogy (Hill, 2012; Ladson-Billings, 2014; Paris, 2012; Paris & Alim, 2014), culturally responsive teaching (Gay, 2002), or culturally relevant pedagogy (Brown-Jeffy & Cooper, 2011; Ladson-Billings, 1995a), refer to the use of the students’ own cultural knowledge, experiences, learning preferences, and common cultural examples while developing curriculum, teaching, and managing behavior. Knowledge of learners and cultural awareness is a critical component of teaching (Shulman, 1986, 1987) and the goal is to maintain students’ cultural awareness while preparing them to function competently in the world outside of their own culture. Faculty must address issues of cultural knowledge and assist candidates in developing the skills and attitudes for culturally diverse students. Researchers use Siwatu’s culturally responsive scales (2007) to determine areas of focus when forming experiences for future teachers and to also look at if the professional development school experience helps to facilitate the preservice teachers’ understanding of culturally responsive teaching.
Gaps in the academic performance of African American, Native Hawaiian, Native American, Native Alaskan, Latino, and other minority groups is an important educational challenge (Hammond, Wilson, & Barros, 2011; Jones & Salinas, 2013; Kana’iaupuni, Ledward, & Jensen, 2010; Kashatok, 2011; Ladson-Billings, 1995b, 2005, 2013; Lohse, 2008). In order for these educational deficits to be effectively addressed, teachers need to have a deeper understanding of the students’ culture (Delpit, 1995; Hill, 2012; Howard, 2003; Richards, Brown, & Forde, 2006). Unfortunately, graduates do not always feel adequate to work with all groups (Cruz, Ellerbrook, Vasquez, & Howes, 2014). Today’s classrooms need teachers who are comfortable educating diverse students from various cultures and backgrounds (Gollnick & Chinn, 2002) and can effectively transit between the home and school cultures (Allen & Boykin, 1992; Kea, Campbell-Whatley, & Richards, 2006; Siwatu, 2007).

Ladson-Billings (2011) introduces the concept of cultural competence to describe teachers who work to find out about students’ backgrounds, cultures, and experiences and are able to “work back and forth between the lives of their students and the life of school.” (p. 40). Given the importance of cultural responsiveness (Ladson-Billings, 2011), it is important to explore ways for preservice teachers to better understand the importance of culture and assist candidates in developing the skills needed to bridge the home and school cultures.

The authors of this paper describe the use of Siwatu’s (2007) Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) and the Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) with students participating in a
professional development school experience. The goal was to see if faculty and students working within a diverse setting can better identify and improve their cultural competence and pedagogical practice consistent with Ladson-Billings (2011) definition of “helping students recognize and honor their own cultural beliefs and practices while acquiring access the wider culture, where they have the chance of improving their socioeconomic status and making informed decisions about the lives they wish to lead.” (p. 40).

**Statement of the Problem**

Georgia College is the State of Georgia’s designated public liberal arts university. Although faculty and students are involved with many high-impact educational practices consistent with the goals of *Liberal Education and America’s Promise* (Kuh, 2008), most of our students do not match the local diversity or have the specific experiences to further develop their culturally sustaining teaching. Their work in an urban school environment can lead to cultural misunderstandings (Mason, 1999; Schaffer, Gleich-Bobe, & Copich, 2014).

Given the lack of black teachers (9.3% nationwide) and the less than two percent of black male teachers nationwide (Toldson, 2013) it is imperative for a diverse population, such as the one where the researchers reside, to have teachers that are able to understand K-12 students’ cultural beliefs and children make the transition to the school environment without losing their own cultural attributes and identity. To better develop cultural competence and culturally sustaining teaching practices, the College of Education developed a professional development school partnership with the local school district. It is believed that this relationship would be mutually beneficial in
improving the educational achievement of the local K-12 students. It was also hoped that the preservice teachers would benefit through further development of their cultural awareness and teaching practice as identified and further measured by the CRTOE and CRTSE scales.

**Background**

*What does it mean to be “culturally responsive” or use a “culturally sustaining pedagogy?”*

Ladson-Billings (1995a) discusses the term culturally responsive as more than a simple accommodation of students, but rather a more dynamic or synergistic relationship between home/community culture and school culture (p. 467). They must practice a cultural approach to learning and teaching (Banks & McGee Banks, 2013). When studying culturally-responsive instruction in classrooms, Ladson-Billings found collective efforts being used to encourage academic and cultural excellence where the culture outside of the school was reflected in how students assisted and encouraged each other (Ladson-Billings, 1994, 1995b).

Ladson-Billings (1995a) also introduces the theoretical model of a “culturally relevant pedagogy” (p. 469), noting the positive influence this approach has on achievement. Additionally, Ladson-Billings (1992) describes how culturally responsive teachers develop intellectual, social, emotional, and political learning by "using cultural referents to impart knowledge, skills, and attitudes" (p. 382). Ladson-Billings’ (1995a) and Schmeichel’s (2012) research includes findings on the importance of a teacher exploring his or her own conception of knowledge; including the relationship of the knowledge to the curriculum and the assessment of the knowledge. Thinking about their
own conceptions and pedagogy is an important first step in understanding ways to
reach out to culturally-diverse groups. Osborne (1996), in a synthesis of ethnographies,
notes some examples of strong confirming evidence that culturally relevant teachers
need not come from the same ethnic minority group (p. 289-290).

Paris (2012), questioning the earlier use of the terms “culturally relevant” and
“culturally responsive,” builds on earlier research and provides the stance of “culturally
sustaining pedagogy.” This approach “seeks to perpetuate and foster—to sustain—
linguistic, literate, and cultural pluralism as part of the democratic project of schooling”
(p. 93). In other words, instead of a “tolerance” of culture, there needs to be an
educational program for students where pedagogy is more than “responsive of,” or
“relevant to,” cultural experiences and practices— “it requires that they support young
people in sustaining the cultural and linguistic competence of their communities while
simultaneously offering access to dominant cultural competence” (p. 95). The goal is for
a more fluid approach to pedagogy that supports the pluralistic nature of the students
and the evolving identity and cultural practice (Bristol, 2015; Ladson-Billings, 2014;

**Field Experiences and Professional Development Schools**

*Is simple exposure enough to foster culturally sustaining pedagogy with teaching
candidates?*

Ladson-Billings (1995c) discusses how field experiences have become regulated
to include diverse experiences but these experiences do not always produce beneficial
results and can actually widen cultural gaps. Professional Development School (PDS)
experiences can however, provide an immersion experience that Ladson-Billings
Richmond (2017, p. 7) in an article on community partnerships notes that “it is critical for those preparing to become teachers to understand what surrounds and drives the young people they will teach…” Zeichner (2010) also suggests that there needs to be a better interplay between academic, practitioner, and community expertise.

Chou (2007) provides an outline of potential the benefits of a PDS when working with diverse populations, noting that the experience provides for a variety of instructional strategies. The PDS experience also includes the needed time to debrief and reflect as a way to counter prejudices. Since cultural approaches to pedagogy may not be conceptualized the same by the teachers, faculty, and teaching candidates (Young, 2010), it was important to have a set of common constructs to work from as faculty address issues of cultural knowledge and assist future teachers in developing the skills and attitudes necessary to work with culturally diverse students. The researchers felt that Siwatu’s culturally responsive scales (2007) could help identify areas of common understanding and be a tool for further understanding and fostering of culturally sustaining pedagogy.

**Research Questions**

Given the importance of culturally sustaining teaching and cultural competency, the researchers are exploring the use of the CRTOE and CRTSE scales within a professional development school (PDS) experience. The two questions that researchers are seeking to answer are:

1. Can the CRTOE and CRTSE scales be used to identify areas of need related to cultural awareness with preservice teachers and
2. Will the PDS experience show an improvement in cultural competency as measured by the CRTOE and CRTSE scales?

Methodology

The study was designed for the researchers to look at initial data for areas of need in terms of the areas indicated on Siwatu’s (2007) culturally responsive scales. They also looked for how the overall experience would made a difference with respect to areas related to culturally sustaining pedagogy.

Subjects and School Setting

The subjects were intact cohorts of college students in the undergraduate degree programs in early childhood (grades P-5), middle grades (grades 4-8), and special education general curriculum (grades P-12), as well as masters of arts in teaching students preparing for various subject matter secondary school teaching positions (grades 6-12). There were 110 respondents and two students who did not fill out the informed consent and failed to include an id number on the survey so their information could be matched pre-post. The subjects in the undergraduate programs are primarily from outside the college’s region because of the competitive admission standards to be accepted to the College. The master’s students are generally local and will seek a position on the local schools.

The school district is a small, rural district with a student population racial makeup similar to the county’s population and all schools are identified as Title 1. The student enrollment is 65% black, 28% white, 1% Asian, 2% Hispanic, and 4% multi-racial (Baldwin County Schools, 2014). Only one of the four elementary schools was used and it is identified as a “focus school” due to persistent low achievement. There
are two professors in residence from the college that assist in the schools. One is supporting the superintendent’s reading/literacy programs and the other is facilitating districtwide support in the area of Positive Behavior Interventions and Supports (PBIS).

The Professional Development School relationship is consistent with the National Association for Professional Development Schools (NAPDS, 2008) and includes essentials such as a formal articulation agreement, a working governance structure, and collaborative work among all participants. The balance of power, referred to by Breault (2014) does not lie with either entity and all work is collaboratively in the interest of promoting P-12 student achievement and enhanced teacher candidate preparation.

**Measures**

The variables are the items from Siwatu’s (2007) culturally responsive scales and include 26 items from the Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE). This instrument allows participants to rate, from 0 (entirely uncertain) to 100 (entirely certain), the probability that the behaviors listed will lead to the outcomes that follow the behaviors. Two examples are “A positive teacher-student relationship [outcome] can be established by building a sense of trust in my students” [behavior] and “Incorporating a variety of teaching methods [behavior] will help my students to be successful [outcome].” [See Appendix A],

Another 40 items are from the Culturally Responsive Teaching Self-Efficacy Scale (CRTSE). With this instrument, participants rate from 0 (no ability) to 100 (highest ability) how confident they are in their abilities such as “Identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture” and “Implement strategies to minimize the effects of the mismatch between my
students’ home culture and the school culture” [See Appendix B]. These instruments are seen as valid and reliable.

The surveys were administered during class periods at the elementary, middle and high school at the beginning and end of a semester. The pre-post data was matched through the use of student college id numbers.

**Procedures**

Similar to Frye, Button, Kelly, and Button (2010), researchers administered a pre and post survey during the fall 2015 semester. Consistent with the research questions, the study has two parts. The first part was to survey all students in the cohorts and then look at the overall pre-data to see which areas faculty should focus on that term and in the future. Second, re-administer the survey at the end of the semester and look at if there were any pre-post differences.

For the first part simple averages were used to look for areas of focus. For the pre-post analysis, researchers used the Wilcoxon Signed Rank Test (http://vassarstats.net/) to compare pre-post differences of the repeated measures. The Wilcoxon Signed Rank Test is a nonparametric test for the significance of the difference between distributions of two non-independent samples involving repeated measures or matched pairs (Lowery, 2015).

**Human Subjects Protection.** Georgia College Institutional Review Board (IRB) approval was provided for this study. All data collected was coded with students Georgia College identification number so that pre-post information could be matched. A copy of the informed consent is located in Appendix C.
Results

The pre-post comparison yielded a significant difference with the Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) with a two-tailed p-value of <0.01. The pre-post comparison of the Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) was also significant with a p-value of <0.01.

Individual item averages for the pre-data included the following areas that the researchers identified as less than 80% for the CRTOE and less than 70% for the CRTSE and needing further emphasis during courses and field placements.

- Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) [Measures the probability that the behaviors listed will lead to the outcomes that follow the behaviors]
  - Item 5 (pretest average = 76.59): Acknowledging the ways that the school culture is different from my students’ home culture [behavior] will minimize the likelihood of discipline problems [outcome].
  - Item 14 (pretest average = 75.37): Changing the structure of the classroom so that it is compatible with my students’ home culture [behavior] will increase their motivation to come to class [outcome].
  - Item 20 (pretest average = 76.41): The frequency that students’ abilities are misdiagnosed will decrease [outcome] when their standardized test scores are interpreted with caution [behavior].
  - Item 21 (pretest average = 70.17): Encouraging students to use their native language [behavior] will help to maintain students’ cultural identity [outcome].
• Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) [Measures how confident participants are in their abilities]
  
  o Item 6 (pretest average = 63.54): Implement strategies to minimize the effects of the mismatch between my students' home culture and the school culture.
  
  o Item 8 (pretest average = 68.66): Obtain information about my students' home life.
  
  o Item 17 (pretest average = 62.07): Teach students about their cultures' contributions to science.
  
  o Item 18 (pretest average = 56.83): Greet English Language Learners with a phrase in their native language.
  
  o Item 22 (pretest average = 57.56): Praise English Language Learners for their accomplishments using a phrase in their native language.
  
  o Item 23 (pretest average = 68.41): Identify ways that standardized tests may be biased towards linguistically diverse students.
  
  o Item 29 (pretest average = 64.02): Design a lesson that shows how other cultural groups have made use of mathematics.
  
  o Item 30 (pretest average = 65.85): Model classroom tasks to enhance English Language Learners' understanding.
  
  o Item 31 (pretest average = 57.80): Communicate with the parents of English Language Learners regarding their child's achievement.
  
  o Item 33 (pretest average = 68.41): Identify ways that standardized tests may be biased towards culturally diverse students.
There were a few items where the pretest to posttest scores showed very little gains and one where were the pretest was actually higher than the posttest score. These include:

- **Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE)**
  - Item 3 (pre average = 92.93, post average = 94.02, difference = +1.10):
    Students will be successful when instruction is adapted to meet their needs.
  - Item 12 (pre average = 83.98, post average = 85.49, difference = +1.51):
    Conveying the message that parents are an important part of the classroom will increase parent participation.
  - Item 20 (pre average = 76.41, post average = 77.44, difference = +1.02): The frequency that students’ abilities are misdiagnosed will decrease when their standardized test scores are interpreted with caution.

- **Culturally Responsive Teaching Self-Efficacy Scale (CRTSE)**
  - Item 4 (pre average = 77.80, post average = 78.81, difference = +0.90):
    Determine whether my students feel comfortable competing with other students.
  - Item 9 (pre average = 89.63, post average = 90.54, difference = +0.90): Build a sense of trust in my students.
  - Item 13 (pre average = 73.29, post average = 74.15, difference = +0.85): Use my students’ cultural background to help make learning meaningful.
  - Item 25 (pre average = 77.32, post average = 78.17, difference = +0.85):
    Structure parent-teacher conferences so that the meeting is not intimidating for parents.
- Item 28 (pre average = 74.71, post average = 74.68, difference = -0.02):
  Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes.

- Item 38 (pre average = 88.66, post average = 89.20, difference = +0.51): Use the interests of my students to make learning meaningful for them.

The items that included the largest gains were as follows:

- Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE)
  - Item 6 (pre average = 82.85, post average = 91.57, difference = +8.73):
    Understanding the communication preferences of my students will decrease the likelihood of student-teacher communication problems.
  - Item 9 (pre average = 82.07, post average = 90.73, difference = +8.66):
    Revising instructional material to include a better representation of the students’ cultural group will foster positive self-images.
  - Item 21 (pre average = 70.17, post average = 80.98, difference = +10.80):
    Encouraging students to use their native language will help to maintain students’ cultural identity.

- Culturally Responsive Teaching Self-Efficacy Scale (CRTSE)
  - Item 2 (pre average = 75.61, post average = 83.90, difference = +8.29):
    Obtain information about my students’ academic strengths.
  - Item 8 (pre average = 68.66, post average = 78.46, difference = +9.80):
    Obtain information about my students’ home life.
  - Item 14 (pre average = 77.07, post average = 85.98, difference = +8.90): Use my students’ prior knowledge to help them make sense of new information.
Discussion

Looking at the highly significant difference in the pre-post comparison data for both the Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) and Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) suggested to the researchers that the professional development school experience was overall a positive experience in helping students better understand and teach in diverse classrooms. The teaching candidates’ knowledge about culturally sustaining teaching and their ability to prepare and teach diverse students as measured by the Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) indicated they were able to work through their own bias and better understand the cultural background of the students. This translates to a better understanding of student needs and ways to design learning activities based on those needs. It also reduces misunderstandings that can impact classroom instructional time and teacher-student relationships.
Most respondents showed gains in the post-data. However, it was interesting to note that there were some items where teaching candidates showed only slight gains and one where they actually went down slightly from the pre- to post-experience. It may be due to the fact that they were more confident about an area or felt they were more knowledgeable until they were in the actual classroom and had to apply their knowledge and skills.

Limitations

This study is limited to a sample of convenience of students involved in coursework at local schools as part of a professional development school initiative. It is also limited to one predominant culture in a small rural Southern community. It should not be generalized to all cultures and communities without further investigation with large, randomized studies.

Implications for Further Study

Based on the initial data, researchers believe it is important to complete a qualitative analysis of the preservice teachers' professional development school experiences and use of Siwatu’s (2007) culturally responsive scales as a tool to assist in the development of culturally sustaining pedagogy. An emphasis should be consistent with Siwatu’s (2011) study of preservice teachers’ culturally responsive teaching self-efficacy beliefs and the disparities with preservice teachers in terms of culturally sustaining pedagogy.

It is also important to use Siwatu’s (2007) culturally responsive scales in other professional development school experiences to see if there are similar results. This
study was primarily based on the African American populations in rural central Georgia but needs to be explored in other populations.

Another implication is that specific activities for students need to be brought into courses to help identify candidates’ efficacy toward diversity and better understand the cultures that they will be working with in their future classrooms. McMullen, R. (n.d.) suggests activities such as a neighborhood map, classroom diversity audit, ethnographic interview, autobiographical exploration, and a families’ project to facilitate cultural experiences (see appendix D).

**Conclusions**

This study was an important first step in looking at the preparation of candidates for teaching in diverse classrooms. The Professional Development School experience helps to provide the environment for candidates to question their own biases and practice culturally sustaining teaching strategies. The Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE) and Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) are useful tools in identifying areas of need so faculty can arrange appropriate learning experiences at the schools.
References


McMullen, R. (n.d.). Preparing teachers to meet the challenges of teaching today’s diverse populations. Milledgeville, GA: Author


Appendix A: Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE)

GCID: ____________

Please rate, from 0 (entirely uncertain) to 100 (entirely certain), the probability that the behaviors listed will lead to the outcomes that follow the behaviors:

1. ____ A positive teacher-student relationship can be established by building a sense of trust in my students.

2. ____ Incorporating a variety of teaching methods will help my students to be successful.

3. ____ Students will be successful when instruction is adapted to meet their needs.

4. ____ Developing a community of learners when my class consists of students from diverse cultural backgrounds will promote positive interactions between students.

5. ____ Acknowledging the ways that the school culture is different from my students’ home culture will minimize the likelihood of discipline problems.

6. ____ Understanding the communication preferences of my students will decrease the likelihood of student-teacher communication problems.

7. ____ Connecting my students’ prior knowledge with new incoming information will lead to deeper learning.

8. ____ Matching instruction to the students’ learning preferences will enhance their learning.

9. ____ Revising instructional material to include a better representation of the students’ cultural group will foster positive self-images.

10. ____ Providing English Language Learners with visual aids will enhance their understanding of assignments.

11. ____ Students will develop an appreciation for their culture when they are taught about the contributions their culture has made over time.

12. ____ Conveying the message that parents are an important part of the classroom will increase parent participation.

13. ____ The likelihood of student-teacher misunderstandings decreases when my students’ cultural background is understood.

14. ____ Changing the structure of the classroom so that it is compatible with my
students’ home culture will increase their motivation to come to class.

15. ____ Establishing positive home-school relations will increase parental involvement.

16. ____ Student attendance will increase when a personal relationship between the teacher and students has been developed.

17. ____ Assessing student learning using a variety of assessment procedures will provide a better picture of what they have learned.

18. ____ Using my students’ interests when designing instruction will increase their motivation to learn.

19. ____ Simplifying the language used during the presentation will enhance English Language Learners’ comprehension of the lesson.

20. ____ The frequency that students’ abilities are misdiagnosed will decrease when their standardized test scores are interpreted with caution.

21. ____ Encouraging students to use their native language will help to maintain students’ cultural identity.

22. ____ Students’ self-esteem can be enhanced when their cultural background is valued by the teacher.

23. ____ Helping students from diverse cultural backgrounds succeed in school will increase their confidence in their academic ability.

24. ____ Students’ academic achievement will increase when they are provided with unbiased access to the necessary learning resources.

25. ____ Using culturally familiar examples will make learning new concepts easier.

26. ____ When students see themselves in the pictures that are displayed in the classroom, they develop a positive self-identity.
Appendix B: Culturally Responsive Teaching Self-Efficacy Scale (CRTSE)

GCID: ____________

Please rate, from 0 (no ability) to 100 (highest ability) how confident you are in your ability to do the following:

1. ___ Adapt instruction to meet the needs of my students.
2. ___ Obtain information about my students’ academic strengths.
3. ___ Determine whether my students like to work alone or in a group.
4. ___ Determine whether my students feel comfortable competing with other students.
5. ___ Identify ways that the school culture (e.g., values, norms, and practices) is different from my students’ home culture.
6. ___ Implement strategies to minimize the effects of the mismatch between my students’ home culture and the school culture.
7. ___ Assess student learning using various types of assessments.
8. ___ Obtain information about my students’ home life.
9. ___ Build a sense of trust in my students.
10. ___ Establish positive home-school relations.
11. ___ Use a variety of teaching methods.
12. ___ Develop a community of learners when my class consists of students from diverse backgrounds.
13. ___ Use my students’ cultural background to help make learning meaningful.
14. ___ Use my students’ prior knowledge to help them make sense of new information.
15. ___ Identify ways how students communicate at home may differ from the school norms.
16. ___ Obtain information about my students’ cultural background.
17. ___ Teach students about their cultures’ contributions to science.
18. ___ Greet English Language Learners with a phrase in their native language.
19. ___ Design a classroom environment using displays that reflects a variety of cultures.

20. ___ Develop a personal relationship with my students.

21. ___ Obtain information about my students’ academic weaknesses.

22. ___ Praise English Language Learners for their accomplishments using a phrase in their native language.

23. ___ Identify ways that standardized tests may be biased towards linguistically diverse students.

24. ___ Communicate with parents regarding their child’s educational progress.

25. ___ Structure parent-teacher conferences so that the meeting is not intimidating for parents.

26. ___ Help students to develop positive relationships with their classmates.

27. ___ Revise instructional material to include a better representation of cultural groups.

28. ___ Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes.

29. ___ Design a lesson that shows how other cultural groups have made use of mathematics.

30. ___ Model classroom tasks to enhance English Language Learners’ understanding.

31. ___ Communicate with the parents of English Language Learners regarding their child’s achievement.

32. ___ Help students feel like important members of the classroom.

33. ___ Identify ways that standardized tests may be biased towards culturally diverse students.

34. ___ Use a learning preference inventory to gather data about how my students like to learn.

35. ___ Use examples that are familiar to students from diverse cultural backgrounds.

36. ___ Explain new concepts using examples that are taken from my students’ everyday lives.
37. ___ Obtain information regarding my students’ academic interests.

38. ___ Use the interests of my students to make learning meaningful for them.

39. ___ Implement cooperative learning activities for those students who like to work in groups.

40. ___ Design instruction that matches my students’ developmental needs.
Appendix C

INFORMED CONSENT
Professional Development School Experiences

I, _________________________________________________, agree to participate in the research Professional Development School (PDS) Experiences and Culturally Sustaining Teaching, which is being conducted by Drs. Becky McMullen and Drs. Darlene and Joe Peters, who can be reached at joseph.peters@gcsu.edu, or 478-445-2518. I understand that my participation is voluntary; I can withdraw my consent at any time. If I withdraw my consent, my data will not be used as part of the study and will be destroyed.

The following points have been explained to me:

1. The purpose of this study is to see the effects of Professional Development School experiences on Culturally Sustaining Teaching.
2. The procedures are as follows: you will be asked to complete a pre- and post-survey.
3. Your name will not be connected to your data. Therefore, the information gathered will be confidential. We will ask for your GCID to be used to match the pre-post forms.
4. You will be asked to sign two identical consent forms. You must return one form to the investigator before the study begins, and you may keep the other consent form for your records.
5. You may find that some questions are invasive or personal. If you become uncomfortable answering any questions, you may cease participation at that time.
6. This research project is being conducted because of its potential benefits, either to individuals or to humans in general. The expected benefits of this study include a better understanding of how offering college courses in a school district setting could help with awareness of cultural issues and enhanced culturally responsive teaching.
7. You are not likely to experience physical, psychological, social, or legal risks beyond those ordinarily encountered in daily life or during the performance of routine examinations or tests by participating in this study.
8. Your individual responses will be confidential and will not be released in any individually identifiable form without your prior consent unless required by law.
9. The investigator will answer any further questions about the research should you have them now or in the future (see above contact information).
10. In addition to the above, further information, including a full explanation of the purpose of this research, will be provided at the completion of the research project on request.
11. By signing and returning this form, you are acknowledging that you are 18 years of age or older.
Research at Georgia College involving human participants is carried out under the oversight of the Institutional Review Board. Address questions or problems regarding these activities to Dr. Tsu-Ming Chiang, GC IRB Chair, CBX 090, GC, email: irb@gcsu.edu; phone: (478) 445-0863
Appendix D

**Neighborhood Map**
Using class readings and discussions as guides, candidates prepare neighborhood maps for the school where they are placed. The maps include keys that explain what they indicate. Along with the maps, there are reflections that address specific ways of learning about the families of children in their classrooms by visiting their neighborhoods. These reflections include clear and specific citations from articles read during the semester. These citations and the references should follow the guidelines of the style manual of the American Psychological Association.

**Classroom Diversity Audit**
This two-part assignment is conducted in coordination with field placement. When teacher candidates strive to interweave multicultural/anti-bias curricula, content, assessments, and instructional delivery in their classrooms, students’ academic performance and the degree of self-efficacy and confidence, they experience growth. This assignment is designed to examine the degree to which their field-placement classrooms are multicultural and anti-biased. In order to assess this project, candidates must reflect on each of the following categories.

**Part A:** This category requires candidates to write a 3-4 page paper on the components of teaching with diversity that they see present or absent in their classrooms. They should provide evidence of specific examples from the classroom and discuss the importance of such components by citing Byrnes and Kiger (2006), and other ancillary materials.

**Part B:**
This category requires candidates to use format of choice – an essay, a letter informing parents of changes in your classroom, PowerPoint to the PTA, a whole-class lesson designed for elementary students, a “how to booklet” on becoming more anti-biased/multicultural in the classroom, or an annotated exhibit – candidates should describe how they would go about remediying those aspects of an anti-biased/multicultural education that seem to be weak or lacking from their classrooms.

Regardless of the selected-classroom presentations, the format of choice should be persuasive, thoughtful, mechanically correct, and touch on all four components of the “teaching with diversity checklist.” Additionally, it should touch on the benefits of anti-bias/multicultural curriculum, content, delivery, and assessment.

**Ethnographic Interview**
**Context and Analysis of Children’s Language**
Teacher candidates conduct an ethnographic interview of a student in her/his placement, following guidelines distributed separately in class. This student should be one with language differences (e.g., dialect or kids who are linguistically different).
Candidates should consider carefully, from readings and from class discussion, how an ethnographic interview differs from other interviews. Using an audiotape to record the actual interview, candidates discuss this interaction through the views of their students’ lenses rather than through their own. They are instructed to write notes about their interactions with the student as well as the language that students’ use. Teacher candidates are required to make notes about particular words, silences, or gestures.

**Autobiographical Exploration**
Teacher candidates are required to choose five identity sources (e.g., race, ability/disability, ethnicity/nationality, social class, sex/gender, health, age, geographic region, sexuality, religion, social status, language) for which they will write a 4-6 page paper exploring how their past experiences shaped their current understandings of self and their future role as an educator. For example, they should ask the following personal questions as writing prompts:

1. What did I learn about (insert identity source here) growing up and how did I learn it? Were my beliefs biased? They should provide a rationale.
2. When I think of (insert identity source here) today, this is what I believe. Have I changed? What contributed to that change?

**Expanded Horizon**
Teacher candidates are required to complete three separate assignments. They choose three items from the lists below, one from each category. For each of these, they choose activities/events that will challenge them. The best choices are ones that make them feel some level of discomfort because the event/experience is new. Reflecting on that discomfort is where we want students to experience the most growth. Note the following activities in which they are instructed to engage.

Watch a film, visit a facility, read a book, and attend an event fully. Briefly describe what you did and answer the following questions in a 2-3 page paper:
- What was the purpose of the film, book, field trip, or event?
- What life experiences have you had that allow you to make connections to or find common ground with the target population/characters/content/presenters?
- What about the film, book, or event challenged your thinking/goals/values/beliefs?
- What new insights/understandings did you gain? How will you use this in teaching?

See choices below:
- **FILMS or BOOKS**
  - Milk
  - Precious
  - The Garden
  - Crash
  - Brokeback Mountain
  - Rent
  - American Violet
  - The Providence Effect
• BOOKS
  o *The Lottery* by Patricia Wood
  o *The Curious Incident of the Dog in the Nighttime* by Mark Haddon
  o *The Glass Castle* by Jeannette Walls
  o *The Short Bus* by Jonathan Mooney
  o *The Diving Bell and the Butterfly* by Jean-Dominique Bauby
  o *Out of My Mind* by Sharon M. Draper
  o *The Spirit Catches You and You Fall Down: A Hmong Child, Her American Doctors, and the Collision of Two Cultures* by Anne Fadiman

• FIELD TRIPS TOURS
  o ESOL Classrooms/Centers
  o Central State Hospital or Georgia Regional Hospital
  o GA Academy for the Blind
  o John Milledge Academy
  o Hancock County Schools
  o Georgia Military Academy
  o Hair Salons
  o Interview a patient who is terminally ill

• COMMUNITY ACTIVITIES/EVENTS
  o Parents, Families, & Friends of Lesbians and Gays (PFLAG) meeting in Macon
  o Volunteer at Rescue Mission, local food pantry, Salvation Army, Meals on Wheels,
  o Literacy Volunteers, or any other community service for a minimum of two hours
  o PRIDE Alliance meeting at GCSU
  o Attend an event sponsored by Best Buddies for a minimum of two hours
  o Attend a religious service other than the one in which you are familiar (need church bulletin as an artifact)
  o Macon NAACP Youth & College Division Meetings or NAACP general meetings

**Family’s Project**
The purpose of this project is for pre-service teachers to think about building partnerships and working relationships with parents and families of P-12 students. They learn to emerge communication and collaboration skills while seeking to understand the parent’s perspective of his/her child, the child’s experiences in school, and the parent’s experiences advocating for their child.

They spend individual time with a student during school hours and then meet with the student’s parents, to discuss prescribed talking points. One of the goals of this assignment is to focus on listening to what parents say as they share their ideas, options, dreams, and goals for their child’s future.

Additionally, this project challenges students to consider their own biases and examine their own attitudes about working with parents and families. The goal is students to gain
greater understanding and appreciation for the student’s strengths and struggles when trying to see them from the family’s point of view.
My Digital Voyage: An Interactive Computer-Based Curriculum on Internet Safety and Ethics for Elementary Technology Learners

Description: *My Digital Voyage* was created for students in grades 4 and 5 to use with teachers and family members to spark relevant and timely discussions about being ethical and responsible digital citizens in today’s perpetually connected online society. We will demonstrate the use of the *My Digital Voyage* Internet safety and ethics program, discuss the educational foundations of the development, and share future research plans to evaluate the program’s effectiveness.

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Abstract

Digital technology and Internet access in U.S. schools continue to grow, as evidenced by increased 1-to-1 computing and BYOD or bring-your-own-device case studies. Digital tools enable greater collaboration and creativity, but also increase exposure to Internet misuse. Schools recognize the need for online ethical and responsible behavior strategies not just for children, but also for the adults who support and integrate these approaches into existing policies and practices. An online learning module series called My Digital Voyage was created with the intent to provide a computer-based digital citizenship curriculum for children in grades 4 and 5. Using a mixed-methods design, we will examine students’ and adults’ perceptions of Internet safety and ethics, and analyze feedback to improve the modules for future use.

Keywords: technology-based learning, digital citizenship, Internet safety, cyber ethics

The rapid adoption of digital-communication technologies has created many noteworthy positive changes in our society (David-Ferdon & Hertz, 2009; U.S. Department of Health and Human Services, 2010). Digital tools enable greater collaboration, creativity, and exploration. However, these same tools have also lead to increased exposure to and engagement in Internet misuse, such as online piracy, copyright infringement, plagiarism, impersonation, and cyber victimization to name a few. Schools are now recognizing the need for online ethical and responsible behavior strategies not just for children, but also for the teachers and parents who support and integrate these approaches into existing policies and practices.

Purpose and Objectives

The purpose of this pilot study is to examine the effects of a computer-based, digital citizenship curriculum for students in grades 4 and 5, called My Digital Voyage. This specific age group was targeted because almost half of U.S. children in grades 4–8 are victimized online and the average cyberbully starts at age 9 (i-SAFE, 2004). Our goal was to create a useful learning tool for elementary school children before they enter middle school, where various physical, social, psychological, academic, and behavior issues are often manifested more prominently.
Digital citizenship incorporates the basic tenets of digital ethics, etiquette, and character development that guide technology users toward making ethical decisions, choosing appropriate actions in an online community, and understanding that all actions have consequences, whether observed or not. Decisions are a result of core values and ethics (Enomoto & Kramer, 2007). Therefore, the main objective of the *My Digital Voyage* program is to purposefully and explicitly teach young technology users about values like respect, responsibility, and kindness to increase their ethical decision-making capacity online.

The *My Digital Voyage* curriculum is grounded in character education and delivered in cartoon form through learning activities and age-appropriate content assessments. Teacher and parent support and participation to cultivate Internet-safe climates both at home and in school are also highly emphasized. In this study, we will examine both students’ and teachers’ perceptions of Internet safety and ethics to understand the usefulness of the *My Digital Voyage* program. Data for this study have yet to be collected. However, the goal is to complete data collection and analysis prior to the 2017 HICE conference. The main research question is as follows: To what extent will an online digital citizenship curriculum that encourages adult participation influence students’ and adults’ perceptions of Internet safety and ethics?

As a result of their participation in this session, participants will gain an understanding of the relationships between digital citizenship, ethical decision-making, and online empathy. They will also hear about the results from the pilot study. In addition, participants will have the opportunity to provide their thoughts on how to improve our research methodology and instruments. Success will be evident through the conversations that we have with participants.
Their feedback and comments regarding the computer-based program and research instruments will be invaluable in our future program design, development, and research.

**Perspective or theoretical framework**

Digital citizenship and Internet safety education are still relatively new concepts with few empirically researched *best practices*. Therefore, the content of *My Digital Voyage* was based on recurring themes and ideas from well-cited digital citizenship and Internet safety research and curricula (Patchin & Hinduja, 2012; Willard, 2002; Ribble & Bailey, 2007). The *Six Pillars of Character: trustworthiness, respect, responsibility, fairness, caring, and citizenship* (Josephson, 2015) were also interwoven into the scenarios and ethical dilemmas within each module.

Epstein’s (1995) family-school-community partnerships theory influenced the emphasis on adult participation in this educational effort. Based on Bronfenbrenner’s (1979) ecological theory, Epstein found that school-family-community partnerships are most successful when people from various groups share common interests, goals, and responsibilities to create better opportunities for children. Our key beliefs are that children should be allowed to make mistakes in safe, supported school and home environments, and they should not have to face Internet safety challenges alone. Knowing the kinds of Internet-related problems that exist are important so that parents and teachers can better assist children if problematic situations arise.

Internet safety and digital citizenship education require a shared responsibility between parents and educators, and an interactive digital curriculum that can be used as a platform to start critical dialogues between children and adults could be a solution that brings Internet safety and ethics explicitly into classrooms and homes. Teachers can incorporate this curriculum into their existing class practices and parents can use these activities at home when talking about safe and ethical Internet use. The module activities align to select English Language Arts & Literacy in
Research methods

Pilot Study

This project includes a pilot trial of the My Digital Voyage prototype, which includes the use of a structure-and-sequence teaching guide, and survey/interview instruments. The teaching guide, written for parents and educators, explains the topics to be discussed at different points throughout the module series. Educators can use the guide for suggestions to implement the online learning modules into existing classroom practices.

Participants

A convenient sample of 20 grade 4 and 5 students (five males and five females in each grade) and four to six educators will test the prototype, teaching guide, and survey/interview instruments. Their initial Internet safety and ethics knowledge will be collected through a pre-survey via SurveyMonkey, and after testing the modules, their perspectives will be gathered in a post-survey. Feedback and additional comments will then be collected in small, student focus groups and semi-structured interviews with each teacher participant. After the pilot trial, we will calculate Cronbach’s alpha to test the reliability of the pre- and post-survey instruments for both student and educator versions. Appropriate modifications will then be made to the modules, teaching guide, and instruments prior to phase one of data collection.

Data Analysis

We will use a mixed-methods design. Two versions of a 5-point Likert-type scale survey will be used for the pre- and post-tests before and after program implementation: the Student Internet
Safety and Ethics Survey and the Educator Internet Safety and Ethics Survey. Repeated Measures ANOVA will be used to analyze pre- and post-survey data. We will also conduct follow-up interviews and use thematic analyses to analyze the qualitative data.

Results or expectations

As of this writing, we do not yet have complete results. However, we do expect to have the pilot survey and interview/focus group data from the 20 grade 4 and 5 students and the four to six educators analyzed prior to the conference.

Preliminary results: From an informal talk-aloud session with elementary school teachers who were provided a preview of the computer-based program, they (a) expressed strong opinions on the length of time between information delivery (e.g., “The teacher character talked too long.”); (b) provided suggestions for additional interactivity (e.g., “Different students will think different things, so could we be able to click on different characters to reveal ideas?”); and (c) expressed a desire for a learning management system interface so they could see learning across all students at a glance. Additionally, the teachers recognized that Internet safety and digital citizenship education should be a priority of both teachers and family members, and expressed excitement to see how this program could work in their classrooms.

We have found through literature, as well as our own experiences as research-practitioners, that teachers cannot do this work alone. Parents and community members are just as important in engaging children in ongoing Internet safety discussions, modeling appropriate behaviors, and guiding youth through online exploration and discoveries (Baum, 2005). Our future studies will include the experiences and perspectives of parents and community members using the My Digital Voyage series outside of school contexts and environments.

Educational or scientific importance
Empirical studies on computer-based digital citizenship, Internet safety, and ethics curriculum are sparse. More research is needed to understand the explicit teaching of decision-making, empathy, and self-regulation. This investigation could address gaps in research and could provide relevant insights into the specific roles and responsibilities of adults when it comes to digital citizenship education.

References


Title of the submission: English Curriculum Reform in Oman in the Context of Globalization

Topic area: Curriculum, Research, and Development

Presentation format: Paper session

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Abstract

Education is considered a necessary component of development in responding to globalization and achieving economic growth and social development. With globalization challenges, it was essential to reform the educational system. Since a hot debate over the issue of the influence of globalization on education and curriculum reform is taking place currently in Oman, an attempt is made by this preliminary study to explore some aspects of this power. This paper aims at investigating how the post basic English textbooks are reformed in the context of globalization. Particularly, it aims at exploring how the issue and challenges of economic and technological globalization are addressed in the English textbooks of post basic education. It also seeks to find out more about the extent to which the Omani teachers are aware of the different challenges of globalization. Two methods were used to collect data, and they are; post basic English textbook analysis and an interview questions which were addressed to some teachers of post-basic education teachers in Oman. Data analysis revealed that the issues of economic and technological challenges of globalization are adequately dealt with in the post basic English textbooks. It also showed that there is a sort of a gap between the goals to be achieved by the Ministry of Education in Oman concerning globalization challenges and the teachers' awareness of those challenges. Therefore, the study highly recommended having a constructive conversation between the Ministry of Education and the teachers of post basic education to bridging that gap. It also suggested raising teachers' awareness of different aspects of globalization concerning curriculum development and reform.
TITLE: Lived Experiences of Teachers Transitioning To Distance Education In A Traditional University, A Phenomenological Study

(Dissertation proposal submitted to the Faculty of Education for the degree of Doctor of Philosophy in Educational Leadership and Management)

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Lived Experiences of Teachers Transitioning To Distance Education In A Traditional University, A Phenomenological Study

Topic Area: Distance Education or Human Resource Management

Paper Session

The university will integrate distance education into its traditional teaching and learning method, this study will show how the teachers experience the transition from the time of their selection extending into the training period until the end of their first semester of implementation with the goal that by understanding the experiences from the perspective of the teachers it will enable management to better prepare future teachers who will make the same transition.

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Chapter One

Introduction

Education has always been in the forefront amongst the concerns of nations as well as organizations such as UNESCO who are concerned with the development and progress of a country. It is believed that the presence of education and the ability of a country to educate its people is akin with the development and progress of a nation. UNESCO’s Education for All or EFA as well as the Millennium Declaration which has emphasized the importance of education and its relation to progress have been mainstreamed in our country with its inclusion in the Philippine’s Medium Term Development Plan or MTPDP (UNESCO 2008). The 1987 Philippine Constitution guarantees the right of every Filipino to education, this is further emphasized in Republic Act 9155 or the Governance of Basic Education Act of 2001 as well as the Republic Act 6655 or the Free Secondary Education Act. In spite of these efforts however, education is not readily available to the Filipino people for a multitude of reasons and Philippine higher education institutions of HEIs are continuously confronted with the challenge of the attainment of education at all levels for its people, a problem commonly seen among developing countries such as ours.

Purpose of the Study

Education and its delivery has changed over time, some of these changes were brought about by the advent of technology while others occurred due to the need of the times. The advent of distance education or DE has brought about a vast number of possibilities to enable the country to reach the goal of providing “Education for All”. Distance education (DE) has been around for some time and has evolved through several generations based on the mode of delivery
used. This has provided educational institutions with opportunities to expand its reach outside the borders of its own localities, reaching and connecting with new groups of learners other than the traditional student who experiences his learning within the four walls of the classroom. At the same time, distance education also provides learners who for some reason may not be able to attend traditional face-to-face programs with opportunities to study and further themselves using this method of educational delivery. These changes have also led to opportunities as well as challenges in teaching and learning. There are institutions of learning which have specifically been established for the purpose of providing education purely using the distance education mode. The enactment of the Republic Act No. 10650 (RA 10650) entitled “An Act Expanding Access to Educational Services by Institutionalizing Open Distance Learning in Levels of Tertiary Education and Appropriating Fund Therefor” have provided traditional Philippine institutions of higher education an opportunity to offer courses using the distance education mode of delivery (Philippines 2014). This law supports the Commission on Higher Education’s (CHED) policies with regard to distance education as can be seen in its Commission on Higher Education Memorandum Order (CMO) 27, Series of 2005 entitled “Policies and Guidelines on Distance Education” (Commission on Higher Education 2005). This however does not come without a cost be it financially or in terms of transitioning of teachers to enable them to teach via this method and students to be able to learn by this method. There is the question of how traditional educational institutions can offer such programs taking into regard its traditional framework of education in the four walls of a brick and mortar classroom The shift to distance education will entail a change among all its stakeholders and among these are the teachers who will need to understand, design and teach in a new pedagogy.
“There is nothing more constant than change”—Heraclitus 535BC, this was true then as it is now. Change may come from within or may be driven by external factors. Change and transition are two different things. Change is basically external in nature and may due to a different policy, practice or structure that is being brought about, transition on the other hand is internal in nature and is a psychological reorientation that people have to go through before change can take place, another way of putting it is that, “transition is the state that change puts into people” (Bridges and Mitchell 2000). One of the goals or objectives of the university is to provide students with alternative modes of learning and one way to achieve this is to offer courses or programs which will use the distance education approach. To enable the university to do this and shift from a traditional face-to-face pedagogy to a distance education methodology it would mean that some changes will have to occur hence the teacher will need to transition from where they are now in the traditional framework in order to enable them to teach via DE.

The university to be studied is a traditional non-sectarian stock organization in existence for 70 years and provides quality education to the people of the Batangas City, nearby cities, towns and provinces. As the years have passed it has evolved and sees itself as being in the forefront as an educational provider within its geographic area dedicated to providing students with an education that will make them globally competitive in a technology and research driven environment using both traditional and alternative modes of delivery (UB 2015). The university offers programs from basic education to various programs in the tertiary level as well as the Expanded Tertiary Education Equivalency and Accreditation Program (ETEEAP), graduate school and a college of law. Distance education (DE) has come into light at the university as a means to increase its reach especially for programs in the ETEEAP and graduate school levels
and even potentially the regular tertiary programs and even some secondary program classes to enable it to maximize the use of its resources. At the current time ETEEAP students at the university number more than 300 at any one time, coming not only from Batangas City but from other parts of Luzon and even from outside of the Philippines. ETEEAP allows the student to accomplish his or her tertiary program of study within a year by giving credit to work experience and other trainings. During the period in which he is taking his or her courses there is a need to have a physical presence and come to the campus at least twice a month for the conduct of classes. The presence of ETEEAP courses taught via distance education would enable current students to study from a physical location separated from the campus. It will also enable more geographically distant students to accomplish their dreams of being a college graduate by the taking the program through distance education. As an autonomous institution the university also has extension programs for its graduate school as far as Calapan, Mindoro and Lucena, Quezon. There are however limitations as to the number of teachers willing to travel to those places to teach, by using distance education it will enable the graduate school to eventually have more professors sharing their expertise with graduate students as well as enabling more individuals geographically separated from the existing campuses to enrol in graduate educate programs and accomplish their graduate degrees via this method as well.

The university’s management understands that there is more entailed to enable it to offer distance education courses even if it would start only with the blended type of DE, they are however keen on exploring this avenue of possibilities. This provides the researcher with an opportunity to study how the university will integrate distance education into its current traditional method of teaching and learning and how such a method will be experienced and
accepted by the teachers. This change from what is to what the university wants to attain will
entail a change that will affect not only current policies and procedures but will also entail a
transition of its faculty from one pedagogical practice of classroom teaching and learning to
another mode which teaching and learning occurs outside the physical classroom with a
separation of teacher and learner during the process.

This study will subscribe to the definition given by RA 10650 which defines distance
education as a “mode of learning in which students and teachers are physically separated from
each other, it is student-centered, guided independent study, making use of well studied teaching
and learning pedagogies to deliver well-designed learning materials in various
media” (Philippines 2014). This law combines the methodology of DE with that of the concepts
of open learning and flexible learning, hence the modes of delivery may use print, audio-visual,
electronic/computer technology and virtual classrooms as well as face-to-face sessions.

Change is nothing new and organizations of whatever type cannot grow and be successful
by just repeating the practices of yesterday, hence they must learn to be innovative and with
innovation comes change (Bridges and Mitchell 2000). Change is a phenomenon of time which
involves both identity and process and can be polarized from serene acceptance to modern
abhorrance (Chiaburu 2006). For change to occur, a transition must happen. Transition itself
entails a person to go through phases which start at the trigger of the event and ends at the period
of acceptance and involvement. Understanding the change and transition that will happen from
the perspective of the teacher will allow management to better prepare other teachers who will be
making the same transition in the future by providing more support, mentoring and coaching if
and when needed based on the experience of others or of those who have lived the same experience.

Though many have transitioned from the classroom to distance education, there have been no studies seen documenting this transition in the local context. And though foreign literature and studies may be used as a basis to understand the phenomenon it is an accepted fact that the transition that an individual goes through during change is not only affected by the individual’s traits and personality but may also be affected by the culture and practices that exists within the organization itself and in the country in which it exists.

**Review of Related Literature**

Globalization and technology has brought about changes in the world, more so in the field of education wherein not only our views and perceptions of education has changed or has needed to change but also in the ways that we can offer education and in how we can reach a greater multitude of individuals.

The ecological approach to education and business administration used by Katane et. al. states that the educational environment is a 1.) multilevel environmental system hence its environment can be studied from the structural, evolutionary and functional points of view; 2.) multicomponent/multi-contextual and multifunctional environmental system hence it has several features and functioning principles which can be distinguished, analyzed and assessed (Irena Katane 2015). They believed that distance education is a complicated process that needs specific organizational provisions in management, its implementation can ensure competitiveness and sustainability of an education institution (Irena Katane 2015). It provides important advantages
from the standpoint of students and teachers due to the opportunity to study, accessibility, convenience and flexibility while at the same time there are recognized disadvantages which include technological limitation (facilities, incompetence, trust), educators methodological incompetence, digression from academic standards, feelings of social isolation, language competence and lack of learning skills (Irena Katane 2014).

Distance education can obviate the need for a brick and mortar classroom. Globalization and technology not only alters views on education but also provides new avenues for learning (Hisham Dzakiria 2006). Distance education has several modes of delivery which ranges from print, radio, television to online, it can be done purely in the distance mode or via a hybrid or mixed mode or what some would call the blended mode wherein a certain percentage of the classes are done in a traditional classroom or face-to-face while the rest are done in the distance mode irrespective of the technology used.

Any innovation and change in teaching entails that it be studied or researched on because of possible impact on beliefs, pedagogical practices and experiences (Redmond 2011). When an institution chooses to shift or make a change it needs to consider various factors and the sectors that will be affected and often times insight understanding are generated only when the experience is studied are different levels (Hisham Dzakiria 2006). Following this line of thinking it is expected that in shifting from a traditional face-to-face environment to a distance education environment, teaching and learning will challenge the expectations and the roles of both the instructors and the learners (Redmond 2011).

The National Center for Education Statistics (NCES) web site has shown that there are four factors that impact distance education offerings and these are faculty concerns, institutional
barriers, lack of funding/costs, and resources and external support (Greene 1998). These were further confirmed by the study of Styron (2009) wherein they found six emerging themes that should be taken into consideration in the decision making process with regards to distance education and these are: 1.) distance education offerings; 2.) faculty considerations and incentives; 3.) student considerations; 4.) resources and external support; 5.) lack of funding and costs and 5.) administrative characteristics and considerations (Styron 2009). In this same study the findings showed that the level of importance is largely self-determined and that if it was known to have upper-administrative support, buy-in by faculty became much easier. In starting the distance education course offerings the decision making process included examining of the pedagogy of online content delivery based on the individual faculties’ philosophies, prior content delivery experience, workload requirements for cohorts, program uniformity, course consistency and aesthetic features found within each course.

The commitment to any form of distance education and e-learning is shaped largely by economic imperatives and the potential of information technology for massification and extending over distance (Hannon 2011). Progress and change is not without a price, as technology advances, it has caused a change in the nature of face to face teaching and has enabled the rapid growth of blended and online courses. But as it affords new opportunities, it also affords new challenges. Technology impacts the changes in teaching and learning spaces hence a move from traditional face-to-face teaching towards technology enabled, blended and fully online teaching and learning initiates a role shift (Redmond 2011). One must realize however that the challenge of distance education and e-learning start before technology arrives, to re-scope implementation to encompass the pedagogical effort and learning goals of its
practitioners (teaching academics, academic developers learning technologists and educational designers) (Hannon 2011). Studies have shown that transitioning from traditional face-to-face to online teaching and learning challenges the expectations and roles of both the teacher and the learner as they make the transformational shift.

On the side of the faculty their concerns also included issues in regard to tenure and promotion policies as well as faculty incentives. Incentives involved financial compensation as well as faculty recognition. Financial compensation both for development of a DE course and delivery of a DE course (recognition of efforts in the development and implementation of distance education offerings). Recognition involved letters of recommendation to be included in their dossier for the purpose of tenure and promotion. Faculty buy-in as well as faculty openness was noted to be important in that with a new attitude shift and acceptance or buy-in moving forward with the program was easier. Some have voiced out concerns with regard to the rigor and quality of distance education courses while others took note of the time constraints involved in developing the instructional materials and effectively teaching the content needed for the purpose of the course. There was also mention of fears of the brick and mortar schools closing with further progress into DE.

Teachers must redefine not only their professional identity but also their teaching practices. Replicating their existing course design and pedagogical practice commonly occur in instances wherein no training was given prior to their transition as seen in studies by Bonk et.al. (2003). Several studies have shown that the major challenge for teachers as identified by Yang and Cornelious (2005), was in learning how to redesign learning to a constructivist approach.
which results to a change in the roles and responsibilities, use of technology, relationships, presence and perceived lack of prestige (Redmond 2011).

A case study done by Redmond (2011) which followed two traditional face-to-face teachers over a four-year period as they transitioned from the face-to-face to blended then to online teaching chronicled the changes in perceptions and pedagogical practices as the two instructors moved through their transition journey. The first stage of their journey was when they were first introduced to blended teaching, the second stage was when they had some experience teaching via the blended approach and were capable of designing fully online course and the third was when they were able to teach in the face-to-face, blended and online modes. As they progressed through each stage they had realizations at each part of the transition. In essence they felt that their growth was spiral in nature in that as they gained experiences as blended and online teachers they experienced new roles and explored the expectations of what those roles entailed while at the same time developing within them the expertise, knowledge and skills necessary for the DE pedagogy. Paradigm shifts were seen not only in how they communicated with their students but also in the manner in which they designed the courses and how they initiated learning and as they progressed. Although they were more positive with regard to the resulting student outcomes, in essence they felt that what worked in the traditional face-to-face classroom was not as effective in the online space (Redmond 2011).

Administrators mention the importance of having the necessary resources and external support network in their decision making processes in DE. The need to provide not only initial training and support for faculty learning to integrate new technology but also the need for it to be continuously readily accessible with follow-up training to ensure that the tools provided are
being utilized both effectively and efficiently are frequently highlighted. Aside from resources and external support for faculty there were also resources and external support that were applicable to students. Other external support sources which have been identified were grants and fundings in order to fill in the gaps between what the institution currently has and what it needs in order to successfully implement DE. External funding sources may be in the form of grants, alumni contributions, community businesses and partnerships with entities who are interested in the success of the venture. Partnerships may include those of technology leaders, learning management software companies who can provide not only software and hardware but training for the end-user. Financial costing considers not only technology expense and training expense but also expense in terms of greater compensation for faculty teaching via DE. Another factor mentioned of concern was institutional bureaucracy which includes length of time for the program to be approved and getting everyone on board. Organizational change must occur in order to alleviate institutional barriers that serve as a hindrance to the expansion of distance education offerings. There must be an understanding of institutional policies and processes and the establishment of a realistic timeline for the creation/expansion of distance education offerings (Styron 2009).

To be an effective education provider all issues pertaining to learning support need to be identified and addressed effectively, the task is to design and offer an educational experience that encourages learning (Hisham Dzakiria 2006). In this study done on the experience of University Utara Malaysia (UUM), learning support was seen to be of utmost importance. Learning support meant not only that of the teacher facilitating the learning process but also with regard to the other support systems including but not limited to that of technological support and access.
Effectively addressing the issues of the learning support system creates an environment that encourages independent learning and produces effective learning outcomes (Dzakiria, Mastafa et al. 2006).

Much has been said about the changes that must occur within an educational institution in order to effect a shift from traditional to distance education. More often than not, studies have focused on changes in pedagogy, infrastructure, compensation, policies and procedures but only a few studies have focused on the psychological impact it has on teachers as they transition from one form to the other. Any change can cause a feeling of apprehension and uncertainty. A movement from traditional to distance education or distance learning can be considered as a change which like other forms of change can cause a sense of bewilderment which can further be compounded by the feeling of apprehension and uncertainty, it is with this that Forrester’s study underlined the importance of “Induction” which helps the students transition from their existing traditional environment to that of the distance learning with greater ease (Forrester, Motteram et al. 2004).

Change and transition may or may not be periodic events and is dependent on the natural state of the organization. Factors such economic, political, technological, cultural and societal factors contribute to the pace and complexity in which change will occur (Bunker and Wakefield 2005). Change does not happen automatically and it involves grieving, letting go, building hope and learning. In order for change to be in effect, transition must occur and the human dynamics of transition must be addressed. Transition is a three phase process which begins with something “Ending” followed by a “Neutral Zone” and the third and final phase being a “New Beginning”. Transitioning goes through several stages which include 1.) initial resistance; 2.) embracing the
changes; 3.) striking a balance and 4.) hitting the target or mastery. Between “ending” and the neutral zone occurs emotions such as denial, shock, frustration/stress and ambivalence. Between the “Neutral Zone” and the “New Beginning” occurs skepticism, acceptance, importance, hope and enthusiasm (Bridges 2013). Transition is the inner process which allows people to come to terms with the change that they are experiencing and enables people to let go with the way things used to be and reorient themselves to the way things are now (Bridges 2013).

Synthesis of Literature

The advent of distance education or DE has made it possible for teaching and learning to occur outside the four walls of the classroom. It has brought about a number of possibilities and has enabled educational institutions to have opportunities with which to expand its reach outside the borders of its own localities, reaching and connecting with new groups of learners other than the traditional student who come on campus for his or her education. By the same token, it has also provided learners who for some reason have not been able to attend traditional face-to-face programs with opportunities to study and further themselves using this method of educational delivery. Globalization and technology have enabled us not only to change our views and perceptions on education but has also enabled us to do more (Dzakiria, Mastafa et al. 2006, Katane, Kristovska et al. 2014). The end goal of education in the twenty-first century is the systematic improvement of both the quality and accessibility of education throughout the world (Cisco Systems 2008).

The shift from a traditional face-to-face framework to a DE framework entails changes in teaching and learning which evolves through time. As it provides new opportunities it also provides for new challenges because what may have worked in the traditional classroom may not
be as effective in the DE space (Dromgoole and Boleman 2006, Redmond 2011). There are advantages and disadvantages in the distance education environment, in as much as it provides greater accessibility beyond geographic boundaries, it allows individualization as well as flexibility, it also has the disadvantages related not only to high cost of development but also in the need for a pedagogical shift as well as required technological skills and the feeling of social isolation (Katane, Kristovska et al. 2014, Katane, Kristovska et al. 2015). Programs taught in the traditional academic environment can be shifted to the distance education environment to meet the needs of a global community but it entails a shift in the way of thinking and of doing things. Integrating distance education into a traditional institution is seen by many as a way for an institution to ensure its sustainability while at the same time it also entails a cost be it either financial or in human resources and even changes or the unmaking of policies, procedures and practices in order to make them anew (Goho, MacAskill et al. 2003, Katane, Kristovska et al. 2015).

Any change, innovation or shift in traditional practices should not be taken lightly as it affects different levels of the institution and will challenge the roles and expectations of all those involved or affected by the change, hence better insight and understanding can often be possible only by studying those experiencing it first hand (Dzakiria, Mastafa et al. 2006, Redmond 2011).

Leaders and managers have been found adept in creating visions of what should be and initiating reorganization, restructuring or whatever else is needed in order to create change and attain their visions, however there is lack of focus on the human side of the change and the human dynamics of transition (Bunker and Wakefield 2005). Understanding what is involved in
the human side of change would enable the leader or manager to effectively deal with the changes needed to guide people through their transition.

The shift from one stage of development to another necessitates a change and for this to occur those involved must transition wherein individuals concerned must come to terms with the change and should be willing to “let go” of the way things used to be and reorient towards what it is now. Transitions have been described by Goodman (2006) to be “any event, or non-event, that results in changed relationships, routines, assumptions and roles” which are experienced and can have either a negative or positive impact depending on individual and the context in which it is experienced at the time (Hicks 2014). The key to transition is bridging from the old, dismantling and unmaking then looking towards the new (Hill 2014). Change will work only if it accompanied by transition and it is through understanding these transitions that leaders can guide those who need to make the change (Bridges and Mitchell 2004). Transition can be very brief lasting a few days to a few weeks and at other times it can take months to years (Alberta 2002).

Transition can be categorized into: (1) anticipated, (2) unanticipated, and (3) non-events. The impact of the transition is determined by the degree to which it alters one’s daily life, while context refers to one’s relationship with transition and the setting in which it takes place. Schlossberg’s Transition Theory identifies four major factors that influences a person’s ability to cope which transitions and these include: situation, self, support and strategies (Guido-DiBrito 1998). The interplay of the four factors may dictate how a person transitions from one phase to another.
Conceptual Framework

It is believed that change of any kind brings with it a confluence of effects. Change in itself is considered as the external situation that occurs, it is what is being sought to be achieved which may be a change in policy, practice or structure to be brought about. Transition on the other hand is the internal process that people must go through to come to terms with a new situation and eventually adjust and adapt to the change (Bracken 2011). Some would refer to transition as the “psychological reorientation that people go through before change can work” (Bridges and Mitchell 2000). Any change in the current status or ways of doing things implies that a transition must be made from “what is” to “what we want”, it also involves “unmaking” in order to “remake”.

There are several transition models like Bridges’ Model, Schlossberg’s Model, Oconner and Wolfe’s Stages of Transition Model and Hays and Hobson’s Sperm Model. Each of these models have a commonality in that there is a starting point followed by processing and ending wherein the necessary change has occurred. Each of the models have their strengths as well as their limitations and their inherent applicability and usefulness in certain situations and in the process of transition. For the purpose of this study, the focus is a combination of Bridges’ Transition Model and Schlossberg’s Transition Theory.

Bridge’s Transition Model describes three distinct phases in transition which are, “endings” or “saying goodbye”, followed by “exploration” also know as the “neutral zone” or “shifting to neutral” and finally “new beginnings” or “moving forward” (Bridges and Mitchell 2000). During each of these stages the individual undergoing the transition goes through a variety of emotions and experiences before they proceed into the next stage. It’s optimistic nature
presumes that all transition is temporary and the end result is the development of a better person (Brandt 2003).

According to Schlossberg’s Transition Theory, transition has three major parts, the first of which reflects on the experience leading up to the transitions (approaching transitions), the second entails taking stock of coping resources to understand how to cope with the transitions and finally the third part which is taking charge (Guido-DiBrito 1998). Transition is a psychological process of letting go of how things used to be and taking hold of the way they subsequently become, it is how individuals come to term with change (Hicks 2014).

The models of Bridges and Schollsberg are in agreement in saying that for change to occur, transition must happen. Transition itself is a process that people must go through to attain an end result. The institution envisions itself as being able introduce the concept of distance education and migrate or transition some of its courses into this pedagogy. In effecting this change it is believed that the teachers who will be chosen to shift from traditional to distance education must go through a transition process which according to these two models have three phases and each of the phases brings with it certain events and feelings which the teachers must go through in order to effect transition during change. In the course of the transition the teacher must go through an initial process of “approaching transition”, “letting go (of the old or familiar)” or “ending” or “moving in (of the new)” which may bring about feelings of fear, anxiety, sense of loss of the familiar, despair, resistance, frustration and depression. After which he moves into a “transition process” or “moving through”, “neutral zone” or “exploratory phase” during which time there is an interplay of the elements of the situation, support strategies and self which may cause some chaos, confusions, pessimism, skeptics, realization of loss and
resignation. The third and final phase of the transition is “new beginnings” wherein the change has occurred and is rolled out and during which time there is acceptance, relief, hope, excitement, trust, courage and optimism.

As the institutions shifts some of its offerings from traditional face-to-face to distance education it is believed that the shift not only affects the administrative aspect of the institution and its infrastructure but will also involve the end users among which are the teachers. This study intends to look into the “lived” experiences of teachers of a traditional university as they migrate and make a change or transition towards distance education so as to understand their feelings, perceptions and experiences as they shifted from traditional face-to-face to distance education as seen in the Modified Bridges - Schollsberg Model (Figure 1). It is hoped that by being able to study the lived experience of the first set of teachers to undergo change will bring

![MODIFIED BRIDGES-SCHLOSSBERG MODEL](image)

Figure 1. Change Process
about a better understanding of the human dynamics that will occurred which in turn will be able to help others in getting through the transition process.

**Statement of the Problem**

The transition from a traditional or a face-to-face to a DE mode of teaching entails a change and a shift in pedagogy which may in some cases mean a movement or a change from familiar to the unfamiliar. This change will entail transitioning of those involved, in this case that of the teachers who have been chosen to make the shift from their traditional face-to-face method of teaching to a distance education mode which they have not yet experienced. In this study, it is aimed to discover the essence of the lived experiences of the teachers who are transitioning from a traditional face-to-face setting to a distance education milieu with the hope that in understanding their experiences and the psychological processes involved in the transition process other teachers who will make the shift in the future will be better prepared for the shift.

This phenomenological study focuses on the events and experiences of transitioning or migrating from traditional face-to-face to distance education. This will enable to researchers to discover the essence of the phenomenon of transitioning by studying the lived experience of teachers transitioning to the new pedagogy as well as examine their assumptions about teaching and learning in a traditional and distance education environment. The main research question would be “How do teachers describe their lived experience of transitioning from traditional face-to-face teaching to a DE mode of teaching?” This will be focusing on the essence of transitioning to a DE pedagogy based on the lived experiences of the teachers with the belief that in shedding light on the experience of these teachers it will facilitate the transitioning process of other teachers who will make the same shift in the future. This will also provide the
administration with a sense of direction on how to manage the transition and effect the change leading to a smoother transition of a teacher during the change process in the future.

The research questions that guide this study include:

**Grand Tour Question.**

“How do teachers describe their lived-in experiences as they shift or transition from traditional face-to-face teaching to teaching in distance education mode?”

**Sub-questions.**

1. How do the teachers describe their experience in transitioning from traditional face-to-face teaching and learning environment to DE teaching and learning environment? (What was their transitioning like, what did they experience and how did they feel about the process of transitioning?)

2. How did they cope with the transition to a new pedagogy?

3. What were their most significant internal experiences in their own individual transitioning processes?

**Chapter Two**

**Research Design and Methodology**

**Research Design**

The basic framework of this study is phenomenological in nature, it can be considered as a “research in progress” due to the fact that the research will be occurring during the actual time of the planning and implementation of distance education at the university. The university’s expansion into distance education will be studied as it unfolds in its natural setting. We will
attempt to interpret the phenomenon as it occurs and the meanings brought into it by one of the set of stakeholders, in particular, the teachers. Phenomenology focuses on the experience itself and how experiencing something is transformed into consciousness. Using the Giorgi’s methodology, the descriptive understanding of the experience will be based solely upon the presented data from the teachers who are the subjects of the research and will not go beyond what is given.

Phenomenology is a broad discipline and method of inquiry which is based on the premise that reality consists of objects and events as they are perceived and understood by the human consciousness of those who are actually experiencing it or living it (Mastin 2008).

The term “phenomenology” comes from the Greek word “phainomenon” which means “appearance”. Phenomenology is not only a philosophy, a foundation for qualitative research but is a research method in its own right (Hirsch 2015). Phenomenology as it is known today is attributed to Edmund Husserl regarded as the fountainhead of phenomenology in the twentieth century, he launched it in his work “Logical Investigations” in 1901 (Groenewald 2004, Mastin 2008, Kemerling 2011). Husserl’s classical phenomenology was a kind of “descriptive psychology” which later became “transcendental phenomenology” wherein he differentiated the act of consciousness and the phenomenon at which it is directed. Husserl believed that people can be certain about how things appear in or present themselves to their consciousness hence anything outside the immediate experience must be ignored (Groenewald 2004).

The purpose of the phenomenological approach is to illuminate the specific, to identify phenomena through how they are perceived by those in a situation hence it is based on a paradigm of personal perspective and interpretation, knowledge and subjectivity with emphasis
on the importance of the personal perspective of those who are experiencing it (Lester 1999). The foundational question in phenomenology is: “what is the meaning, structure, and essence of the lived experience of the phenomena by the individual or individuals experiencing it?” (Johnson and Christensen 2007). It differs from other qualitative methods as it attempts to understand, analyze and describe the essence of a phenomenon based on the account of the persons who are experiencing the phenomena being investigated in their everyday life or what some would call the “lifeworld” (Hirsch 2015). The aim of the researcher should be to describe accurately the phenomenon without biases or pre-conceived or pre-given frameworks and only remaining true to the facts while understanding the social and psychological phenomena from the perspectives of the people involved (Groenewald 2004). The phenomenological approach can be applied to single cases to deliberately selected samples usually no more than ten. Multiple samples or participants can strengthen the inferences made with the recurrence of factors among the participants. Methods used can vary from interviews, conversations, participant observation, action research, focus group discussions and analysis of personal texts or diaries. Since the aim of phenomenological research is to aspire for pure self-expression, there must be no interference from the researcher and no leading questions must be given so that the participants or subjects are able to be aware of their own ideas (Vickers and Offredy). Analysis involves looking across themes between participants to draw out key issues and commonalities across the participants, faithfulness to the participants should be remembered and personal biases should not be included (Lester 1999, Cohen and Crabtree 2006, Johnson and Christensen 2007).

There are several phenomenological approaches, though all follow the primary concepts of description, reduction, imaginative variations and essences. The different approaches are
mainly categorized into transcendental phenomenology which was founded by Husserl, existential phenomenology by Merleau Ponty and heuristic phenomenology by Heidegger (Hirsch 2015). Each of these main categories have followers who espoused their methods.

The transcendental phenomenology of Husserl forms the basis of all other phenomenologic research methods. According to Husserl the “lived experience” should be captured, described and reflected upon the way the person experienced it and its interpretation should be based on his reality. The reduction process would involve bracketing or epoch wherein the researcher or investigator would set aside his own personal beliefs and prejudices so that he may have a clear view of the phenomenon as originally intended. Hermeneutic phenomenology of Heidegger on the other hand differed in the sense that Heidegger believed that it was impossible to set aside the personal beliefs and possible biases of the researcher. He believed that the researcher’s awareness would enable the researcher to be immersed in the phenomenon and gain better insight and understanding of the experience. Instead of just being descriptive in nature it is also interpretative. This method is exemplified by Van Manen’s approach to phenomenology. Existential phenomenology on the other hand believed that the consciousness and the self could not be separated hence bracketing or suspension of individual presuppositions and biases would not be possible, hence complete reduction is impossible.

For this study, Giorgi’s adaptation of the transcendental phenomenological process was selected as we are interested in the lived experience of the teachers transitioning from traditional face-to-face into the distance education mode and that an insider’s perspective would be most helpful in understanding the phenomenon of transition in this particular case and how management would be able to aid teachers who in the future would be making the same
transition. Giorgi's approach utilizes the phenomenological reduction process that involves several main steps which are bracketing, intuiting, analyzing and describing. *Bracketing or epoche* is the process of removing or holding in abeyance any pre-conceived ideas, opinions and beliefs about the phenomenon being researched (Vickers and Offredy). Others would refer to this process as the assumption of a phenomenological attitude wherein the researcher puts aside his or her presuppositions, theoretical, cultural and experiential knowledge to allow him or her to see the data in its own context without doubt or disbelief (Broome 2011). Researchers should be self critical and aware of their own subjectivity, vested interest, predilections and assumptions and how these may impact the research process and findings (Finlay 2009). *Intuition* on the other hand requires that the researcher be immersed in the study of the phenomenon and that he remains open to the meaning given by those who experienced it resulting in a common understanding of the phenomenon being studied. The data is read in its entirety or in the “naive description” as provided by the participant. *Analysis* is the process of categorizing and making sense of the essential meanings of the phenomenon so that the common themes or essences will emerge. In the process of the analysis demarcations are made so as to divide the narrative into “Meaning Units” which are more manageable portions. After being divided into meaning units, these are reduced to discrete expressions of the experiences by the creation of “Central Themes”. Next is the establishment of the “Thematic Index” which is a non-repetitive list of meaning statements and referents used to search for interpretive themes. The thematic indexes are analyzed collectively and from this arises the “Interpretative Themes”. In the descriptive stage or in describing, the researcher begins to understand the phenomenon and is able to communicate a distinct, critical description of the phenomenon (Vickers and Offredy). This is
essentially the summary of the “Interpretative Themes” which produces an in-depth picture of the experience or the phenomenon under investigation which in this case would be those of the teachers in transition from traditional face-to-face to a distance education environment. The ultimate goal of this process is to reduce the meanings of the teacher’s experiences to their essential structure so as to reveal the essence of the experience. Essence has been defined by Husserl (2001) as “a structure of essential meanings that explicates a phenomenon of interest”

![Diagram of Giorgi’s Descriptive Phenomenological Research Design]

During the study, triangulation of the data will be done in order to improve the validity of findings. It has can be assumed that with the use of triangulation the data will converge and the aggregate truth can be revealed. According to Wargo, “triangulation is a means of checking the integrity of inference one draws” and can be done through various ways such as the use of multiple data sources, multiple investigators, multiple theoretical perspectives and or multiple methods (Wargo 2013). The process espoused by Wargo involves the following: 1.) interviews are conducted and audiotaped; 2.) the audio recordings are transcribed and returned to the participant for review and approval and 3.) the researcher collaborates with an “outside or
external” evaluator or auditor during the data analysis (Wargo 2013). The use of this triangulation method will lessen concerns with regards to subjectivity of the findings.

**Data Sources**

The study will be conducted in a private, non-sectarian private higher education institution which has been awarded autonomous status by the Commission of Higher Education (CHED) as well as having a Center of Excellence in Teacher Education and Center of Development in Business Management. It is International Organization for Standardization (ISO) certified and has accreditation from the Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA) with levels ranging from levels I to IV across majority of its programs. The program offerings range from basic education to higher education, graduate school and college of law. There are three fully operation campuses across the province and extension programs in Mindoro and Lucena.

A homogenous theoretical purposive sampling will be done as the faculty will be from among those who will undergo the training during the summer semester of 2015-2016 to be able to teach via distance education in the 1st semester of 2016-2017. The faculty to be chosen will be mainly among those who are teaching courses either in ETEEAP or in the Graduate School Level as well as a few from the collegiate and secondary school levels. The faculty members chosen will be oriented individually with regard to the study and it will be made clear to them that they are requested to answer the interview faithfully and honestly and that in no way will their responses be a cause of negative reprisals in any of their performance evaluations. They will be asked to sign the informed consent form explaining that they may withdraw from the study at any time without prejudice.
**Data Collection Methods**

Data collection will be done through a combination of semi-structured face-to-face in-depth interviews and the diary method. In order to illicit their lived experiences as accurately as possible the faculty members will undergo face-to-face interviews at several points during their transition namely, 1.) shortly after receiving notification of being selected to transition to the distance education environment but prior to the commencement of training estimated to be around April 2016; 2.) at the completion of the training period which is estimated to be by the second week of June 2016 and; 3.) at the completion of their first semester of teaching via DE which is estimated to be by the end of November 2016. Interviews will be recorded so as to assure the accuracy of the transcription. At the start of every interview the faculty participant will be reminded they may withdraw from the study at any time without fear of negative reprisals secondary to their withdrawal from the study or from their responses during the interview. All interviews will be recorded and transcribed verbatim. Bracketing will be done throughout the interview process to ensure that the information gathered would be from the perspective of the participant. After each transcription of the interview is done the participant faculty will be asked to review the transcription so as to ensure its accuracy and to validate the raw data. They will likewise be asked to maintain a diary starting after the initial or preliminary interview stage until the end of their first semester of teaching via DE. The diary will chronicle their experiences and the emotions they go through during the process and will allow the triangulation of data and to ensure greater validity. The combination of these methods will enable the researcher to build a better understanding of the process entailed in teaching via DE by capturing the deep meaning of the experience in their own words. It will also enable us to see
how the teachers experienced teaching in DE over a period of time as they migrate from traditional face-to-face to the distance education mode.

**Data Analysis**

Analysis is the process of categorizing and making sense of the essential meanings of the phenomenon so that the common themes or essences will emerge. The researcher begins to understand the phenomenon and is able to communicate a distinct, critical description of the phenomenon.

There are basically six stages in the analysis of data gathered after it has been transcribed: (1) organizing and validating the data, (2) generating categories, themes and patterns, (3) coding the data, (4) testing emergent understandings, (5) searching for alternative explanations, and (6) writing the report (Lari 2008).

After the interview is done, the recording will be transcribed verbatim. After reviewing the transcription, the faculty participant will be asked to review and validate the transcription so as to ensure that what has been transcribed is what was meant by the participant. During the period of transcription and that of analysis, the phenomenology process of epoch will be maintained. Horizontalization of data is done wherein each statement is given equal weight or value. During this process, the transcription is chunked into what is called as meaning units (MU) to promote better understanding. After horizontalization is done the statements are reviewed to see if the experience will contribute to the understanding of the experience and see if it would be possible to label it. The next step in the reduction process was the clustering of the meaning units to form core themes and patterns for each participant in the study. This is followed by creating a textural description, this is considered as the “what” of the experience
After this is done for each of the participants a composite textural description will be made wherein the individual descriptions will be synthesized. Once the composite description is made we will be able to derive the “essences” of the experience of the phenomena.

At the completion of each stage and external reader will be requested to review and analyse the data so as to ensure greater validity and strengthen the analysis of the data prior to the finalization of the research study.
Steps and Procedure Summary

Participants who will be the first to transition to the DE environment are chosen.

Study is explained to the participants and Informed Consent forms are signed.

Initial interview of Participants by Researcher is conducted and the participants are also given a diary for their use.

Researcher transcribes the interview as recorded and the transcriptions are considered as raw data.

Figure 3. Diagrammatic Summary of Steps and Procedures

Researcher transcribes the second interview as recorded and the transcriptions are considered as raw data.

Second interview is done at the end of the training period.

Participant teachers undergo the training program.

Raw data of the first interview undergoes processing using the steps previously shown (Figure 2).

Participant teachers start their first DE classes in the 1st semester.

Third interview is done at the end of the training period.

Raw data of the third interview undergoes processing using the steps previously shown (Figure 2).

Raw data of the second interview undergoes processing using the steps previously shown (Figure 2).

Researcher does Analysis of the implications of the results and derives the Essence of Transitioning based on the lived experiences of the teachers.

Diary of collected Raw data of the diary undergoes processing using the steps previously shown (Figure 2).

Researcher compiles the results of the analysis of the three interviews and the diary and triangulates the
Research Question

**Grand Tour Question.**

“How do teachers describe their lived-in experiences as they shift or transition from traditional face-to-face teaching to teaching in distance education mode?”

**Sub-questions.**

1. How do the teachers describe their experience in transitioning from traditional face-to-face teaching and learning environment to DE teaching and learning environment? (What was their transitioning like, what did they experience and how did they feel about the process of transitioning?)

2. How did they cope with the transition to a new pedagogy?

3. What were their most significant internal experiences in their own individual transitioning processes?

**Interview Questions**

1. Can you tell me how you felt when you found out that you were chosen to teach through the distance education mode?

2. How did you feel when you started in the training program to teach via DE?

3. Can you describe the training process you underwent to teach via DE and what was it like for you?

4. How did you feel at the end of the training process for DE?

5. Can you tell me how you felt when you taught via DE and what was the process like for you?
5.1. During the first few weeks of teaching via DE?

5.2. At the mid portion of the semester?

5.3. At the end of the semester?

6. Did you receive any help?

6.1. What were the resources that you found helpful in transitioning from traditional face-to-face to the distance education environment?

7. Did you feel prepared to teach via DE?

7.1. Was there enough time for you to prepare for the transition?

7.2. Were you adequately prepared?

7.3. Did you have any misgivings?

7.4. Was there anything else that could have been done or provided to you to help you transition from traditional to DE?

8. Do you see any difference in your teaching experience in the traditional face-to-face and the DE environment?

8.1. Based on your own teaching viewpoint?

8.2. Based on the learning experience you saw in your students?

9. Did you experience any difference in your beliefs and assumptions about your own teaching and learning experience in the traditional face-to-face and the DE environment?
10. Looking back at the start of your transition process from traditional face-to-face to DE, do you remember how it affected you personally and professionally?

11. If you were to choose an image to describe your transition from traditional face-to-face and the DE environment, what would that image be?

11.1. Why that image or why did you choose that image?

11.2. Would you have chosen the same image when you were chosen to the time that you started teaching compared to the end of your first semester of teaching?

12. What were your most significant moments or experiences in your transition from traditional face-to-face and the DE environment?

13. Has your transition from teaching in the traditional face-to-face to the DE environment changed your perspectives in the teaching and learning process?

14. How do you see yourself as a result of this experience both as a teacher and as a learner?

15. What are your recommendations for other teachers who would be undergoing the same transition as you have undergone?

16. Do you want to teach another class via DE?
References


TRANSITIONING IN DISTANCE EDUCATION


Appendix A

Proposed Dissertation Timeline

<table>
<thead>
<tr>
<th>NAME</th>
<th>Abegayle Machelle P. Chua</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT NUMBER</td>
<td>11480122</td>
</tr>
<tr>
<td>AY</td>
<td>2015-2016</td>
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<tr>
<td>TERM</td>
<td>2ND</td>
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<td>Education</td>
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<td>PROGRAM</td>
<td>PHDELMDx</td>
</tr>
<tr>
<td>DISSERTATION MENTOR</td>
<td>Dr. Roberto T. Borromeo</td>
</tr>
<tr>
<td>PROGRAM COORDINATOR</td>
<td>Dr. Anne Marie R. Ramos</td>
</tr>
<tr>
<td>TITLE</td>
<td>Lived Experiences of Teachers Transitioning To Distance Education In A Traditional University, A Phenomenological Study</td>
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SCHEDULE

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<thead>
<tr>
<th>Stage of the dissertation writing process</th>
<th>Number of days/weeks needed</th>
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<th>End date</th>
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<tr>
<td><strong>STAGE ONE: Dissertation Proposal Preparation</strong></td>
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<td></td>
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<tr>
<td>a. Choosing of topic</td>
<td>First Term 2015-2016</td>
<td>First Term 2015-2016</td>
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<td>b. Research and writing for the Concept Paper</td>
<td>First Term 2015-2016</td>
<td>First Term 2015-2016</td>
<td></td>
</tr>
<tr>
<td>c. Presentation, submission and approval of the concept paper</td>
<td>First Term 2015-2016</td>
<td>First Term 2015-2016</td>
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</tr>
<tr>
<td>d. Reading and research for the initial dissertation proposal</td>
<td>First Term 2015-2016</td>
<td>First Term 2015-2016</td>
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<tr>
<td>e. Submission, revision and final approval of the initial dissertation proposal by professor</td>
<td>First Term 2015-2016</td>
<td>December 1, 2015</td>
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<tr>
<td><strong>STAGE TWO: Dissertation Proposal</strong></td>
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<td>-----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>b.</td>
<td>Reading, research and revising dissertation proposal based on discussion with mentor</td>
<td>February, 2016</td>
<td>March 5, 2016</td>
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<tr>
<td>c.</td>
<td>Accomplishment of the DLSU General Ethics Checklist another related forms</td>
<td>February 2016</td>
<td>March 5, 2016</td>
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<tr>
<td>d.</td>
<td>Approval of dissertation proposal by mentor</td>
<td>March 1, 2016</td>
<td>March 15, 2016</td>
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<td>e.</td>
<td>Presentation of Dissertation Proposal to the Panel</td>
<td>March 21, 2016</td>
<td>March 22, 2016</td>
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<td>g.</td>
<td>Final Approval of the revised Dissertation Proposal by the panel</td>
<td>April 6, 2016</td>
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**STAGE THREE: Implementation of the Research**

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<td>a.</td>
<td>Identification of the subjects for the research</td>
<td>March 1, 2016</td>
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<td>b.</td>
<td>Initial interview with the subjects</td>
<td>April 9, 2016</td>
<td>April 15, 2016</td>
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<td>c.</td>
<td>Transcribing and decoding the interview after each subject</td>
<td>April 16, 2016</td>
<td>April 20, 2016</td>
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<td>d.</td>
<td>Analysis of the initial interviews</td>
<td>April 21, 2016</td>
<td>May 7, 2016</td>
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<td>e.</td>
<td>Writing of initial findings</td>
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<td>May 7, 2016</td>
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<td>g.</td>
<td>Conducting the second interview of the subjects</td>
<td>June 1, 2016</td>
<td>June 15, 2016</td>
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<td>h.</td>
<td>Transcribing and decoding the 2nd interview after each subject</td>
<td>June 16, 2016</td>
<td>July 7, 2016</td>
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<td>i.</td>
<td>Analysis of the 2nd interviews</td>
<td>July 7, 2016</td>
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<td>j.</td>
<td>Writing of findings from the second interview</td>
<td>July 7, 2016</td>
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<td>k.</td>
<td>Consultation with Mentor</td>
<td>August 1, 2016</td>
<td>August 15, 2016</td>
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<td>1. Conducting the third interview of the subjects</td>
<td>October 5, 2016</td>
<td>October 14, 2016</td>
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<tr>
<td>m. Transcribing and decoding the 3rd interview after each subject</td>
<td>October 15, 2016</td>
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<td>n. Analysis of the 3rd interviews</td>
<td>October 20, 2016</td>
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<tr>
<td>o. Writing of findings from the 3rd interview</td>
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<tr>
<td>p. Consultation with Mentor</td>
<td>November 2, 2016</td>
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<tr>
<td>q. Decoding of the subjects diary for triangulation</td>
<td>November 2, 2016</td>
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<td>r. Comparison of results of the 1st, 2nd and 3rd interviews as well as the diary</td>
<td>November 16, 2016</td>
<td>November 30, 2016</td>
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<td>s. Writing/Drafting the initial results of the study</td>
<td>December 1, 2016</td>
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<td>t. Consultation with the mentor</td>
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**STAGE FOUR: Initial writing**

<table>
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<tr>
<th>a. Draft the various sections of the dissertation</th>
<th>January 15, 2017</th>
<th>February 15, 2017</th>
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<tbody>
<tr>
<td>b. Undertake additional research where necessary</td>
<td>January 1, 2017 onward</td>
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<tr>
<td>c. Consultation with mentor</td>
<td>February 15, 2017</td>
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<tr>
<td>d. Revision and rewriting based on comments of the mentor</td>
<td>February 17, 2017</td>
<td>March 1, 2017</td>
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**STAGE FOUR: The first draft of the dissertation**

<table>
<thead>
<tr>
<th>a. Compile and collate sections into first draft of dissertation</th>
<th>March 1, 2017</th>
<th>March 5, 2017</th>
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<tbody>
<tr>
<td>b. Check the flow of the dissertation</td>
<td>March 6, 2017</td>
<td>March 10, 2017</td>
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<tr>
<td><strong>c.</strong> Check the length of the dissertation</td>
<td>March 16, 2017</td>
<td>March 10, 2017</td>
</tr>
<tr>
<td><strong>d.</strong> Consultation with Mentor</td>
<td>March 10, 2017</td>
<td>March 20, 2017</td>
</tr>
<tr>
<td><strong>e.</strong> Research and revision as needed based on feedback of mentor</td>
<td>March 21, 2017</td>
<td>March 30, 2017</td>
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**STAGE FIVE: Final draft for submission for defense**

| **a.** Check for errors | March 30, 2017 | April 5, 2017 |
| **b.** Prepare for submission | April 5, 2016 | April 8, 2016 |
| **c.** Final proof-read and final editing prior to submission for defense | April 9, 2017 | April 15, 2017 |
| **d.** Submission for Defense | April 16, 2017 |

**STAGE SIX: Dissertation Defense**

| **a.** Dissertation accepted for scheduling of defense | April 16, 2017 |
| **b.** Dissertation Defense | April 17, 2017 | May 15, 2017 |
| **c.** Revision and rewriting based on comments during defense | May 16, 2017 | May 30, 2017 |

**STAGE FIVE: Final manuscript for submission**

| **c)** Final proof-read and final editing | June 1, 2017 | June 15, 2017 |
| **f) Submission and acceptance of dissertation** | June 16, 2017 |
Appendix B

Informed Consent Form

De La Salle University

I, the undersigned, confirm that (please tick box as appropriate):

<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>I have read and understood the information about the study, as provided in the information sheet provided by the researcher.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I have been given the opportunity to ask questions about the project and my participation.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>I voluntarily agree to participate in the study.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymisation of data, etc.) to me.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>If applicable, separate terms of consent for interviews, audio, video or other forms of data collection have been explained and provided to me.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>The use of the data in research, publications, sharing and archiving has been explained to me.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.</td>
<td></td>
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| 9. | Select only **one** of the following:  
- I would like my name used and understand what I have said or that I have written |   |
## Participant:

<table>
<thead>
<tr>
<th>Name of Participant</th>
<th>Signature</th>
<th>Date</th>
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## Researcher:

<table>
<thead>
<tr>
<th>Name of Researcher</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

Philosophical and Pedagogical Issues in the Politics of Dress in Arabian Gulf Education

Alan S. Weber
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Abstract—Although countries such as France and Germany have experienced large-scale immigration of Muslim populations from North Africa and Turkey for decades and have debated the implications of public dress codes in educational and governmental contexts, only recently has the Arabian Gulf (GCC) evolved into highly diverse and multicultural communities. Specifically, the development of American-style and Western higher educational institutes (branch campuses) and investments in science and technology capacity in the region has increased the number of expatriate experts from Western and Eastern Europe and the United States working in the Gulf. The previous expatriate populations who came to Qatar during the labor shortages of the first oil boom (1940s-80s) originated in other Gulf nations, Pakistan, India and other Muslim-majority nations who shared similar patterns of dress and attitudes towards public modesty. ‘Permissive’ clothing styles associated with Western cultures have become the topic of serious debate in the region. The subject is further complicated by the fact that most Gulf nations have developed an unspoken ‘national dress’ code which confers certain social privileges when in fact (as evidenced in historical photographs), styles of clothing were more diverse in the past, particularly in the use of color and adornment. As globalization and the Internet are increasingly altering cultural patterns in the Gulf, several organizations have called for more regulation of clothing at all levels of education and in public settings. In this contribution, the author attempts to disentangle the complicated debates surrounding proper dress in the Arabian Gulf as a means of understanding deeper sociological issues in higher education, such as access, multiculturalism, Islamic and Western identities, and post-colonialism. The author will demonstrate that these issues are serious, go far beyond the simplistic debates of individual freedom of choice and expression in clothing selection, and do impact the educational experience of both students and faculty.

Keywords: education—Arabian (Persian) Gulf; dress codes; education and religion

I. INTRODUCTION

Since most of the research on school dress codes and uniforms has been carried out in the United States, a brief overview of the most significant scholarship and the salient legal, social and philosophical debates within the U.S. context is valuable. Some of the issues in school dress are similar in the U.S. and Qatari educational systems, while on the other hand, the unique cultural and historical traditions of Qatar as a conservative Muslim country that is undergoing rapid modernization and to some extent Westernization adds certain complexities to the topic. For example, dress and attire are also linked to attitudes towards Qatar’s colonial past (as both an Ottoman and British Protectorate) and local attitudes towards the growing non-Muslim expatriate worker populations who bring with them different customs of modesty, public space, and identity expression through clothing.

Dress codes have been a feature of American, British and European education since the 19th century when mass public education first began. Earlier, religious houses in Europe such as Dominican and Benedictine friars required specific dress to identify their order. Formalized School Uniforms, defined as identical clothing sets with minimal variation, were introduced when a critical mass of student families could afford to purchase the required school attire. Obviously in poorer school districts required uniform purchase was impractical and led to low attendance rates. School uniforms, which strictly specify the actual colors, patterns and styles of clothing worn by all students can be distinguished from school dress codes that only set out general principles for wearing clothes, such as banning political or social statements or symbols on t-shirts and limiting immodest forms of dress. Thus dress codes are generally viewed as less restrictive than uniforms, providing more individual choice for students.

American citizens hold the Freedom of Expression as one of their most important individual rights. Thus dress codes and the ability to choose what one wears has often been framed in legal and individual rights terms. School dress code disputes have reached the various U.S. courts, and cases are often decided on related judicial precedents pertaining to freedom of speech, not to actual laws on dress which are not common in U.S. jurisdictions and usually occur only at the state or local level. In “Tinker v. Des Moines Independent Community School District” (1969) judges determined that students could wear armbands to school to protest the Vietnam War as this was found to be a form of legally protected speech under the First Amendment [1]. In Bethel School District No. 403 v.
Fraser (1986), students were granted the right to free speech expression in school if it was not deemed lewd or offensive by school officials, i.e. speech or expression that infringed on the civil conduct of school proceedings [2]. Similarly in Hazelwood School District v. Kuhlmeier (1988) the court determined if protected speech was found to interfere with activities in the classroom or infringe on the rights of other students (including their personal safety), schools could limit those forms of speech through official school policy [3].

Other pragmatic arguments against dress codes point out that school and administrator time is wasted in enforcing policies, for example requiring teachers to check attire individually in class on a daily basis and asking them to make interpretative judgments wastes precious class time. These judgments will be by necessity subjective, varying from teacher to teacher. Also, sending students to the Principal’s office for corrective action such as warnings or punishment additionally requires extra administrative time and resources. Moreover, adolescents and adults often dress differently for a variety of reasons and agreement on ‘appropriate dress’ will always be difficult, and judging a child’s or young adult’s clothing choice may reinforce existing generational differences and power differentials, increasing the sense of the arbitrariness and unfairness of compulsory school rules among disadvantaged and at-risk youth.

There are also valid and well-articulated arguments against allowing full freedom of dress choice in academic settings and valid points to be made for requiring the wearing of standardized school uniforms. For educators, the primary mission of education is learning and in the opinion of some educators emphasis on dress distracts students from studying, and also poorer students who are not able to buy the latest fashions can feel excluded from the school community, impacting their sense of self-worth and subsequently their academic performance. Also schools in the role of in loco parentis often assume some responsibility for controlling sexual behaviors of adolescents which can be signaled by certain kinds of clothing that sexualize both girls and boys.

Finally, the very important question of whether school dress and uniforms have any impact on academic performance has been the focus of several large-scale longitudinal, case, and retrospective studies in the U.S. Although evidence from case studies is variable, some case study findings suggest that wearing uniforms increases attendance rates, reduces crime and substance abuse, and boosts grades. However, other studies have come to the opposite conclusion. Using one of the most reliable data samples in the U.S., the 1988 National Education Longitudinal Study of 1988 (NELS: 88), Brunsma and Rockquemore concluded: “mandatory uniform policies have been the focus of recent discourse on public school reform. Proponents of such reform measures emphasize the benefits of student uniforms on specific behavioral and academic outcomes. Tenth-grade data from The National Educational Longitudinal Study of 1988 was used to test empirically the claims made by uniform advocates. The findings indicate that student uniforms have no direct effect on substance use, behavioral problems, or attendance. Contrary to current discourse, the authors found a negative effect of uniforms on student academic achievement. Uniform policies may indirectly affect school environment and student outcomes by providing a visible and public symbol of commitment to school improvement and reform” [4].

The constitution of Qatar approved by an overwhelming majority of its voting-eligible citizens in 2004–similar to the First Amendment to the U.S. Constitution—also guarantees freedom of the press and speech, but in practice this freedom is restricted by cultural practices that pre-date Islam, as well as specific Emiri decrees and the civil code. For example, it is unlawful to insult the Emir of Qatar and Qatari citizens have been imprisoned for this offence.

II. HISTORY AND CULTURE OF QATAR

Except for a small population (8-10%) of Shia Muslims, Qataris profess Sunni Islam of various conservative varieties known as either Salafism or Wahhabism. Their spoken dialect called khaleeji or Gulf Arabic is not mutually intelligible to all Arabic speakers, especially those in western Africa (al-maghreb). The learned language of Modern Standard Arabic is standard in school textbooks and the media. Many of the pre-Islamic Bedouin customs of Qatar have survived alongside normative Muslim practice, such as second and first cousin marriage, male and female separate social spaces, and the shunning of alcohol. Qataris venerate the past and hold traditional customs in high regard, hence the persistence of traditional dress, music and dance (ardha), and past-times (camel racing and falconry).

III. EDUCATION IN QATAR

Qatar was a traditional Gulf culture before the first oil exports from the country in 1949. The primary activities were pearling, fishing, seasonal pastoralism, date farming, trade, and piracy (the notorious Gulf pirate Rahman ibn Jabir al-Jalahima frequently kept his headquarters in the northern Qatari city of Zubarah). Most of these activities did not require extensive literacy beyond knowing and understanding the Quran. Hence there was little need for formal school beyond the primary level. Literate Sheikhs would sometimes teach children Quranic recitation and basic mathematical skills at religious schools variously called maktabs or kuttabs. The Dutch Reformed Church of America, despite the local rulers’ unease with Christianity, sponsored several American Mission schools in the early part of the last century in Bahrain and Oman, such as the Al Raja School in Bahrain.

By 1956 a public school system funded by the new oil wealth was established after sporadic government attempts to sustain a small number of schools in Doha beginning in 1948. The new schools contained a strong religious component and focused on basic skills, with memorization as one of the common pedagogical techniques. Qatar University, based on an earlier teacher’s college, was established as the national university in 1977. Since there were almost no trained local Qatari teachers and university professors, most faculty were invited from neighboring Arab countries with a much longer history of tertiary education such as Egypt (whose Al-Azhar University, still in operation, is over 1,000 years old), and Syria, Iraq and Lebanon which have operated prestigious modern universities since the 19th century. This is an important historical development with respect to education and dress
codes in Qatar, since all of these countries were impacted by Western culture, and some teachers arrived in the country wearing western-style cloths. This caused some cultural friction in the conservative and traditional State of Qatar in which the normal patterns of dress were still the thobe and abaya.

Also, during the ascendency of Gamal Abdel Nasser in Egypt, whose Free Officers movement overthrew the Egyptian monarchy of King Farouk, Gulf reigning monarchs were particularly sensitive to potential political activities of expatriate Egyptian sympathizers of Nasser or other Arabs attracted to socialist and communist ideas that threatened the political existence of the Gulf royal families. Even today, the majority of teachers (approximately 75%) in Qatar are non-Qatari, with non-Gulf Arabs teaching in the Independent government Arabic schools. Khaleeji (Gulf) culture is very distinct, with a unique Arabic dialect, foods, and customs that can be readily distinguished from other Muslim nations such as Morocco (Maghrebi culture, encompassing pre-Islamic Berber tribes), Lebanon (with Christian and European influence), and Egypt (impressed by British colonialism).

Concerned with poor performance of Qatari students when compared with their international peers, the previous Emir HH Father Amir Sheikh Hamad bin Khalifa Al Thani (who abdicated in 2013 due to health reasons) and his wife HH Sheikha Moza bint Nasser founded Qatar Foundation for Education, Science and Community Development in 1995. Qatar Foundation manages and is affiliated with a number of scientific research organizations such as Qatar Science and Technology Park and Qatar National Research Fund. Qatar Foundation’s main project is Education City: a campus consisting of nine international branch campuses mostly from the United States and the U.K. In 2008, the Supreme Education Council invested 4.8% of Qatar’s GDP into educational projects [5].

Education City, with its elite American universities such as Weill Cornell Medicine – Qatar, Carnegie Mellon – Qatar, Northwestern University – Qatar, etc., has been allowed greater freedoms in setting educational policy and policing campus behaviors than the national university Qatar University. Thus there is a smaller percentage of fully veiled students and students wearing hijab and shayla in Education City than in the Arabic language schools. The language of instruction at all Education City schools is English. However, Qatar Foundation does possess an official dress policy (detailed below), as do all of Education City campuses in some form. These codes are often modeled on local conceptions of modest dress and appropriate public attire.

IV. DRESS CODES IN QATAR

Historical photographs indicate that dress has been more diverse in past times. After the Iranian Revolution of 1979, a wave of anti-western sentiment swept across the Middle East, causing a return to conservative and traditional attitudes to counter the growing western influences on behavior primarily from cinema. Today the simple white thobe (or kandura) and black abaya have transformed into the standard Qatari national dress (see illustrations below, Figs. 1 and 2).
In addition to being very practical, shielding the wearers from sand and the intense sun and heat of Qatar (summer temperatures reach 50+ Celsius), both the thobe and abaya additionally completely cover the awrah, or private parts. The awrah has been the focus of controversy as to its exact meaning since its semantic range in Arabic can include nakedness, vulnerability, privacy, and weakness. In most of the Sunni madhhabs (schools of fiqh), the male awrah extends approximately from the knees to the navel. For females, the interpretation of awrah is much more complex as evidenced by the variant cultural forms of Islamic female dress.

For example, the full length burqa found in Afghanistan points to an interpretation that the entire body of the female is awrah, while other countries tolerate women appearing in public with uncovered hair. Interestingly, in Qatar, a common fashion is to wear the shayla head covering partially back on the head, revealing a portion of the hair. The hair is clearly fetishized as a sexual object in Qatari society. In a minority highly conservative theological opinion, such as Ibn Al-Arabi, the voice of women is awrah along with her entire existence, which reveals an attitude that women should not appear in public at all, but should be secluded. This attitude is extremely uncommon in Qatar today due to the new active role of women in society, encouraged by the former Emir’s wife Sheikha Moza bint Nasser who encourages women’s rights and greater participation in society.

The use of the shayla—also generically known as hijab, which can be translated as protection, carrying with it the additional metaphorical meaning of protection from unwanted male attention—to cover the hair is almost universal among Qatari women. A small percentage of women, primarily from traditional Bedouin heritage, wear the niqab or full face veil, covering all of the face except the eyes. An even smaller and diminishing number of older women wear the batula, a face mask which is often metal-colored. Although Quranic passages speak of modestly covering the breast with a veil (khimar), and the Prophet Mohammed requested that guests speak to his wives through curtain or veil (hijab), the origin of veiling is contested and may be a pre-Islamic Semitic or Assyrian / Mesopotamian custom. Ahmed points out that laws on veiling in Assyrian law are carefully spelled out – veiling may have been simply an upper class requirement indicating social class, while slaves and harlots were forbidden to veil and were punished, hence the veiling-moderesty nexus [6].

The issue of school dress codes and behavioral expectations in the classroom must be contextualized with these traditions and general public attitudes on dress in the State of Qatar both among local and expatriate communities, which can vary considerably, occasionally leading to open conflict. In the last decade local citizens concerned with the patterns of dress of expatriates have launched a number of initiatives, the most recent of which was “The One of Us” campaign in 2012 [7]. Local volunteers set up booths in public places such as shopping malls and spoke with expatriates to remind them of proper dress in Qatar so as not to offend the local cultural and religious sensibilities. Efforts were increased during Ramadan when Muslims fast for one month and reflect on religion (modesty is an important part of general Islamic practice). The main recommendations of volunteers were for men and women to cover the awrah (shoulders and knees) and avoid tight clothing that accentuates the form of the body, eliciting sexual attention. This campaign reveals the striking differences in attitudes towards clothing present in Qatar’s new multicultural environment – most Western designer clothing, particularly for women, is designed not only to signal status and wealth but also to sexually attract, whereas traditional Muslim clothing has historically been created, and remains so today, as protection from the elements and to hide sexual features of the body. The rise of ‘designer abayas’ throughout the Gulf–variations on the entirely black abaya using unusual cuts, color, and accessories—sometimes elicits the wrath of conservative Imams, who believe the function of female dress is to divert attention away from the wearer, to render her invisible and safe from male lust in public. In 2014, the name of the One of Us campaign was changed to “Reflect Your Respect.” Sponsors included Dar Al Sharq, the Qatar Center for Voluntary Activities (QCVA), and Qatari Women’s Association (QWA). An image from the Reflect Your Respect campaign is provided below.

![Reflect Your Respect campaign image](image)

**Table 1.** Brochure image from “Reflect Your Respect” campaign (c. 2014).

Expatriate responses to the campaign were mixed, with some grateful for the cultural lesson (private companies in Qatar sometimes do not provide cultural sensitivity training for new expatriate employees, assuming that the knowledge of appropriate dress is common sense), while others, including some non-Qatari and non-Arab Muslims, acted angrily. Some expatriates accused the campaign of only focusing on expatriate behavior while ignoring identical behaviors among Qataris. Due to this criticism the group extended its outreach to Qataris as well.

Despite the illustrated brochures, the concept of ‘appropriate’ and ‘modest’ dress is difficult for non-Muslims and non-Qataris to understand as it embodies subtle cultural
attitudes and historical developments which are not documented in print. The concepts as well are not well defined from a civil law perspective or even in many of the written dress codes available for the Qatari workplace. The Qatar Constitution of 2004 simply states in general terms: “Respect for the Constitution, compliance with the laws issued by the Public Authorities, abiding by the requirements of public order and public decorum, and observing national traditions and deep-rooted customs are duties of all who reside in the State of Qatar or enter its territory” (art. 57) [8].

The One of Us campaign and its subsequent variants influenced a related dress code campaign at Qatar University that resulted in the official adoption of a new dress code. The policy forbids the following modes of dress:

- Clothes with inappropriate text or images
- Visible tattoos
- Fad hair styles like dreadlocks and the unnatural coloring of hair
- form-fitting or tight abayas for women [9].

An image from the QU dress bulletin is provided below.

Table 2. Illustration from Qatar University dress code pamphlet. Source: Al-Raya Newspaper.

Since women frequently wear in public (underneath their outer abaya) the Western styles of clothing pictured in the QU dress code bulletin, the code also made reference to the opening of the abaya to expose publically inappropriate clothing underneath. Deliberate abaya-opening behavior can be interpreted as flirtation, a desire to show off expensive fashions, or a flaunting of known taboos as a form of teenage and young adult rebellion.

In Education City, the group of primarily U.S.-based satellite campuses set up as an education hub by Qatar Foundation (QF), Hassan Mohammed Al Hammadi, the Executive Director of Human Resources at QF, sent a memo to education city campuses in 2014 reminding them of QF’s standing policies on appropriate dress [10]. This communication was undoubtedly in response to both the One of Us Campaign and the QU dress code, both in full force during that year. Most of the provisions for appropriate dress in Al Hammadi’s letter echoed the general principles of the modest dress campaigns in Qatar. However, the exact details of this Qatar Foundation dress code and its policies are probably not widely known to most students, faculty and staff at the individual Education City campuses. Each university maintains generalized attire policies on their websites or in student handbooks and students in general follow these guidelines. However, given the diversity of dress styles (for example the popularity of T-shirts for males) within Education City, it is clear that these guidelines allow for a variety of dress practices.

CMU-Q is the Qatar branch campus of Carnegie Mellon University in Pittsburg, providing Computer Science, Business, and Biological Sciences programs in Education City. The CMU-Q FAQ relating to dress is provided in full below: “Q-Is there a dress-code that I have to abide to in Qatar? To familiarize you, Qatari national men wear a thobe, a long white shirt over loose pants. They also wear a loose headdress, called a gutra, in white or red and white cloth, held on with a black rope known as the agal. Qatari national women cover their heads with a black headdress called a shayla and their bodies with a long black dress called an abayah. The national dress for both men and women is a traditional custom that Qatars respect and seek to preserve. However, expatriates are free to wear whatever they like and feel would be appropriate within the society and its customs. They are expected to remain sensitive to the Islamic culture and not dress in a revealing or provocative manner. Men generally wear long pants and a shirt in public. Women’s attire should cover shoulders and knees. Shorts and short skirts are considered inappropriate, although casual dress is becoming increasingly flexible. Western bathing attire is worn at hotels, clubs, swimming pools, some beaches, and in private gated housing communities. Topless sunbathing is not permitted. For business attire, suits are the most common dress for men at work. Working women tend to wear items similar to those they would wear in their home country” [11].

An excerpt from a job posting for a Qatar Academy (a high school within Qatar Foundation) expatriate teacher position provided below spells out the approved clothing for both male and female prospective teachers.

**DRESS CODES FOR TEACHERS**

(Qatar Academy, Doha, Qatar)

**MALE TEACHERS**

- Shirts – long or short sleeved
- Tie (compulsory)
- Long dress trousers/pants
- Shoes (closed toed) – should be smart and professional

**FEMALE TEACHERS**

- Long dress trousers/pants (to ankle at least) or Skirt or dress (below the knee at least). Stomachs must be covered.
- No capri pants

**TOPS**

- Collared shirt or if wearing a round neck top or similar, a jacket must be worn over the top Knitted tops (Professional in style)

- No T Shirts e.g. cotton tops round or v neck with or without a pattern
- Tops must cover shoulders and upper arms

- Shoes should be smart and professional, preferably closed toed/close back

Clothing must not be see through, low cut or obviously too tight fitting. Clothing made of denim material is not allowed.
No national dress is to be worn e.g. abayas or saris (although Islamic dress and hijabs are permitted).

If you are unsure of the suitability of an article of clothing feel free to ask any of the Administrators for advice [12].

Interestingly, the female dress is specified in much more detail, for two probable reasons: 1) women have more diverse choices in clothing selection than males; 2) sexualization of the female is a greater concern to Qatari society than sexualization of the male body. This phenomenon may be related to the Arab cultural custom that family honor resides in the female. Also, ‘national dress’ (thobe and abaya) is prohibited in the job description since the expatriate could be mistaken for a Qatari, who exercise certain social privileges as a result of being in national dress. For example, expatriate unmarried males are banned from public parks and Qatari families are allowed sole access to some malls on Fridays (‘family days’).

V. CONCLUSION

Westernization, secularism, and religious sensibility (rules of awrah or the privacy of certain body parts, and the rules of public modesty) all come into play in attitudes towards dress in Qatar and in the Qatar educational system. Some concerns related to the Qatari dress codes are similar to those found in Western school dress codes in preventing sexualization of students in the educational setting and removing distractions from the classroom. The issues, however, are complicated in Qatar by the expatriate-local relations and the role of clothing as a cultural symbol that instantly distinguishes in public membership in a particular cultural group, since most expatriates wear clothing that is traditional to their country of origin.

References

Teacher Continuing Professional Development in Qatar: Barriers and Prospects

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Abstract—Although public education only first began in the State of Qatar in the mid-1950s, and its first university Qatar University opened in 1977, the Supreme Education Council (SEC) established in 2001 has operated on the basis of international best practices in pedagogical theory and praxis. Specifically, the government launched the Education for a New Era (EFNE) initiative in 2001 after a review of the country’s educational system by the U.S. RAND Corporation. A series of reports recommended a large number of radical changes in the provision of educational services in Qatar’s K-12 educational system, including Continuing Professional Development (CPD) modeled on western and primarily American models. However, a recent study by Nasser and Romanowski (2012) questioned the impact of these programs on actual teaching practice in Qatar. Also, Qatar still ranks comparatively low in international standardized student test scores, such as PISA and PIRLS as reported by the OECD. Thus the effectiveness of the newly created programs has been variable. This contribution analyzes the available data, case reports, and government statistical websites (Qatar Statistics Authority) to provide an overview of CPD in the State of Qatar, including the related practice of Continuing Medical Education (CME). The paper also suggests improvements in the current assessment, quality, and rewards policies in the education system of the State of Qatar.

Keywords:-- education--Arabian (Persian) Gulf; continuing professional development (CPD); teacher training; Qatar

1. INTRODUCTION

The State of Qatar has only recently arrived on the international scene as a country of note. As a late adopter of the Internet and previously with little regional power in face of the dominant military powerhouses of Saudi Arabia, Iran, and the former Iraq, the small peninsular nation in the Arabian (Persian) Gulf has mostly been unknown in the international press until the last decade. A period of high oil prices coupled with a small native population of approximately 300,000 however created enormous budget surpluses since Qatar ranks 14th in world oil production with 2,055 thousand barrels per day (bpd) and boasts the third largest proven natural gas reserves in the world at 24.7 trillion cubic meters, as reported in 2014 by the U.S. Energy Information Administration (EIA) [1].

These budget surpluses were used to further develop the infrastructure and human resource capacity in the country. Although now ranked as a high-income country with a very high human development index (ranked 32 in HDI with a score of .850 in 2014), in many areas such as healthcare, roads, and sanitation the nation is still developing [2]. Natural gas only became a recent export commodity in Qatar, facilitated by U.S. built refrigerated LNG tankers. Although Qatargas is the largest LNG plant in the world, established in 1984 and delivering its first shipment of gas in 1996 to a customer in Japan, the company’s major production plants did not start operation until 2009, 2010, and 2011 when Qatargas 2, 3, and 4 came online. Also, oil wealth was not equitably distributed in former years and was kept within the hands of a small number of elites, removing public funds for development from the government revenue stream. Thus Qatar’s infusion of wealth has been relatively recent, and basic features of its society such as its educational system have been underfunded and neglected until recently.

Historically, Qatar was sporadically settled by Bedouin tribes with several semi-permanent towns such as Al Bidda, Fuwayrit, and Zubarah. The area was loosely controlled by northern Mesopotamian and Akkadian peoples (Dilmun civilization) for its importance as a trade route for copper, aromatic gums, woods, and spices. A Tyrian purple dye factory using the local gastropod Murex spp. was discovered in Qatar in the 1970s near Purple (Al Ghanim) Island along with Ubaid era pottery shards at Ras Abruk [3]. The area was also ruled by Persian dynasties such as the Sassanians. Both the Ottomans and British exerted political power over the region in the 19th century; however, the sparse population and few natural resources coupled with the difficulty in collecting taxes from the mobile beddu tribes translated to power in name only. The British were primarily concerned with protecting their shipping interests in British India and subsequently signed many maritime truces with local Sheikhs along the Arabian Gulf littoral which came to be known as the Trucial Coast. The British Political Agent Lewis Pelly by settling the Qatar-Bahrain War (1867-68) simultaneously brought recognition to the ruling Al Thani tribe and Qatar as a distinct political region [4]. After the defeat of the Ottoman Empire in WWI, Qatar
became an official British Protectorate from 1916-1971, when it gained full independence.

Qatars profess primarily Sunni Islam and the influence of Wahhabism from neighboring Saudi Arabia impacts culture, behaviors, theology, and sharia law (Hanbali madhhab). Unique in the world is the ratio of expatriates to citizens and only approximately 11-14% of the population are passport holding citizens. The ethnic makeup of Qatar is Arab 40%, Indian 18%, Pakistani 18%, Iranian 10%, and other 14% [5]. Muslims make up 77.5% of the population, with a significant Christian population of 8.5% and 14% other (probably Hindus and Buddhists among the immigrant professional and manual labor population) [6].

The previous history and development of education in Qatar has had a strong impact on current practices. Schooling in the pre-oil (pre-1948) era was sporadic with most instruction occurring at informal schools known as kuttabs where basic literacy—primarily learning to read the Quran—and mathematics were taught. In 1890, there were 10 kuttabs operating in Qatar and in 1913 the religious al-Athariya school opened [7]. From 1947-56 the modern school system of Qatar was built. As an oral and non-technical society, there was originally little need for literacy before the development of the oil and gas fields and the oral nature of the culture continues to this day. Many older locals prefer to receive news and information by telephone or through regular neighborhood meetings called the majlis rather than reading newspapers or books. The Internet is now very popular, however, among younger Qatars with an explosion of social media use from 2008 to the present.

Concerned about low international rankings of Qatari high school students in standardized tests as well as low per capita expenditure on education, the State of Qatar contracted with U.S.-based RAND Corporation in 2001 to analyze and suggest reforms in the educational system. RAND’s analysis resulted in a program called Education for a New Era (EFNE). Arabic and English language curricula was updated and standards increased. Additionally, new student and teacher assessment and professional development rules were put in place [8]. To coordinate the reforms, The Supreme Education Council (SEC) was established in 2002 taking over many functions of the former Ministry of Education (MOE), which was tasked with regulating private education. In 2009, the MOE was absorbed into the SEC for administrative reasons.

II. CONTINUING PROFESSION DEVELOPMENT IN QATAR

Eslami et al. reported in 2016 on a six week teacher development program for Qatari Middle School science teachers. The research was carried out as a pilot program funded by the Qatar National Research Fund. One important finding was that “participants expanded their views of reading by the end of the intervention, discussing reading as a process that needs to be explicitly addressed, taught and modeled” [9].

In 2004-2005, RAND education began work on a continuing professional development system for teachers based on the standards-driven reforms of EFNE and founded on the Guskey model [10, 11]. The main features of the program included:

1. Standards Implementation Support workshops: three five-day workshops were developed in order to introduce the curriculum standards for mathematics and to discuss with teachers in the 12 independent schools the implications for planning the curriculum, teaching, learning, and assessment.

2. Follow-on activities: focus groups, schools visits and classroom observations that take place regularly between and around the workshops mentioned in (a).

3. School Support Organization contributions: each school is assigned an internationally-recruited school support organization that helps facilitate and/or mentor teachers in their daily classroom practice.

4. School-Based professional development: each school is expected to craft its own professional development plan that might vary in shape and style according to the school vision and resources [12].

The State of Qatar, however, ended its relationship with Rand-Qatar Policy Institute in 2013 after their ten year contract was concluded. In 2009, the SEC issued the National Professional Standards for Teachers and School Leaders Policy [13]. During this developmental stage, the Supreme Education Council partnered with the New Zealand educational consulting company Cognition Education. According to Cognition, “Between 2004 and 2009 Cognition provided professional development support for over 80 Ministry of Education schools in Qatar. A key component of this support was dedicated coaching for principals and other senior leaders to develop strategies to implement future focussed policies and practices to accelerate student achievement” [14]. Cognition Education not only sponsored and organized workshops and activities, but they also produced template documents for Professional Development planning for local schools such as “Planning for professional development – some guiding questions”; “Sample Professional Development Needs Assessment Tool,” “Using the standards to identify individual professional development needs”, etc.

The National Centre for Educator Development (NECD) began some of its operations in 2011. The initiative was led by Sheikha al-Misnad, the former President of Qatar University and HE Saad bin Ibrahim al-Mahmoud, Qatar’s Minister of Education and Higher Education. The primary mission of the organization is to provide further training and development opportunities for teachers in Qatar.

Private industry has also partnered with Qatar University and the NECD to develop teacher CPD programs. For example, the National Centre for Educator Development, Qatar University (QU) and ExxonMobil Qatar have jointly sponsored four Qatar University ExxonMobil Teachers Academies for about 45-55 Independent school teachers. According to the Academy, which now includes an initiative called Maharaty started by HE Sheikha Hind bint Hamad al-Thani, “the teachers will undergo a week-long, intensive professional development programme that will foster innovative maths and science teaching skills, helping them inspire their students to develop an interest in the subjects” [15].
Nasser and Romanowski surveyed 40 in-service teachers from two Doha schools who had recently completed CPD activities. Their research goal was to gauge the participants’ views of the effectiveness and purpose of CPD activities. While the authors saw merit in the technical skills acquired by teachers in the activities, they were concerned that teachers were not acquiring the mindset of life-long learning (LLL) that they could take away with them from the workshops.

As Nasser and Romanowski conclude: “Our concern is that the current system of PD is producing technicians who lack the full ownership of the knowledge imparted through PD. We are cautious of evoking the too-often quoted Chinese proverb, but it serves this discussion well: ‘Give a man a fish and he will eat for a day. Teach a man to fish and he will eat for a lifetime’. The problem with PD is that it provides teachers with a fish – teaching ideas, lesson plans and practical solutions to a variety of problems without ever teaching them the theory and reflection involved. Teachers are more concerned with mastering and refining teaching methodologies than with developing the thinking processes needed at times to understand the theory required to sustain real educational reform. In this sense, technical competency, successful teaching and educational reform are defined as treating knowledge as objective, and mastering and applying predetermined sets of teaching and assessment methodologies or applying various technical management skills under the guise of leadership. Completely annulled or else shunted to the margins are the epistemological and theoretical foundations that must be maintained and adapted to bring about educational reform, and we believe that this is essential for the longevity of educational reform” [16].

III. CONTINUING MEDICAL EDUCATION

A. What is CME?

Continuing Medical Education (CME) is a set of practices strongly related to Continuing Professional Development, specifically geared towards the healthcare professions. CME was recognized informally in the 19th century as a necessity for Physicians due to rapid advances in bacteriology (antisepic surgery) and chemically synthesized pharmaceuticals. The “Grand Rounds”, which are still practiced today, have a long tradition. During rounds the senior attending physician selects and examines unique cases for the instruction of junior doctors and nurses. Continuing Medical Education is regulated in the U.S. by the Accreditation Council for Continuing Medical Education (ACCME) formed in 1981 as the successor to two previous organizations, the Liaison Committee on Continuing Medical Education and the American Medical Association’s Committee on Accreditation of Continuing Medical Education. In American and European hospitals, the requirement to obtain a set number of CME credit hours in order to maintain an active medical license is now almost universal, although the exact requirements vary according to the locale [17].

The ACCME’s main goal is “to oversee a voluntary, self-regulatory process for the accreditation of institutions that provide continuing medical education (CME) and develop rigorous standards to ensure that CME activities across the country are independent, free from commercial bias, based on valid content, and effective in meeting physicians’ learning and practice needs. The ACCME accreditation process is of, by, and for the profession of medicine” [18]. The Union Européenne des Médecins Spécialistes (UEMS) coordinates and supports CME for EU member states.

The Gulf Cooperation Council (GCC) of which Qatar is a member along with Saudi, Kuwait, Bahrain, Oman and UAE, has adopted a GCC-wide CPD/CME framework. The Committee for Training and CPD/CME was established at the GCC level in 2001 and most of the Gulf nations have developed CME programs, with Saudi Arabia having the most developed program structure [19].

B. QHPC Regulations in Qatar: CME Comes to a Rapidly Developing Nation

Qatar, whose health system has rapidly evolved in the last decade and is now achieving international standards of excellence such as Joint Commission International (JCI) accreditation of its hospitals, has only recently instituted CME requirements for practicing healthcare professionals. In 2013, the Ministry of Public Health of Qatar formed the The Qatar Council for Healthcare Practitioners (QCHP) to regulate healthcare education and practice in the State of Qatar. The Council created a special division for “Medical Education and Continuing Professional Development.” According to the QCHP, this division “is concerned with developing mechanisms to regulate and accredit activities of medical education/continuing professional development in the state of Qatar and to monitor such activities to ensure their adequacy, quality and compliance with national and international accreditation standards. Effective CME/CPD programs would identify professional practice gaps and lead to a positive change in knowledge, competence, and performance of healthcare practitioners, each in his/her field of practice. This will lead to the development of medical practice to be evidence- and needs assessment-based” [20]. According the QCHP, “All healthcare practitioners in part-time or full-time practice in the State of Qatar are required to complete the annual and cycle-specific requirements of the CPD Program to maintain their registration and renewal of licensure with the Supreme Council of Health (SCH)” [21].

The required credit hour table is provided below.

<table>
<thead>
<tr>
<th>Duration between the CPD system launch and the date of renewal of license</th>
<th>Annual Credit Requirements</th>
<th>Cycle Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 3 months</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>3 - 6 months</td>
<td>10 credits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>6 - 9 months</td>
<td>20 credits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>9 - 12 months</td>
<td>30 credits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>12 - 15 months</td>
<td>40 credits</td>
<td>22 credits in Category 1 or 2</td>
</tr>
<tr>
<td>15 - 18 months</td>
<td>50 credits</td>
<td>23 credits in Category 1 or 2</td>
</tr>
<tr>
<td>18 - 21 months</td>
<td>60 credits</td>
<td>24 credits in Category 2 or 3</td>
</tr>
<tr>
<td>21 - 24 months</td>
<td>70 credits</td>
<td>35 credits in Category 2 or 3</td>
</tr>
</tbody>
</table>

Table 1. QHCP CPD requirements for licensure renewal in Qatar.

C. Continuing Professional Development at Weill Cornell Medicine Qatar (WCM-Q) and Qatar University College of Pharmacy

In response to these new regulations and requirements, Weill Cornell Medicine – Qatar, Hamad Medical Corporation and Qatar University’s College of Pharmacy led the way to
developing programs in the State of Qatar to provide the legally required programs for healthcare practitioners. According to WCM-Q’s Continuing Professional Development Office mission statement, “The Continuing Professional Development (CPD) division’s mission aims to promote educational endeavors, which extend beyond the undergraduate program and align with the mission of Weill Cornell Medicine-Qatar. To this end, the mission of this division is to:

- Provide high quality professional development opportunities for health professionals based on identified needs and the latest scientific and medical developments that will lead to the improved health care of patients;
- Offer health professionals the opportunity to attain credits toward medical licensing requirements locally and internationally;
- Develop and disseminate best evidence-based practice and health education research; and
- Create opportunities for health professionals to develop a community of practice to interact with one another personally and professionally [21].

Wilbur carried out the first CPD needs assessment of pharmacists in Qatar with a cross-sectional review of behaviors in 2010. Her conclusions were: “Approximately one-third had no or inadequate internet access in the workplace. In the past 2 years, one-quarter had not attended any live local educational programmes. Major obstacles included poor timing (66%) and excessive workload (56%). Most pharmacists preferred interactive CE programme formats and one-third indicated Arabic as delivery language of choice. The majority expressed high motivation to achieve their CPPD goals and only 12% outrightly opposed mandatory CE for pharmacist re-licensure.” Wilbur further concluded that “Qatar pharmacists demonstrated support for enhanced CE opportunities. While views and preferences mirror those of colleagues elsewhere, current conditions merit careful consideration of CPD programme development and delivery, including language and technology capabilities” [22]. Her conclusions on CME/CPD can be extrapolated to other areas of healthcare in Qatar as various institutions face similar challenges, for example provision of up-to-date computers and software and reliable wifi connections in the workplace, a key point since many CPD programs are now online and encourage anytime / anywhere access for busy working professionals.

IV. CONCLUSION

Clearly the related concepts and practices of Professional Development (PD), Continuing Professional Development (CPD), and Continuing Medical Education (CME) are new developments in the State of Qatar due in part to the novelty of high quality education in the State of Qatar itself which began organizing its primary and secondary systems of education in the middle of the last century and only began national tertiary education development in the latter portion of the 20th century. After commitment to excellence by top government officials, progress was rapid and swift with per capita spending in Qatar on education on par with highly successful educational systems such as Singapore. However, in the face of rapid change often comes cultural and organizational dissonance. It is not clear judging from internal assessment reports and internationally benchmarked exams that reforms such as Education for a New Era (EFNE) have yet to have fully impacted the Qatari educational system. EFNE was built upon the pedagogical paradigms of American-style education which had not been adapted to the local Muslim culture and previous educational practices. Some education stakeholders in Qatar were alienated by the rapid changes inaugurated by EFNE without proper planning and feedback, although the basic features of CPD are recognized internationally as best practices.

Clearly more work needs to be done in theorizing CPD within the local and Arab and Western expatriate teacher communities in Qatar to increase awareness of the fundamental rationale of these programs. Once the concept of CPD is grasped, teachers will undoubtedly take more advantage of the many informal self-directed learning activities which are increasing rapidly in Qatar. For example, two museums of Arabic art – the Museum of Islamic Art and Mathaf – not only are building world class collections of Arab art but also offer free public programs for learning about art. Education City campuses in addition often sponsor free public lectures on literature, politics, science, and medicine. When teachers become Lifelong Learners, they not only increase their own knowledge and proficiency in teaching, but also inspire the love of learning in students beyond the classroom. In addition, the need for formal paid CPD programs is reduced creating greater efficiency in the public education system.

References


Research Proposal

Investigating Science Teacher knowledge and Beliefs regarding multiculturalism: A Qualitative Case Study

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Objectives

With the fast growing population of immigrants in United States, the gap in cultural and educational experiences between a teacher and multicultural students must be an issue. According to Van Dijk and Kattmann (2007), a teacher’s learning experience in the past affects his or her epistemic orientations of content knowledge (CK) and pedagogical content knowledge (PCK). Teachers’ learning experiences become barriers of communication with their diverse students in science learning situations. This case study will examine how a teacher and students from diverse background such as ethnicity/race, language, culture, learning ability, and education in a Midwestern high school deal with the cultural and educational gaps and how a teacher’s view of multiculturalism affects diverse students’ science learning. A teacher’s understanding of multiculturalism must have impacts on a level of expectations on students’ achievement and types of learning environments. We will examine hidden multicultural issues of teacher-diverse student discourses in general science class, and provide possible explanations for relationships between diverse students’ science learning and teacher’s multicultural knowledge and beliefs. Through this study, we will make a case for 1) how science teachers understand the concept of multiculturalism through their experiences 2) how science teachers implement multiculturalism into their classes.

Backgrounds

Cohn (2015) asserted that future populations’ ethnic composition will be more diverse within 50 years and the ratio of total immigrant population will be 51 percent of the total US population. That means, teachers and students will experience multicultural gaps when they communicate for science learning. Multicultural issues must be discussed in science education for the sake of nurturing all children’s scientific literacy and ensuring their success in learning science (NSTA, 2000). NRC (2011) also emphasizes the importance of embracing students who are from different countries of origin and have diverse educational and cultural backgrounds in science classrooms. Science teachers should encourage all students to achieve scientific understanding and experience scientific practices by providing their own primary languages and intimate ways of interactions (NRC, 2011).

Midwestern states have especially experienced fast growing foreign-born populations range from 65% in Michigan to 298% in Nebraska from 2000 to 2010 (Scholars Strategy Network, 2012): therefore teacher education and multicultural education programs for both native and non-
Native students are necessary (Alexio, Chin, Fennelly, & Shurilla, 2012). As our targeted research site, a single Midwestern public high school, has experienced rapid growing non-native English speaker students for nearly a decade: 9.7% of K-12 enrollments of all minority students in 2000 increased to 21.8% in 2014, it will be meaningful to investigate multiculturalism in science classroom (Iowa Department of Education, 2015). In this study, we will investigate multiculturalism in an Iowa public high school science classroom with two research questions:

1) Does the gap in cultural backgrounds between a science teacher and diverse students affect those students’ science learning?
2) How are a science teacher’s multicultural beliefs and knowledge related to their diverse students’ science learning?
   a) What kinds of experiences related to multiculturalism does a science teacher have?
   b) How does a science teacher interact with diverse students in terms of teaching strategies and types of discourse?
   c) What kinds of experiences do diverse students have in their affect (feelings or emotions), motivation, and self-efficacy?

**Procedure**

**Participants**

Based on the minority demographic statistics report, we will recruit participant teachers through email and personal contacts. An intended research site is a science classroom for non-native English speakers taught by white native English speaking science teacher.

**Data Collection**

There are two phases of this study.

**Phase I: Classroom observation.**

We will conduct one semester classroom observation. Video recordings and field notes will be collected from the classroom observations.

**Phase II: Teacher and student interviews**

Based on the classroom observations, researchers will come up with interview protocols to capture the teachers’ multicultural perceptions and expectations. Also interviews with students will generate students’ dispositions and attitudes toward the science class.

**Data Analysis**

All video records and interviews will be transcribed and analyzed. A discourse analysis framework will be adopted to develop open coding system and discover patterns in teacher-student interactions (Simon, Naylor, Keogh, Maloney, and Downing, 2008).

**Implication**
Through this study, we intend to contribute to improving science teachers’ practices of multiculturalism and supporting non-native English speaker students’ future science related careers.

Reference


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The Influence of Family Language Background on the Development of Chinese and English Reading Abilities

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Abstract

With the bilingual education policy, Singapore’s Chinese students have a unique Chinese-English bilingual background, how schools nurture bilingual talents in Singapore has induced great interest for researchers. The research focuses on the development of bilingual reading ability of Chinese students in Singapore schools, and proposes an evaluation system for bilingual reading capabilities. The study collects the data from Chinese and English reading comprehension test adopted from PIRLS-Literacy and PIRLS. This paper examines the Chinese and English reading abilities of 7-, 9- and 12-year-old Chinese students with three different types of family language backgrounds (Chinese dominant, English dominant, bilingual in Chinese and English) in Singapore. The results show that the impacts of family language background on their English reading abilities have disappeared for 12-years old. As a second language in Singapore school, there is obvious effect of family language background on Chinese reading ability through the whole primary education period. Testing results show that the ability of interpreting and integrating ideas and information, and the ability of evaluating and critiquing content and textual elements are increasing from age 7 to 9 to 12 years old.

Key words

Reading ability Bilingual PIRLS Reading education Family language background

Introduction

In internet age, reading is one of main means for one to access information. Various books and magazines in the world are increasing faster and faster, and scientific journals have been more than hundred thousand (Yan, 2004). It was reported that the information generated by human beings doubles every two years, of which 95% is electronic information (Lymam and Varian, 2000, 2003). With rapid growth of electronic information, the reading platforms have become more diverse, and it changes reading habits of human beings and makes a person in reading through all his life.

How to get more effective information from wide resources in shorter time is becoming a critical issue that a person must handle today. It is one of objectives of language learning and teaching to train this capability. Another important task of language teaching is to ensure that students have the life-long learning ability in the future (Tse, Lam, Lin, and Loh, 2005). Reading teaching will be paying more attentions on the capabilities and skills teaching.
Corresponding to the change, reading test should be not only on the verbal test, but also including the test of reading ability, which covers reading speed, reading comprehension and wide scope.

**Issues of Chinese and English reading abilities of Chinese students with bilingual background in Singapore**

Dual language policy in Singapore requires a student to master English and his mother tongue. English is the official language in school. It is compulsory for a Chinese student to learn Chinese and to reach a certain level in school. From the school view point, Chinese looks like the secondary language in Singapore for Chinese student. But from other view point, Chinese is the most popular local language in newspaper, magazine, TV and radio, and also the main oral language in daily life.

The report by Singapore ministry of education (2010) mother tongue languages review committee on a survey for Chinese students in primary 6 in Singapore, shows that there are 37% of students to communicate to family members solely or mostly in Chinese at home (Chinese dominant), 38% of students solely or mostly in English (English dominant), and 25% of student in both Chinese and English (bilingual in Chinese and English). So for the students in Singapore, there is much more opportunity to contact Chinese than students in other English-speaking countries. Chinese is in the middle between the first language and secondary language for Chinese student in Singapore’s school. Language background is one of key factor to affect development of reading ability, and its role in reading teaching must be pay more attention in the research.

With the international trend of wide employing of English and Mandarin's influence rising, the demand for students to master bilingual (Chinese and English) or even Multilanguage is increasing year by year. Singapore’s Chinese student has a unique Chinese-English bilingual background.

This paper focuses on the development in the bilingual reading ability of Chinese students in Singapore schools, and explores whether the family language background affect the development of Chinese and English reading abilities of Chinese students with bilingual background in Singapore school.

**Literature and theoretical basis**

**Reading types**

Reading can be divided into five reading types: scanning, skimming, rauding, learning and memorizing, which each has different characteristics of reading thinking activities and speed limit. Carver (1981) summarized the characteristics of the five reading types, objectives, activities and their thinking after the corresponding reading speed were extracted by experiment. Carver considered the rauding process is the basic reading process and the most important process because it is the one involved in normal or typical reading. It is the most general and
common type of routine, the purpose was to understand the full message which the author wants to convey in the article (Lam, 2008; Tse and Lam, 2013).

According to rauding theory, there are three slices of time, 1 sec, 1 min and 1 year of reading. One second of reading refers to the cognitive processes that occur during one eye fixation on a word (e.g., Gough, 1972; Carver, 1997). One minute of reading refer to much of the research that presents prose passages to readers that are about 100 to 300 words in length and then measures comprehension or recall (Miller and Kintsch, 1980; Anderson et al. 1983), the comprehension that occurs when the rauding process is executed for 1 min, or 1hr (Carver, 1997; Tse, Lam et al. 2005). One year of reading refer to the research that involves gain during a school year (Juel, Griffith, and Gough, 1986; Carver, 1997). One-second reading, one-minute reading and one-year reading are three important dimensions of reading (Tse, Lam et al. 2005). This paper focuses on the one-min reading experiment.

Chall (1983) believes that there are six stages for the development of children’s reading ability: pre-reading, initial reading or decoding, confirmation, reading for learning the new, multiple viewpoints, construction and reconstruction. First three stages (0~2) belong to ‘learning to read’, later three stages (3~5) belongs to ‘reading to learn’ (Chall, 1983; Tse and Lam, 2013). The study focus on how to develop from ‘learning to read’ to ‘reading to learn’, 9-years-old is adjacent to these two phases; this age is generally just reached the end of children’s early reading education.

**PIRLS**

The Progress in International Reading Literacy Study (PIRLS) and PIRLS Literacy (earlier known as prePIRLS) organized by the International Association for Evaluation of Education Achievement (IEA) is to explore the relationship of primary school children's academic achievement and the experience of language learning in their family and school, and find out the factors that improve the language reading ability (Tse, Lam et al. 2005; Mullis, Drucker, Preuschoff, Arora, and Stanco, 2011). PIRLS is an assessment of reading comprehension that has been monitoring the trends in student achievement at five-year intervals since 2001. PIRLS represents the worldwide standard for reading comprehension at the fourth grade (IEA, 2016). The top-performing countries in PIRLS 2011 were Hong Kong SAR, Russian Federation, Finland, and Singapore (Mullis, Martin, Foy, and Drucker, 2012).

In PIRLS the attention is paid on 9-year-old children’s reading literacy acquisition and formation (Campbell, Kelly, Mullis, Martin, and Sainsbury, 2001). PIRLS examines on rauding type of 1-min reading abilities for 9-year-old students on the watershed between 2nd and 3rd stages of mother tongue reading ability development. 9-years old seems to be used as the watershed in development of children’s reading ability. However, the understanding from “learning to read” and “reading to learn” cannot be simply distinguished. The four processes of reading comprehension is a critical period of personal reading ability developing, but the learning ability seems significantly affected by the development of reading ability before and after the relevant periods (Tse and Lam, 2013).
Table 1. The PIRLS Reading Purposes and Comprehension Processes

<table>
<thead>
<tr>
<th>Processes of Comprehension</th>
<th>Purposes for Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process 1: Focus on and retrieve explicitly stated information</td>
<td>• Reading for literary experience</td>
</tr>
<tr>
<td>Process 2: Make straightforward inferences</td>
<td>• Reading to acquire and use</td>
</tr>
<tr>
<td>Process 3: Interpret and integrate ideas and information</td>
<td>information</td>
</tr>
<tr>
<td>Process 4: Evaluate and critique content and textual elements</td>
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</tbody>
</table>

Table 1 shows the two reading purposes in PIRLS and four comprehension processes of PIRLS (e.g., Tse, Lam et al. 2005; Mullis et al. 2012; Tse and Lam, 2013; Mullis and Martin, 2015).

PIRLS Literacy is designed to test basic reading skills. Its assessment is consistent with the PIRLS framework for assessing reading comprehension. The same background questionnaires are used and the common expert committees review both the PIRLS and PIRLS Literacy assessment passages, items, and scoring guides (Mullis et al. 2011; Hernández, 2014). In general, PIRLS Literacy was developed in parallel with PIRLS, except it is less difficult than PIRLS and has shorter reading passages with easier vocabulary and syntax. The reading passages and questions in common between the PIRLS Literacy and the PIRLS assessments will enable the two assessments to be linked, so that the PIRLS Literacy assessment results can be reported together with the PIRLS assessment results and directly compared to them (Mullis and Martin, 2015).

**Student reading study in Singapore**

Neo Eng Guan (1992) has conducted eight reading strategies for student reading learning: “intensive reading, extensive reading, skimming reading, seeking reading, speed reading, appreciation of reading and critical reading”, and eighteen reading micro-skills. The “six-level reading ability system” listed the six ability elements: repeat, explain, re-engineering, stretching, evaluation, creativity (Zhu, 2008). For exploring the reading theory and practice of classroom teaching in second language, Aw Guat Poh (2013) is using the QAR reading strategy which is a unique teaching method, "look, think and ask”, to guide students to understand the lyrics which are harder to understand.

The second language extensive and speed reading skills training is emphasised on Chinese language by Singapore, from 2009 to 2010. An extensive rolling reading method by school-based pilot and action research were launched by study group in school (Hu, Aw, and Lim, 2012). The extensive rolling teaching theory and classroom practice study were carried out, and the key words reading pedagogy which is from the rolling reading was refined (Hu, Aw, and Lim, 2013). At the same time, many Singapore researchers and teachers are also actively involved in student reading research.

Reading attitude and reading habits are defined as important parameters in Singapore Syllabus Chinese Language for Primary School (2007). Reading ability is becoming a critical issue in primary language teaching in Singapore. The more reading paragraphs are added in examination and test.
Currently, the assessment of reading ability is designed on the base of cognitive, which consists with “six-level reading ability system”. The questions are focused on the processing of obvious and implicit information, attention on text structure, summarization of chapters, projections and extensions, and highest level of creativity. The questions system is based on the six cognitive levels with 18 types of questions. There is still lack of the questions system for metacognitive ability. The metacognitive ability is very important for bilingual background student, since they have different family background and existing knowledge. Furthermore, the study of reading ability is focused on the Chinese, which cannot systemically reflect bilingual environment.

So far, the correlation study between reading ability and family language has been yet conducted.

**English PIRLS Study in Singapore**

English PIRLS study has conducted in Singapore since 2001. In 2012, Singapore had 24% of students reaching the PIRLS Advanced International Benchmark for English language (Mullis et al. 2012). The proportion of P4 students who attained the ‘Low’ benchmark fell from 24% in 2001 to 13% in 2011 (MOE, 2012).

The results affirm that Singapore has made significant progress in levelling up the performance of the academically-weaker students. Broad-based efforts such as the strategies for English Language Learning and Reading (STELLAR) programme in primary schools cater to diverse range of English language learners through the use of learner-centred and developmentally-appropriate pedagogical approaches (MOE, 2012).

**Focuses of the paper**

Since 2001, English PIRLS study has been conducted for fourth-grade students, but there is not PIRLS study on Chinese yet in Singapore. The study focuses on the investigation and comparison on Chinese and English testing for students from three groups: Chinese dominant, bilingual in Chinese and English, and English dominant, depending on their family language background.

PIRLS normally aims to investigate 9 year-old students’ academic achievement on reading experiences at home and in school, and finds out the factors affecting reading abilities. The study analyses the influences of three age groups 7, 9 and 12 years old, corresponding to the ‘pre-reading’, ‘learning to read’ and ‘reading to learn’ stages in the development of children’s reading ability.

**Research method**

**Test paper design**

Test paper is designed in four sets which all cover typical literary story and information expository texts in different language for PIRLS or PIRLS-Literacy. The questions are designed to cover different layers of reading ability. Every participated student reads a PIRLS-Literacy paper and a PIRLS paper in Chinese and English, a set of paper as shown in figure 2.
Figure 1 shows there are two articles in each set of paper which include Chinese and English, PIRLS-Literacy and PIRLS, literary story and information expository, in these two texts. Its details are shown as table 2.

Table 2. Assessment Table for Reading

<table>
<thead>
<tr>
<th>Reading Test</th>
<th>Title of Articles</th>
<th>Types</th>
<th>Language</th>
<th>Genre</th>
<th>No. of Qns</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first set of paper</td>
<td>从幼虫到蝴蝶</td>
<td>PIRLS-Literacy</td>
<td>Chinese</td>
<td>Information expository</td>
<td>16</td>
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<td></td>
<td>An Unbelievable Night</td>
<td>PIRLS</td>
<td>English</td>
<td>Literary story</td>
<td>12</td>
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<tr>
<td>The second set of paper</td>
<td>勇敢的夏洛特</td>
<td>PIRLS-Literacy</td>
<td>Chinese</td>
<td>Literary story</td>
<td>18</td>
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<tr>
<td></td>
<td>Searching for Food</td>
<td>PIRLS</td>
<td>English</td>
<td>Information expository</td>
<td>15</td>
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<tr>
<td>The third set of paper</td>
<td>Caterpillar to Butterfly</td>
<td>PIRLS-Literacy</td>
<td>English</td>
<td>Information expository</td>
<td>16</td>
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<td></td>
<td>一个难以置信的晚上</td>
<td>PIRLS</td>
<td>Chinese</td>
<td>Literary story</td>
<td>12</td>
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<tr>
<td>The fourth set of paper</td>
<td>Brave Charlotte</td>
<td>PIRLS-Literacy</td>
<td>English</td>
<td>Literary story</td>
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<tr>
<td></td>
<td>寻找食物</td>
<td>PIRLS</td>
<td>Chinese</td>
<td>Information expository</td>
<td>15</td>
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</tbody>
</table>

The first set of paper includes a Chinese PIRLS-Literacy information expository text with 16 questions and an English PIRLS literary story with 12 questions. The second set of test paper includes a Chinese PIRLS-Literacy literary story text with 18 questions and an English PIRLS information expository with 15 questions. The third set of test paper includes an English PIRLS-Literacy information expository text with 16 questions and a Chinese PIRLS literary story with 12 questions. The fourth set of test paper includes an English PIRLS-Literacy literary story text with 18 questions and a Chinese PIRLS information expository with 15 questions. For reading test papers selection, a sample of sampling distribution is shown as in table 3.
### Table 3. A sample of sampling distribution

<table>
<thead>
<tr>
<th>No.</th>
<th>Boy</th>
<th>Girl</th>
<th>PLCS</th>
<th>PLES</th>
<th>PLCI</th>
<th>PLEI</th>
<th>PCS</th>
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</table>


### Validation

So far, more than fifty countries and regions, and more than 150,000 students are invited to participate the PIRLS. All PIRLS reading proficiency test volumes and questionnaire must be undergone a rigorous screening, verification and validation. The theory and sample volume are reviewed by academic committee in annual meeting. Therefore, this study bases on the PIRLS theory and sample volume, in order to ensure the reliability and validity of the results.
Data analysis

Participants

Total are 903 Chinese students who are from different family language background and are divided in 7-year-old group (225), 9-year-old group (305) and 12-year-old group (373) are involved in study is from 9 Singapore schools. Around 31% of students are from Chinese-dominant family, 26% of them are from English-dominant family and 43% of them are from Chinese-English bilingual family.

Table 4. Participations and Sampling

<table>
<thead>
<tr>
<th>Family language background</th>
<th>Group</th>
<th>Explanation</th>
<th>Usage frequency</th>
<th>7-years old</th>
<th>9-years old</th>
<th>12-years old</th>
<th>Total</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chinese dominant</td>
<td>Only or mostly speak Chinese at home</td>
<td>C &gt; E</td>
<td>56</td>
<td>87</td>
<td>132</td>
<td>275</td>
<td>31%</td>
</tr>
<tr>
<td>Bilingual in Chinese and English</td>
<td></td>
<td>Almost equally speaking Chinese and English</td>
<td>C = E</td>
<td>102</td>
<td>146</td>
<td>141</td>
<td>389</td>
<td>43%</td>
</tr>
<tr>
<td>English dominant</td>
<td></td>
<td>Only or mostly speaking English at home</td>
<td>C &lt; E</td>
<td>67</td>
<td>72</td>
<td>100</td>
<td>239</td>
<td>26%</td>
</tr>
<tr>
<td>Number/proportion</td>
<td>Boys</td>
<td>467</td>
<td>52%</td>
<td>225</td>
<td>305</td>
<td>373</td>
<td>903</td>
<td>100%</td>
</tr>
<tr>
<td>Total/proportion</td>
<td>Girls</td>
<td>426</td>
<td>48%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The bilingual language background of Chinese students in Singapore are including Chinese dominant (C>E), bilingual in Chinese and English (C=E) and English dominant (C<E).

Results of PIRLS reading test

Through assessments of both informational and literary reading abilities, four processes of reading comprehension has been processed and compared statistically, the p-value = 0.000 < 0.0001 significant. The results of PIRLS assessments have been normalized and standardized to z-scores.

Table 5 shows the results of the normalized mean value of reading test performances on Chinese (CR) and English (ER) for age 7, 9 and 12 groups with difference family language background, Chinese dominant (C>E), Bilingual in Chinese and English (C=E), English dominant (C<E).
Table 5. The Normalized Results of Chinese and English reading tests for 7, 9 and 12 Age with Different Family Language Background Groups

<table>
<thead>
<tr>
<th>Age</th>
<th>FLB</th>
<th>CR</th>
<th>ER</th>
<th>CRP1</th>
<th>ERP1</th>
<th>CRP2</th>
<th>ERP2</th>
<th>CRP3</th>
<th>ERP3</th>
<th>CRP4</th>
<th>ERP4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>7y</td>
<td>C&lt;E</td>
<td>31</td>
<td>27</td>
<td>53</td>
<td>33</td>
<td>44</td>
<td>34</td>
<td>67</td>
<td>36</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>C=E</td>
<td>41</td>
<td>29</td>
<td>62</td>
<td>29</td>
<td>53</td>
<td>34</td>
<td>77</td>
<td>32</td>
<td>42</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>C&gt;E</td>
<td>44</td>
<td>30</td>
<td>57</td>
<td>29</td>
<td>59</td>
<td>32</td>
<td>75</td>
<td>32</td>
<td>42</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>38</td>
<td>29</td>
<td>58</td>
<td>30</td>
<td>52</td>
<td>34</td>
<td>74</td>
<td>33</td>
<td>38</td>
<td>34</td>
</tr>
<tr>
<td>9y</td>
<td>C&lt;E</td>
<td>45</td>
<td>31</td>
<td>57</td>
<td>39</td>
<td>87</td>
<td>25</td>
<td>46</td>
<td>34</td>
<td>73</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>C=E</td>
<td>56</td>
<td>28</td>
<td>74</td>
<td>23</td>
<td>69</td>
<td>31</td>
<td>86</td>
<td>23</td>
<td>62</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>C&gt;E</td>
<td>66</td>
<td>26</td>
<td>69</td>
<td>24</td>
<td>79</td>
<td>26</td>
<td>84</td>
<td>26</td>
<td>69</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>56</td>
<td>29</td>
<td>73</td>
<td>24</td>
<td>69</td>
<td>33</td>
<td>86</td>
<td>24</td>
<td>60</td>
<td>33</td>
</tr>
<tr>
<td>12y</td>
<td>C&lt;E</td>
<td>60</td>
<td>29</td>
<td>85</td>
<td>15</td>
<td>72</td>
<td>32</td>
<td>95</td>
<td>14</td>
<td>59</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>C=E</td>
<td>68</td>
<td>24</td>
<td>84</td>
<td>15</td>
<td>82</td>
<td>21</td>
<td>94</td>
<td>12</td>
<td>72</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>C&gt;E</td>
<td>72</td>
<td>25</td>
<td>84</td>
<td>16</td>
<td>81</td>
<td>27</td>
<td>93</td>
<td>16</td>
<td>77</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>67</td>
<td>26</td>
<td>85</td>
<td>15</td>
<td>79</td>
<td>27</td>
<td>94</td>
<td>14</td>
<td>70</td>
<td>31</td>
</tr>
</tbody>
</table>

The data has been normalized to 100 points. 7y: 7-years old, 9y: 9-years old, 12-years old, FLB: family language background, M: mean, SD: standard deviation, CR: Chinese reading, ER: English reading, CRP1: Chinese reading process 1, ERP1: English reading process 1, CRP2: Chinese reading process 2, ERP2: English reading process 2, CRP3: Chinese reading process 3, ERP3: English reading process 3, CRP4: Chinese reading process 4, ERP4: English reading process 4. For PIRLS, P1, P2, P3 and P4 weight ratios are 0.2, 0.3, 0.3, and 0.2. For PIRLS-Literacy, P1, P2, P3 and P4 weight ratios are 0.5, 0.25, and 0.25 (Mullis and Martin, 2015).
Research Findings and Discussion

Effect of age on the PIRLS results

Figure 2. Visual data of Chinese and English reading results for 7, 9 and 12 age groups.
7y: 7-years old, 9y: 9-years old, 12y: 12-years old, CR: Chinese reading, ER: English reading.

Figure 2 shows the curves of Chinese and English PIRLS results with different age groups, includes mean value and z-score value.

Both of English and Chinese results are increasing with age increasing. The gaps among the ER results of 7-, 9- and 12-year-old groups are obvious. The gap between 7- and 9-year-old groups is slightly larger than the gap between 12- and 9-year-old groups. The mean of 12-year-old group reaches to the level high to 85, it indicates that PIRLS English is more suitable for 9-year-old students.

Chinese PILRS results also clearly reflect the gaps among the results of 7-, 9- and 12-year-old groups, and the gaps among these results with age changing are larger compared to their English PILRS results. The gap between 7- and 9-year-old groups (18) and the gap between 12- and 9-year-old groups (11) are also larger than their English PILRS results. The trend of their variation is consisting with English.

Figure 2(b) indicates that the base point of Chinese and English results is on the result of 9-year-old students group, their Chinese and English reading abilities are increasing with their age growing, and before 9-years old, the growth rate of results with age growing is larger than that after 9-years old.
Effects of family language background

Figure 3. Visual data of Chinese and English reading results for 7, 9 and 12 age with different family language background groups. 7y: 7-years old, 9y: 9-years old, 12-years old, CR: Chinese reading, ER: English reading.

Figure 3 shows the influences of English and Chinese reading abilities with different family language background. The results indicates that the students from bilingual in Chinese and English background of 7-, 9- and 12-year-old groups achieve the best scores on English testing. In other words, the help of the balanced bilingual background for student’s English reading ability development is obvious.

It is interesting that the English reading result of 7-year-old students from Chinese dominant group is better than that from 7-year-old English dominant group. From the results of 12-year-old groups show the influences of family language background on the English test have disappeared. The possible analysis is that the influence of family language background has been becoming very weak since the whole primary school education almost finishes with English as a first language of classroom.

The influences of family language background are more obvious in Chinese reading ability test compared to the English: there are gaps among Chinese reading results of students from different groups. The Chinese reading result of the student from Chinese dominant group is better than that from bilingual in Chinese and English group, although there is a little difference between 7-year-old groups. The Chinese reading result of the student from bilingual in Chinese and English group is significantly better than that from English dominant group. Differently from the English test results, the influences of family language background on the Chinese test results don’t become weak for 12-year-old group. It illustrates the impact of family language background on the development of student’s Chinese reading ability plays important role since Chinese is treated as a second language in school.
**Effects of the FLB and age on the different reading processes**

![Graphs showing the effects on different reading processes](image)

**Figure 4.** Visual data of English reading levels mean and z-score for 7, 9 and 12 age with different family language background groups.


Figure 4 indicates that the result of ER four processes showed a decreasing trend from process 1 to process 4. All of ER four process scores of Chinese dominant and bilingual in Chinese and English groups are better than English dominant group, especially process 1 (focus on and retrieve explicitly stated information) and process 4 (evaluate and critique content and textual elements). At the age of 12, the score of process 4 is increasing obvious compared to 7- and 9-years old. All four ER processes performances of 7-year-old bilingual in Chinese and English groups are at the highest position.
Figure 5. Visual data of Chinese reading levels mean and z-score for 7, 9 and 12 age with different family language background groups.

7y: 7-years old, 9y: 9-years old, 12-years old, CR: Chinese reading, ER: English reading. CRP1: Chinese reading process 1, ERP1: English reading process 1, CRP2: Chinese reading process 2, ERP2: English reading process 2, CRP3: Chinese reading process 3, ERP3: English reading process 3, CRP4: Chinese reading process 4, ERP4: English reading process 4, the p < 0.02 significant.

For Chinese reading, as can be seen from the two figures 5(c) and 5(d), the 9-year-old three groups reflect more balanced and obvious differences. For 7-year-old group, the gap between Chinese dominant and bilingual in Chinese and English groups are small, but there are obvious gaps between them and students from group with English dominant background. The process 4 results of Chinese dominant and bilingual in Chinese and English are higher than process 3 and process 4 is mainly evaluating and critiquing content and textual elements.

Conclusion
The paper has conducted the experiments in the Singapore school aiming to study the effects of age and FLB in Chinese and English reading abilities. Chinese students groups with the bilingual background (Chinese dominant, English dominant, bilingual in Chinese and English) are selected.
The results show that the both Chinese and English reading ability is increasing with age increasing, the gaps among Chinese reading ability of 7-, 9- and 12-year-old students with age changing are larger compared to their English reading results. The growth rate of results with between 7- and 9-year-old groups is larger than that between 9- and 12-year-old groups.

Firstly for English as a first language in Singapore, PIRLS English is more suitable for 9-year-old students and results show that 9-years old is as a watered in development of children’s reading ability, their reading abilities are in transition. The impacts of family language background on their English reading abilities have disappeared for 12-years old.

Then as a second language in Singapore school, there is obvious effect of family language background on the Chinese reading ability through the whole primary education period. It has always existed, and plays a relatively large impact.

Finally, the data of 7-year-old groups indicates that the results of the balanced bilingual in Chinese and English background group and Chinese dominant background group students could achieve better reading test scores compared to the English dominant background group students.

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The present study examined the impact of using mobile technology applications and websites on the attitudes and achievement among students learning Chinese as a foreign language in U.S. K-12 classrooms. Student survey and test data were collected from multiple classes taught by teacher candidates in a Chinese teaching licensure program at a state university. Preliminary data analysis indicates positive findings supporting such technology-based instructional innovations.

**Keywords**: Chinese as a second language, educational technology, K-12 education, academic achievement, academic attitudes

### Introduction

In recent years, it has been increasingly recognized that proficiency in world languages is one of the most important skills that students need to be competitive in the global labor market in the 21st century economy (National Education Association, 2012). Chinese is the national language of China, one of the world’s most populous countries and most dominant economic powers. Forbes magazine (Patton, 2016) predicts that China’s contribution to global economy will exceed that of the U.S. in 2018. As a result, many educators and parents in the U.S. highly support introducing Chinese instruction to k-12 curriculum. With critical support from many Confucius Institutes funded by the Chinese government, the number of Chinese language programs offered in U.S. elementary and secondary schools has doubled from 2013 to 2015, to an unprecedented 550 schools (Shao, 2015)

While much research has been done regarding the teaching and learning of other foreign languages such as Spanish and French, there is relatively little research on the teaching and
learning of Chinese as a foreign language. With the rapid growth in student enrollment in Chinese language programs, we believe that empirical research is urgently needed to inform educators of the best practices in Chinese instruction. The purpose of the present study is to examine the impact of mobile applications and websites for Chinese learning on the achievement, attitudes, and self-efficacy of K-12 students who take Chinese lessons regularly at school. It is hypothesized that students who regularly used mobile applications for Chinese learning as a foreign language for an extended period of time over the semester would perform better in standardized Chinese tests and demonstrate more positive attitude towards and high self-efficacy for learning Chinese.

Method

Participants. Teacher candidates in a Master’s program in Chinese language licensure for teachers who had been arranged to complete student teaching requirement at a local public or private school were invited to participate in our study by the program director. During student teaching, they were expected to experiment with the use of a mobile technology tool in their classroom and write a project report on their findings.

Instruments. This study involves the use of pre- and post-surveys, as well as pre- and post-tests. The pre-survey consists of a demographic section with questions about the student’s grade level, age, gender, ethnicity, primary language at home, level of Chinese study, and amount of time spent on Chinese learning. In addition, the pre-survey includes three scales. The first scale is a short version of a Student Beliefs about Chinese Learning scale developed by Lan (2014) and consists of 17 Likert-type questions on a five-point response scale (1 = strongly disagree, 5 = strongly agree). Sample questions are “I find great pleasure in learning Chinese” and “Chinese will make me more competitive in the job market”. The second scale on Language Learning Capability for Chinese is adapted from a self-efficacy for foreign language learning instrument developed by the National Foreign Language Resource Center (2000). It consists of 20 questions, 5 on each of the following four areas: reading, listening, speaking, and vocabulary. On a scale that ranges from 0 (not sure at all) to 100 (completely sure), students would rate how sure they are completing a specific Chinese learning task such as figuring out the main topic/gist or retelling in English what they read when reading a text in Chinese. The third scale is modified 28-item Language Learning Strategies scale by Ardasheva and Tretter (2013) based on the original scale developed by Oxford (1990). The rating scale is a five-point scale from 1 (never or almost never true of me) to 5 (always or almost always true of me). Sample questions are “I use flashcards to learn new Chinese words” and “I break long words into small parts to figure out what they mean”. The post-survey is identical to the pre-survey except that the demographic questions were omitted.

In addition to the surveys, the present study also involves the use of Hanyu Shuiping Kaoshi (HSK) tests, i.e., standardized Chinese proficiency tests developed and validated by Chinese government’s Department of Education (see www.hanban.org).

Procedures. All participating teacher candidates administered the same pre-survey at the beginning of the study and the same post-survey at the end of the study in the classroom.
Parental consent forms were distributed in the classroom and students were told to bring them back in a week. During the semester when this study was conducted, none of the participating teacher candidates was assigned to teach lower elementary grades and in the rare cases where there were few students with reading difficulties, the teacher candidate would read aloud the questions. Teacher candidates also administered in the classroom HSK tests that were pursuant to their students’ level of Chinese learning as pretest and posttest.

**Results**

Data collection and entry is complete. Data cleaning, matching, and analysis are on-going. Preliminary analysis based on data from a few classes indicates that the use of mobile Chinese learning applications or websites may result in more positive attitudes toward Chinese learning, higher perceived Chinese competencies in the areas that are targeted by the technology tool, and better performance in Chinese proficiency tests.

**Conclusions**

The present study examines the effectiveness of mobile technology applications and websites for Chinese language learning in foreign language classrooms in multiple k-12 classrooms in the U.S. Our study involves multiple student teachers teaching at various grade levels at different sites and includes both student attitudes and achievement in Chinese as a foreign language learning as outcomes. Given the paucity of research that empirically tests validity of technology tools in Chinese language teaching and learning in an English-speaking country, findings from the present study will likely fill a significant gap in existing research and provide valuable implications for teachers, administrators, students, parents, as well as policy makers and instructional designers.

**References**


Analysis of research trends on student support in higher education using text-mining method

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Abstract:

The purpose of this study is to compare Korean and USA’s research trends of student support in higher education. I use RISS (Research Information Sharing Service provided by Korean Government) and SCOPUS database to collect the verified articles related to student support and student service. After reviewing the documents collected by two database, more than 1,000 articles in each country were analyzed with text mining method using R. The analysis is not finished yet, however I expect it will show the differences between the two countries and give the theoretical and practical implications on student support in higher education.

Key words: student support, student services, text mining, higher education
Engaging Undergraduate Students in Research

Utilizing Peer Mentorship Strategies

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Engaging Undergraduate Students in Research
Utilizing Peer Mentorship Strategies

Past research demonstrates that universities tend to segregate underrepresented students from mainstream students; however, if institutions teach all students together, the outcomes could indicate that all types of students have strengths that each type of student could benefit from and every student could succeed academically (Dabach, 2014). This paper considers whether pairing up college students as peer-learning partners based on the results of a pre-academic strengths and needs assessment impacts the students’ academic outcomes as measured by objective goals, such as subjective self-report of academic enjoyment and a posttest academic strengths and needs assessment.

Although, research supports peer mentoring partnerships and relationships in Undergraduate Research (UR), and how these relationships positively impact the UR experience, there is a lack of research in how to properly create relationships based on strengths and needs in order for students to be successful academically. When peer mentoring partnerships are not created strategically, the partnerships are more negatively affected than positively in relation to engagement in university research. Our program is examining whether the success of peer partnerships based on the results of a pre-academic strengths and needs assessment will impact students’ academic outcomes. We will provide peer mentorship opportunities at various levels for undergraduate students from across academic disciplines. The outcomes are measured by objective goals, such as subjective self-report of academic enjoyment, and a posttest academic strengths and needs assessment.

In 2009, President Obama shared that among industrialized nations, the United States ranks 16th for 25 to 34-year-olds that graduate from four-year universities, and that 50% of
college students never end up completing their degrees at all (Luna & Zienkewicz, 2014). More institutions are looking for alternative methods of support to meet their students’ academic needs and to decrease attrition rates. Freeman et al. (2014) demonstrated that peer-learning programs increase student retention and traditional lecturing increases student failure by 55 percent. When looking beyond the peer mentoring concept, we have learned that providing a learning environment where students learn from each other in a positive, supportive atmosphere, will in turn benefit both the mentors and mentees’ relationship. Student achievement increases in positive, inclusive environments, which further increases student retention and graduation rates. (Freeman et al., 2014).

Havnes (2008) discussed that peer learning goes beyond making sure the students are just learning the curriculum. This peer interaction encourages independent and collaborative learning; six outcomes can develop from students using peer learning strategies: students learn to work well with others, they develop critical thinking and reflection skills, they develop the ability to clearly communicate knowledge learned, they manage academic time, they decide which learning style works best, and they develop the ability to conduct self and peer assessment.

Tschofen and Mackness (2012) used personality and self-determination theories in order to gain a look into the individual experience in connective environments, and also explored the meaning of autonomy, diversity, connectedness, and openness. Connectivism, itself, has not been universally accepted, but is being offered as a new learning theory for a digital age. Tschofen and Mackness defined connectivism as “a viable description of learning that incorporates emergent disciplinary and interdisciplinary understandings that may not yet have been tested in traditional forms.” (p.124).
Connectivism is based on the principle that learning starts with a connection, which can occur on conceptual, neural, and social levels (Tschofen & Mackness, 2012). Through the examination of the relationship between connective environments and personality and self-determination theories, the authors determined that learning experiences are less instrumental for learning compared to personality traits; therefore, there may be benefits to amplified attention to the role of personality and self-determination in a connective environment (Tschofen & Mackness, 2012).

Learning Partners

Prata, Letouze, Cerri, and Costa (2015) examined how social behavior can influence student’s learning. Participants consisted of thirty-two sixth graders from a suburban elementary school. The experimenters then placed the students into pairs with “a mixture of mixed-ability and homogeneous ability pairs” (p.251). The experiment lasted four days and the students were given two extensive isomorphic tests: a pre-test and a post-test. On the days in between the pre and posttest, the partners completed a math-tutoring program where they worked together in labs for around 45 minutes a day. The amount of insults that students used against peers was also tracked, and in the results, the researchers indicated that the usage of insults resulted in students abandoning the online learning environment. They also found that students who insulted their partners experienced learning gains, whereas students who were the ones being insulted did not (Prata et al., 2015).

Owen (2011) investigated the educational benefits and challenges that come with using peer educators in the classroom. The author first addressed creating academic partners out of undergraduate teaching assistants. By inviting undergraduate assistants into the classroom to share part of the authority in the class, the instructor was reframing individuals’ responsibilities
and rights as a learner, which means the learning experience of the assistant not only improved, but the students learning experience improved as well (Owen, 2011). By using the undergraduate assistants in the class, the students learned by receiving the opportunity to teach and by working as a peer learning facilitator in which they built mentoring relationships with faculty. The only consequence to this situation is that the undergraduate assistants may have worried about losing credibility with their peers, especially if they were in a position of grading them or having some type of authority over them (Owen, 2011).

The benefits of using an undergraduate teaching assistant for the peer learners is that working with a peer increases the involvement of the learning in their learning experience. The peer learners also relate better to someone who was recently in their place, and in the future are more likely to go to a peer for advice versus an outright authority figure (Owen, 2011).

Chen and Chang (2014) looked at the positive effects of web-based cooperative learning environments, and investigated how to encourage social interaction in online learning situations to create a more productive environment and experience. The authors were interested in creating a scheme for recommending appropriate learning partners in an online environment, and they found that this type of scheme does help encourage learners to interact with their peers more (Chen & Chang, 2014).

**Learning Partners Connections**

Incorporating learning partners into the classroom is not only important because of the relationships it creates and fosters between students, but because of the fact that it encourages the students to take responsibility for their learning (Chen & Chang, 2014; Owen 2011). One of the downfalls of working in a web based classroom, is that there is less personal interaction between students in the classroom. By incorporating peer interactions through partnering, relationship
building occurs along with encouraging interactions that would not arise naturally; these interactions contribute to student satisfaction and success within the class (Chen & Chang, 2014; Prata et al., 2015).

In contrast, Prata, Letouze, Cerri, and Costa (2015) found that peer learning partnerships were positive for both partners as long as they were paired equally and no partner felt in a position of power over the other; the authors demonstrated when one partner felt superior, the other partner suffered. However, Owen (2011) demonstrated that when the learning partners were grouped based on a student teaching assistant and student learner, the outcomes were positive because even though the teaching assistant was in a position of power, the student learner still viewed the teaching assistant as a positive learning partner unlike a peer who may be condescending and insulting in a similar position of power.

**Team Based Learning**

Razzouk and Johnson (2013) addressed how case studies can effect attitudes toward instructions, learning outcomes, and team shared mental models (SMM), specifically when enrolled in an undergraduate psychology course that is centered around a team based learning environment.

This study contained three hypotheses: (1) undergraduate students who are using cases studies will display higher learning outcomes compared to students who are using knowledge representations; (2) the students using case studies will demonstrate more positive attitudes; and (3) undergraduate students using case studies will show higher team SMM compared to the students using knowledge representations (Razzouk & Johnson, 2013). The study took place in an education psychology course, which is where Razzouk and Johnson recruited their participants. In total, out of the 106 students enrolled in the course, 104 of them responded to the
survey, in which all had an educational background before taking the class (Razzouk & Johnson, 2013).

The independent variables in the study were the task type the student learned by, which were either cases studies or knowledge representations. The case studies consisted reading real world problems or dilemmas related to the course concepts and then the students in return would need to help solve these issues. Knowledge representations consisted of an activity that provided an alternative way of demonstrating the principles that were being taught to the students. For example, building a brochure or a concept map would constitute as a knowledge representation. The dependent variables in this study were learning outcomes, which were defined as “recalling and applying the learning theories and principles” (p. 755), the attitude of the learners towards instruction, and the team SMM (Razzouk & Johnson, 2013).

The learning outcomes were measured through a paper-based test, and the participants were administered a pretest before implementation to ensure that the students did not disagree on previous knowledge. These tests were constructed using the instructor’s test bank from the textbook assigned to the course, and were the same for both case study students and knowledge representation students. To score the learning outcomes, the researchers calculated two scores: a knowledge score and an application score (Razzouk & Johnson, 2013).

Learners’ attitudes were measured using the Course Interest Survey in terms of confidence, relevance, satisfaction, and attention. This survey consisted of 25 items; six items each that related to attention, confidence, satisfaction, and seven items that related to relevance and the participants responded to each item using a 5-point Likert scale. A score was then calculated for each of the four attitudes resulting in four scores per participant. This survey was administered at the end of the course before the posttest (Razzouk & Johnson, 2013).
Team SMMs were measured using the Team Assessment and Diagnostic Instrument (TADI). This assessment consists of five factors that relate to team and general task SMM: (1) general task and team knowledge, (2) team dynamics and interactions, (3) communication skills, (4) team resources and working environment, and (5) attitude toward teammates and task. For each factor, participants responded to three statements, which were measured on a 5-point Likert scale ranging from strongly disagree to strongly agree. This assessment was administered after every case study or knowledge representation activity, and it was completed individually, so other participants in their group could not see the others’ responses (Razzouk & Johnson, 2013).

The participant’s response for each factor was then averaged to create one score for each factor (Razzouk & Johnson, 2013). The standard deviation and mean were calculated so each team had a score per factor. The mean represented the perceived amount of each factor that the team had and the standard deviation represented the amount of variation in the individual ratings. The results indicated if the mean was high, then all of the team members viewed the team in a positive way, and if it was low, the team had a less than positive perception of the team. In the case of the standard deviation though, if the score was low, it indicated that the team was thinking alike, but if the score was high, it indicated that the team was thinking differently (Razzouk & Johnson, 2013).

For the first hypothesis, the researchers used a one-way MANOVA in order to determine the effect that the intervention had on learning outcomes of the students. The results of the MANOVA showed a main effect of the task type on learning outcomes. It also revealed differences between groups on knowledge score (p= 0.03) and application score (p=0.01). The standardized difference between group means on the application score was 0.42 standard deviations, and .50 on knowledge score, which are considered medium effect sizes. Since the
results were significantly different, they were able to reject the null hypothesis (Razzouk & Johnson, 2013).

To analyze the second hypothesis, they once again used a one-way MANOVA to determine the effects of the intervention on learning attitudes. The results showed significant differences between learning attitudes: attention (p=.001), relevance (p=.01), confidence (p=.002), and satisfaction (p=.001). The students who used cases studies scored significantly higher in each attitude factor compared to students who used knowledge representations activities, signifying they were able to reject the null hypothesis for the second hypothesis as well (Razzouk & Johnson, 2013).

To evaluate the third and final hypothesis, two separate one-way MANOVAs were calculated. The first one-way MANOVA was calculated to determine the effect of the intervention of the SMM degree for each factor. The results showed that the two groups did not significantly differ when it came to the combined dependent variable of the TADI (p=.73). These results did not support their hypothesis. The second one-way MANOVA was run in order to determine the effect of the intervention on “the combined dependent variable comprising the SMM similarity score for each of the five factors” (Razzouk & Johnson, 2013, p.760). There were no significant differences between the two groups (p=0.88), which once again did not support the hypothesis, which also means they failed to reject the null hypothesis for their third hypothesis.

Ioannou and Artino (2010) conducted a case study to investigate the efficacy of collaborative assessment (CA) in an undergraduate education psychology course. The participants consisted of thirty-one undergraduates who were enrolled in an undergraduate education psychology course (28 females; 3 males). Twenty-eight participants were seniors and
three were juniors. The class met for 16-weeks, twice per week for 75 minutes. The CA was conducted during week 13 and the assessment consisted of 23 multiple-choice questions. Administering the CA consisted of five tasks: (1) students were divided into groups of three or four without the option of working on their own, (2) each test item was projected overhead and the students were given one-minute to answer it separate from the group, (3) the groups were then given a minute to discuss their individual answers and come to a group consensus, (4) students recorded their group response on their individual response sheet, and (5) the next test item was presented and the process was repeated until all 23 questions were completed (Joannu & Artino, 2010).

In the results, the researchers discussed the positive and negative aspects of the CA. The positive aspects of the CA were that the discussion among group members improved understanding, improved their performance and scores, and improved their confidence. The negative aspects were that this type of assessment took longer than a usual exam and it made it easier for cheaters/freeloaders to slip past. Overall, the student data supported the view that the collaborative assessment was beneficial for learning, less stressful than a regular test, almost as fair as a normal exam, and more enjoyable that the usual exam (Joannu & Artino, 2010).

Wallace, Walker, and Braseby (2014) addressed the question of how to incorporate more or create more time for active, collaborative learning in the classroom. A strong method of doing this is by using a flipped classroom because in a flipped classroom, the student’s primary knowledge acquisition happens before class, which allows for more time in which the students can practice applying the learned information. The authors also reviewed the effects of using team-based learning and they found it enriched student content acquisition from pre-class study,
and it allowed the class to use the majority of class time for discussion, to take risks, and to make some mistakes while developing their own expertise (Wallace et al., 2014).

**Team Based Learning Connections**

Team Based Learning is also important to incorporate in the classroom, but it differs from assigning learning partners. As from the title of the action, this type of method is centered more on groups than pairs. All three of the articles agreed on the fact that teams were able to work better and learn better when applying real life situations or problems to the concepts they were learning (Joannu & Artino, 2010; Razzouk & Johnson, 2013; Wallace et al., 2014).

Although there are many benefits from team-based learning, there is further research that needs to be completed in order to control for some possibly less than positive side effects of team based learning; for example, since team based learning allows more freedom for students to cheat or slack off (Joannu & Artino, 2010).

In contrast, students that learned in a flipped classroom were more successful than students in a team based learning environment. Wallace, Walker, and Braseby (2014) attributed this to the fact that more accountability was put on each individual student in a flipped classroom; however, in a team-based environment, some students could fly under the radar and perform poorly, but still be able to hide their poor performance behind the higher achievers in the group.

**Peer Tutoring**

Batz, Olsen, Dumont, Dastoor, and Smith (2015) attempted to answer the question of whether or not weekly peer tutoring is still effective in an introductory biology course when it is offered to the lowest-performing students. The participants consisted of 760 full time students, and the researchers found that students who performed poorly on the first exam of the quarter
participated in a targeted tutoring program, and of those students who attended the peer tutoring sessions, they achieved higher exam performance and ended the year with more well informed perceptions than their struggling peers who did not access help. In the end, this method resulted in persistence throughout the class, and in the long-term, helped in reducing the loss of at risk students (Batz et al., 2015).

Taha, Jalal, Yahya, Omar, and Lin’s (2013) purpose identified how effective the Peer Mentoring Module (PMM) was on peer mentors who had good characteristics and good academic performance. They utilized 20 peer mentors from the Engineering and Information Technology Degree program, and the overall results supported their hypothesis that PMM is effective on peer mentors’ personalities (Taha et al., 2013).

Backer, Van Keer, and Valcke (2010) defined metacognition as “the ability to reflect upon, understand, manipulate, and regulate one’s cognitive activities during learning.” The study explored the prospective success of a reciprocal peer tutoring (RPT) program for university students on the promotion of their metacognition. Sixty-seven first-year Education Science students were randomly assigned to twelve RPT groups; results showed that students reported a higher amount of metacognitive knowledge at both pretest and posttest, although the t-test showed that there was no significant difference (Becker et al., 2010).

**Peer Tutoring Connections**

There are several benefits to peer tutoring in an educational experience because it not only helps the students that are seeking tutoring, but it helps the students who are doing the tutoring. By experiencing peer tutoring, many students reported that by accessing these types of services they obtained a greater sense of knowledge surrounding the topic once the class was finished (Batz et al., 2015; Becker et al., 2010; Taha et al., 2013). Not only did the students
report that they had more knowledge surrounding the subject and greater confidence, but it was also revealed that students who received peer tutoring tended to be more persistent throughout the semester and less likely to give up then students who had never reached out for help (Batz et al., 2015).

However, the studies did not factor in any other variables that may have contributed to the positive outcomes of the students other than the peer tutoring. Since Becker et al. (2010) did not find any significance between peer tutoring and test outcomes, future research should test multiple variables in order to determine if a relationship exists between student achievement and peer tutoring.

Experiential Learning

Experiential learning cultivates student learning by the students acquiring skills and values through experiencing hands on knowledge outside of an academic learning environment (Kolb & Kolb, 2011). The second half of the literature review will discuss experiential learning from several more perspectives: active learning, cross-generational learning, and academic service learning.

Bott and Cortus (2014) placed two groups of agriculture students in two different experiential learning based activities, both involved manure composting. The two groups differed “by gender and the scale of their livestock and land management experience,” (p. 318) Their course material also differed between one another depending on the task they had been assigned, but change in knowledge over time was significant for both groups. Having the opportunity to participate in a hands-on/real life situation increased their learning compared to when the course was mainly based on lectures.
Popov et al. (2014) attempted to answer three different research questions: “When paired in similar or dissimilar dyads in a computer-supported collaborative learning environment, to what extent do students (1) differ in their perceptions of collaborative learning? (2) differ in their learning outcomes? (3) differ in their reported learning experiences?” (p.189). In order to answer their research questions, the students took 120 different participants from two different programs: international land and water management studies (n=60) and international development studies (n=60). The participants were assigned two concepts to learn: community-based social marketing (CBSM) and how to apply that concept in Sustainable Agricultural Water Management (SAWM). The students’ task was to apply these concepts to help foster viable behavior amid wheat farmers in a part of Iran (Popov et al., 2014).

The results ended up showing that regardless of the dyad makeup, that the students who had a collectivist cultural orientation had significantly lower outcomes compared to students coming from an individualistic cultural orientation (Popov et al., 2014). In addition, students with a collectivist cultural orientation had a higher score when it came to their perceptions of collaborative learning than students who had an individualistic cultural orientation. The study demonstrated that when teaching, especially when teaching with experiential learning, the instructor needs to make sure all cultures are rewarded from the process (Popov et al., 2014).

Kolb and Kolb (2011) summarized the most important concepts of Experiential Learning Theory (ELT) – learning style, space, cycle, and deep learning and development; they further discussed how each of these concepts can be used to assess management as an educational experience on several levels: the individual, the team, and the organization. These concepts can also be used to help design and apply management education programs in a higher education environment (Kolb & Kolb, 2011).
Active Learning

Freeman et al. (2014) looked into the question: Does active learning increase exam scores and does it decrease failure rates? The authors investigated this question by meta-analyzing 225 studies that reported data on exam scores and on failure rates when comparing student’s performance in STEM courses. The only differences were that some of the scores were from traditional lecturing courses and others from active learning courses. The researchers found that on average, there was a difference between active learning compared with lecturing by just under half of a standard deviation with the active learning studies in the higher position. After the effect size was calculated, it was determined that students who were in a traditional lecture course are 1.5 times more apt to fail compared to students who were in active learning courses (Freeman et al., 2014).

Bishop and Verleger (2013) conducted a study in a senior level computer interaction class, and in the experimental section of this class, the students/participants watched videos outside of class and then participated in hands-on learning activities in class. Students who were placed in the “flipped” environment obtained a significantly higher score on all the homework assignments, projects, and tests. The authors did recognize that in order for this to become a respected teaching method that research needs to continue, and research needs to occur in controlled studies that examine the students’ performance objectively throughout the semester (Bishop & Verleger, 2013).

Lee’s (2005) purpose was to advance research that investigates “Web-based instruction from language learner’s perspectives,” (p.141). The study specifically looked into whether or not participation in a network-based course of instruction influenced learners’ attitudes and beliefs and directed the development of their Spanish skills and how they used Internet technology. The
participants included 35 students located at a state university situated in the northeast, who were enrolled in two, third-year Spanish classes. A requirement of the study was to use Blackboard, a program used by universities to have an online place for their class and to support their language attainment. They also had to complete online task-based activities (Lee, 2005).

The use of Blackboard as an instructional apparatus helped enable the development of the students’ skills in Spanish, strengthened their cognitive skills, and helped support an active learning environment. The results also showed that the online tasks motivated the students and encouraged them to expand their use of Spanish to improve their knowledge outside of the classroom. Last, this study showed that online-based learning encouraged the students to be more actively involved in the learning process and to take responsibility for their own learning (Lee, 2005).

Active Learning Connections

In all of the studies that were mentioned, each study demonstrated that active learning helped increase and produce higher test scores and grades in students’ classes. In comparison to classes that are mainly lectured centered and when the active learning was performed outside of the classroom, the classrooms that had active learning occur during the class time showed positive effects on the students’ learning outcomes (Bishop & Verleger, 2013; Freeman et al., 2014; Lee, 2005;). These results were especially evident in “flipped classroom” settings where class time was specifically designated to active learning (Lee, 2005).

However, even though each of the study’s results indicated active learning environments have a positive effect on students’ learning outcomes, the authors did not discuss the possibility of other factors that could be effecting student learning; for instance, the quality of the instructor, the size of the classes, the location of the classroom, the speed of the technology used, and so on.
For this very reason, we include a subjective self-report of academic enjoyment at the end of the peer mentoring relationship in order to factor in any other contributing variables to the students’ success or failures.

**Cross Generational Learning**

Murphy (2012) examined the archetypal reverse mentoring relationship between a “baby boomer” senior employee as a mentee and the millennial junior employee taking the role of mentor. The study was not centered on age as much as it was centered on that the participants who were placed in nontraditional roles. What the author discovered from observing this type of relationship was that reverse mentoring is a creative and new tool for organizations to use when looking to encourage cross-generational learning. In addition, by putting the participants into these nontraditional roles, it urged them to look at the same things from a new perspective, which in turn helped develop both groups as leaders (Murphy, 2012).

Lichy (2012) conducted a study that examined cross-cultural Internet use, specifically paying attention to Gen Y and their use of social networking. The results of this study showed that there were broad areas of interest that were common among students of different generations, such as communicating through email, social networking, and information retrieval through sites like Google. There were also disparities and differences between the generations, and these disparities resulted in the author urging instructors to be cautious when moving forward with Web-based instruction so they can avoid over-generalizing the needs of Gen Y students (Lichy, 2012).

Yahr and Schimmel (2013) observed and compared the perceptions of Gen Y, otherwise known as millennials, and Gen X in an experiential learning environment. They hypothesized that because of the different generational values and characteristics that the perceptions between
generations would differ. The results showed that Gen Y actually enjoyed the experiential approach less than Gen X, and Gen X also perceived it as being more complex and therefore, they had learned less. This study demonstrated that even though Gen Y is perceived as being a strong, technological generation, that the need for teacher engagement and interaction, even thru Web-based instruction, is important (Yahr & Schimmel, 2013).

**Cross-Generational Learning Connections**

Cross-Generational partnerships in the classroom are a method that is slowly becoming more common. In some classes, it is not possible for these types of relationships to develop, which is why a lot of the research on these forms of partnerships come from the workplace and not education (Murphy, 2012). The most beneficial factor from partnering people based on their generation is that it allows the two generations to see eye to eye, and objectively understand another point of view. In society, gaps between generations exist due to all the differences that each generation believes exist between them; this type of partnership encourages each generation to see that at the very base, generations are not as different as people think (Lichy, 2012; Murphy, 2012; Yahr & Schimmel, 2013).

**Academic Service Learning**

Waters and Anderson-Lain (2014) examined an assortment of online survey assessments that are utilized in service-learning projects. The purpose of the study was to demonstrate what questions, categories, and concepts are currently being used to evaluate students, community partners, and faculty from numerous Campus Compact member institutions. After this analysis, the authors found six unique concepts: leadership, understanding course details, understanding service learning as an instructional method, course/project description, impact/influence on the community partner, and commitment to service learning. The authors then suggested that those
who are surveying people on Service Learning Projects should choose measures and tools that focus on the core concepts (Waters & Anderson-Lain, 2014).

Longmire-Avital, Chenault, and Haglund (2013) investigated whether the motivation of students in Academic Service-Learning (AS-L) increased when learning in the AS-L process as they gained perspective and knowledge of their own values and goals. There were multiple results from this study; throughout the semester, they assessed the students’ motivation three different times: the beginning, the middle, and the end. They found that there was a decrease in motivation throughout the semester. They also found that there were gender differences in the motivational changes that occurred during the semester; female students started out with high motivation levels that steadily decreased across the semester, but male students experienced a minor increase towards the middle of the semester and then their motivations started to decrease after that point (Darby et al., 2013).

Some of the factors that contributed to the increase of the students’ motivation during the semester occurred when they found the experience enjoyable, held an interest in the people they were helping, were able to form relationships with the clients and their community partner, and when they felt a sense of responsibility for their community partner (Darby et al., 2013). Factors that contributed to the decrease of students’ motivation over the semester were negative communication issues, lack of integration between their class and the AS-L project, issues with transportation, and the time demand in relation to their schedules. These factors were discovered through qualitative analysis of open-ended questions (Darby et al., 2013).

Ellerton et al., (2015) assessed how Academic Service-Learning (AS-L) can be used in order to provide support to urban community college students. In the fall of 2013 and spring of 2014, a quantitative survey was administered to AS-L students. Around 750 students from about
60 different classes participated in this analysis; this sample represented 15 different disciplines (Ellerton et al., 2015). The results from this survey indicated that AS-L projects positively influenced students’ academic learning. These projects also appeared to increase a student’s general confidence when it came to their learning and skills in the workplace. They also found gender differences in the perception of impact that AS-L had on academics. Male students reported that the projects allowed them to apply what they were learning in class more than the female students were, but the genders had a similar response in that AS-L projects helped them learn the materials from class more effectively (Ellerton et al., 2015).

**Academic Service Learning Connections**

Academic Service Learning (AS-L) is a method of teaching that can be very effective, but only if used in the correct way (Ellerton et al., 2015). The one factor the AS-L studies had in common that all of the previous mentioned studies had a positive effect on student learning and their AS-L projects were related to something the students cared about. For some students, if the project was not related to something they cared about, they were less motivated when it came to completing the project and were less motivated when it came to the learning process. As long as the project was related to something the students cared for and related back to the concepts they were learning in class, the projects had positive effects on student learning and motivation (Darby et al., 2013; Ellerton et al, 2015; Waters & Anderson-Lain, 2014).

Conversely, the students discussed many factors in their classes that effected them through the AS-L project. Future research should also consider those variables in order to increase the reliability and validity of the research. Peer learning increases students’ critical thinking abilities through hands on instruction in a student-led environment; therefore, students will also positively improve upon their communication, collaboration, planning, and problem
solving skills (Stathakos). Razzouk & Johnson (2013) found that after students attended lectures on the class material, the professor would then divide the students into peer led learning groups, and the students would then apply the knowledge they gained in class to solved real world case studies. The students who worked together in a student led, hands on learning environment had higher academic outcomes then students who only learned in a teacher-centered classroom with little to no interaction with their peers (Razzouk & Johnson, 2013).

In the past, and currently in education, the classroom was designed mainly for one learning style; however, by bringing the differences of every student to light and showcasing the students’ strengths in order to expose the students’ needs. Our program can provide faculty support and build upon what the faculty are already teaching in the classroom, except by giving their students another alternative to learning the information. The peer mentorship program can provide the benefits of peer learning while also respecting the curriculum developed by the faculty within the classroom; consequently, developing positive outcomes for more students in the process.

**Peer Mentorship and Undergraduate Research**

Auger and Rich (2007) define mentorship as “a role model offering support to another person and sharing knowledge, expertise, and experiences with that person.” The traditional idea of mentorship tends to place an individual who is older and wiser in the position of mentor and tends to follow a hierarchical model where the mentor in some way holds a higher or more prestigious position. Peer mentorship tends to deviate from this traditional mentorship model.

“Peer leaders represent formalized, informed, and experienced agents to help the socialization process of fellow college students, (Shook & Keup, 2012). Utilizing a peer as a mentor for undergraduate students conducting research minimizes the gap between the mentor
and mentee that exist in traditional mentor relationships. There is still an experience gap between students, without this gap mentorship could not be fostered. Although, the gap between mentor and mentee is minimized, the ability to relate between the two is increased, there is shared thought that they have both “been there,” (Gidugu et al., 2015). When the mentor is closer in age and experience to the mentee, it helps open up communication and quickly produces a foundation built on common understanding. Another benefit to peer mentor, is that the mentee tends to still be deeply within the learning process and that makes the mentee not feel alone in their experience.

Although, many of the first year or sophomore experience mentorship programs focus on the social aspect of college, the program through the Office of Undergraduate Research focuses on professional and academic socialization. Previous research shows that characteristics that define the underrepresented student population (e.g. first generation, low income) tend to also predict the presence of a professional language gap. Students with these characteristics may not be exposed to academia the same way as other students whose parents completed college or who are from high income homes. This gap sometimes keeps students from participating in opportunities such as undergraduate research because they lack the communication skills to develop their interests or do not know that research opportunities are available to them (Stephens, Hamedani, & Destin, 2014). This mentoring program would serve as access to research opportunities and skills to not only students in certain disciplines or from certain social backgrounds, but to all students. Providing these students with a chance to gain ownership of academic and disciplinary language and content, it gives them a chance to succeed in a discipline that may have not been previously accessible (Sharer, 2015).
Our department has taken the previous research and the desire to start a peer mentorship program, and utilize it to develop other supports until the program could be more of a possibility. The two main supports that exist out of our office are the SOURCE Ambassador Program and the Undergraduate Research Club. SOURCE is the Symposium Of University Research and Creative Expression is held annual for two days the third week in May. In 2016, over 600 students and faculty from 47 different disciplines participated in SOURCE. In order to provide support to the students applying to present at SOURCE, we developed the SOURCE Ambassador program, which utilizes student volunteers who have previously presented at SOURCE in order to present in different classes across campus and provide support to students new to research. Their presentation consists of several things: providing a brief explanation about SOURCE as a whole, who can present, why they should present, and how students can present at SOURCE. The main goal is for students to present in their department, because it increases understanding between the presenter and the students in the class. Due to the amount of departments on campus, and the amount of student volunteers, most SOURCE Ambassadors end up also presenting in departments outside of their own discipline. This program was born out of the idea of peer mentorship, but utilizing the benefits in a group setting versus a one-on-one relationship.

The Undergraduate Research Club was also founded last year; this is a group for students participating in undergraduate research run by students/officers who come from various disciplines. The group offers social events, professional workshops, and information on research opportunities. This club offers more social support compared to the SOURCE Ambassador program. The Ambassador program focuses solely on the academic aspects, where as the club does place an importance on academics but provides a social situation for students to enjoy as
well. This helps students establish a sense of community and a bond with other individuals attending the university, which in the end, has been shown to be related to retention in higher education institutions (Mendoza, Suarez, & Bustamente, 2016).

Based on both of these supports and the background literature, our department has started to build an individualized peer-mentorship program. The Undergraduate Research Mentoring Program will be a selective program that requires mentors to submit an application and undergo an interview. Mentors will be required to have completed their first year of school before applying, and must have completed the core research/development classes of their department/major. Alongside these requirements, once hired, mentors would go through extensive training to prepare them for the challenges that come with being a peer leader and the responsibilities involved in participating in this program.

This training will be a one-credit internship offered through the Undergraduate Research Department, and led by the program coordinator, who would also be serving as an advisor to the mentors in conjunction with their faculty mentors from each of their disciplines. However, the mentors will come initially from our graduate students. Not only are these students already immersed in research and can properly share the faculty’s’ mentorship goals, but since our university is very limited on the amount of graduate assistantships it can provide, we will be providing employment opportunities for graduate students looking for jobs that will enhance their own research skills to help prepare for future PhD programs.

This collaboration between the mentors and the faculty is a key part of the program. Peer mentors are not meant to replace faculty mentors; they are there to assist in faculty mentor relationships. Faculty only have the ability to serve so many students a quarter, so if peer mentors could focus on teaching students the basics of undergraduate research, once they get into
the faculty mentor relationship, that faculty member will have the time to really focus on the
details and narrow in on the grittier more difficult parts of the learning process. This peer
mentorship program is currently in the works, is awaiting institutional funding, and is scheduled
to be in place by Fall 2017.
References


Appendix A

SOURCE 6-year department participation statistics

### Symposium Of University Research & Creative Expression (SOURCE)

#### 6-Year Statistics

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<th>Year</th>
<th>2011</th>
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<th>2015</th>
<th>2016</th>
<th>Total 6-year</th>
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#### Breakdown by Department

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<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Total 6-year</th>
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<td>331</td>
<td>324</td>
<td>328</td>
<td>340</td>
<td>366</td>
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Appendix B

SOURCE participant demographics

The following tables only include data regarding to Undergraduate Student participation at SOURCE.

### Gender Comparison

<table>
<thead>
<tr>
<th>Gender</th>
<th>CWU Student Population</th>
<th>SOURCE Student Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>51 %</td>
<td>57 %</td>
</tr>
<tr>
<td>Male</td>
<td>49 %</td>
<td>42.8 %</td>
</tr>
<tr>
<td>Other</td>
<td>0 %</td>
<td>0.2 %</td>
</tr>
<tr>
<td>Total</td>
<td>100 %</td>
<td>100 %</td>
</tr>
</tbody>
</table>

### Ethnicity and Race Comparison

<table>
<thead>
<tr>
<th>Ethnicity/Race</th>
<th>CWU Student Population</th>
<th>SOURCE Student Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>*POC</td>
<td>33 %</td>
<td>31 %</td>
</tr>
<tr>
<td>Other</td>
<td>67 %</td>
<td>69 %</td>
</tr>
<tr>
<td>Total</td>
<td>100 %</td>
<td>100 %</td>
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</tbody>
</table>

*People of Color (breakdown for SOURCE included below)

### Ethnicity/Race Breakdown

<table>
<thead>
<tr>
<th>Ethnicity/Race</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American/Black</td>
<td>6</td>
<td>1.4 %</td>
</tr>
<tr>
<td>Asian</td>
<td>25</td>
<td>5.8 %</td>
</tr>
<tr>
<td>Hawaiian/Pacific Islander</td>
<td>1</td>
<td>0.2 %</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>76</td>
<td>17.8 %</td>
</tr>
<tr>
<td>Multiracial</td>
<td>25</td>
<td>5.8 %</td>
</tr>
<tr>
<td>NonResident Alien</td>
<td>9</td>
<td>2.1 %</td>
</tr>
<tr>
<td>Not Reported</td>
<td>31</td>
<td>7.2 %</td>
</tr>
<tr>
<td>European/White</td>
<td>255</td>
<td>59.6 %</td>
</tr>
<tr>
<td>Total</td>
<td>428</td>
<td>100 %</td>
</tr>
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### Age Band

<table>
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<th>Percent</th>
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</thead>
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<td>18</td>
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</tr>
<tr>
<td>Age Group</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
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</tr>
<tr>
<td>20 - 21</td>
<td>135</td>
<td>31.5 %</td>
</tr>
<tr>
<td>22 - 24</td>
<td>200</td>
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<td>25 - 29</td>
<td>45</td>
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</tr>
<tr>
<td>30 - 34</td>
<td>10</td>
<td>2.3 %</td>
</tr>
<tr>
<td>35 - 39</td>
<td>9</td>
<td>2.1 %</td>
</tr>
<tr>
<td>40 - 49</td>
<td>9</td>
<td>2.1 %</td>
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<tr>
<td>50 - 64</td>
<td>2</td>
<td>0.5 %</td>
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<tr>
<td><strong>Total</strong></td>
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### Academic Level

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<tr>
<td>Sophomore</td>
<td>7</td>
<td>1.6 %</td>
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<tr>
<td>Junior</td>
<td>42</td>
<td>9.8 %</td>
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<tr>
<td>Senior</td>
<td>378</td>
<td>88.3 %</td>
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### Veterans

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<td>15</td>
<td>3.5 %</td>
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### Pell Eligible

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<td>199</td>
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### First Generation

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TRiO
(Federal outreach and student services program designed to identify and provide services for individuals from disadvantaged backgrounds)

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<td>4.7 %</td>
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<tr>
<td>Total</td>
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CAMP
(The College Assistance Migrant Program. It is a special program offered at Central Washington University that provides Financial and Academic Support Services to freshman students from migrant and seasonal farm working backgrounds.)

<table>
<thead>
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<th></th>
<th>Frequency</th>
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Crowdsource Your Class: Unlock the Perspectives of Your Participants to Enhance Engagement and Authenticity

**Topic Area:** Other Areas of Education

**Presentation Format:** Workshop

**Presentation Description:** In this session, the participants will walk through learning how to use the concept of crowdsourcing in order to help them acquire ideas from their participants to, in turn, enhance the engagement of those participants.

**Author:**
Nadia Williams
Digital Transformation Coach
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Nadia.Williams@cobbk12.org
**Presenter:** Nadia Williams, Digital Transformation Coach for the Cobb County School District (Cobb County, Georgia)

**Session Format:** Workshop

**Topic:** Other Educational Areas

**Session Title:** Crowdsource Your Class: Unlock the Perspectives of Your Participants to Enhance Engagement and Authenticity

**Session Abstract:** Research indicates that students (and adult learners) are more engaged when they are presented with opportunities to experience ownership in their classroom (or organization). Why not use this to enhance your next lesson or presentation? In this session, you will learn about a variety of tools and techniques to provide your pupils with opportunities to share their ideas in a non-threatening manner. This ensures that students and adult learners feel supported in an environment where their ideas are regularly validated. Bring a lesson idea you want to enhance and learn how to crowdsource your class by using tools such as Google Drive, Office 365, Slido, Microsoft Pulse, and more.
Harnessing the Power of Interactive Video

**Topic Area:** Other Areas of Education

**Presentation Format:** Workshop

**Presentation Description:** In this self-differentiated session, participants will learn how to use tools such as TouchCast, Racontr, and EdPuzzle to supplement classroom instruction. Participants will learn how to discern which tool to use for which purpose, how to implement it to support and enhance sound pedagogy, and how to guide students in creating their own interactive content as well.

**Author:**
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Digital Transformation Coach
Cobb County School District (Cobb County, Georgia)
Nadia.Williams@cobbk12.org
**Presenter:** Nadia Williams, Digital Transformation Coach for the Cobb County School District (Cobb County, Georgia)

**Session Format:** Workshop

**Topic:** Other Educational Areas

**Session Title:** Harnessing the Power of Interactive Video

**Session Abstract:** “A picture is worth a thousand words,” or so the saying goes. This session seeks to build upon that while supporting sound pedagogical practices. Participants will first be introduced to a selection of examples of interactive video created to support instruction. Then, based upon participant interest, and technological proficiency, they will self-differentiate using materials provided by the presenter in order to learn how to create their own interactive video. The participants will then share what they learned, how they can see it being applied into their classrooms, and other observed possibilities.
Noor Hussain has done a master degree in Educational Leadership & Management and another master degree in Economics. He has got more than 27 years of work experience with schools, colleges and institute of higher education, both in public and private sector in Pakistan. He has rich experience in k-12 education and has also carried our research studies in the same area and some of his papers have got published in international and national journals. He has written multiple proposals for various interventions in education and led the implementation of various educational projects in Sindh Pakistan. Presently he is supervising seven community colleges in Sindh.
ABSTRACT

This study has been carried out in district Khairpur Sindh Pakistan. The foci of this study are to understand the disparities in girls’ education in one of the districts of Sindh Pakistan and explore the causes of disparities and put forward the parents’ concerns and their suggestions to address the situation. Ministry of Education Government of Pakistan prepared a National Plan of Action 2001-2015 to honor the commitment made in the Dakar Framework. However, despite multiple interventions in education sector in country the provinces of Baluchistan and Sindh lag behind in almost all quantitative and qualitative indicators. It is generally believed that in Pakistan; particularly in Sindh the parents do don’t want to educate their daughters. To understand the beliefs of parents about the education of their female children this paper explores the perceptions of parents and asks their suggestions as well. The purposive sample of the research participants are the parents of the girls-out-of-school. The key reasons shared by the parents for not sending their female children to schools include, safety and security of their female children, lack of awareness at the part of parents, poverty, poor quality of schools and malpractices and corruption. The solutions of the problem suggested by parents can simply be summarized into three government actions, which include, compulsory education for all, school transport for girls and monthly stipend for girls on regular basis.

Keywords: Girls’ Education, Disparities, Perceptions of parents, females out of school
INTRODUCTION

Target 4.1 of the Sustainable Development Goal 4 puts a responsibility on the signatory nations that by 2030, they will “ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.” However, in Sindh province of Pakistan yet the targets of MDG 3 are far off things, where even the universal primary education seems almost impossible. Target 3.A of the Millennium Development Goal 3 put a responsibility on the signatory nations to, “eliminate gender disparities in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015” and Dakar framework for action 2000 also reiterate the same. Ministry of Education Government of Pakistan prepared a National Plan of Action 2001-2015 to honor the commitment made in the Dakar Framework. However, despite multiple interventions in education sector in country the provinces of Baluchistan and Sindh lag behind in almost all quantitative and qualitative indicators. (UNESCO, 2010) finds “over the period between 2000 and 2008 indicate that the NERs for girls are consistently lower than boys, thereby indicating that in Pakistan girls have less access to primary education than boys”(P.9). Disparities in girls’ education in rural Sindh, as suggested by various surveys are quite high (Annual Status of Education Report, Economic Survey of Pakistan & Pakistan Integrated Household Survey). According to the statistics shared in Sindh Education Sector Plan 2014-2018, “in 16 out of 23 districts, more than 50 per cent of girls are out of school”. According to the Reforms Support Unit (RSU) of the Education & Literacy Department (ELD) government of Sindh the current total enrolment of students in K-12 grades is 306, 550 and out of this the number of girls is120,150 which makes only 39%. This disparity in the enrolment indicates that in future the people of Sindh will continue with a substantial number of illiterate mothers. According to ASER 2013 survey 21% of the school-going-age children are out of school in rural areas and the percentage of females out of school is higher than that of males. ASER finds that 72% of the mothers in Pakistan have never been to school (ASER, 2014). The Sind Right to Free and Compulsory Education Act 2013 provides for education beyond 16 years of age in order to ensure, “that a child is so admitted to secondary education shall be entitled to free education till the completion of secondary education even after sixteen years.”

Among many reasons that account for these disparities the perceptions and concerns of parents about girls’ education, its quality and access to it are of great importance to understand and address the issues. It is understood that researching and analyzing real situations leads to change and improvement. Understanding parents’ concerns and perceptions require a good deal of in-depth understanding of the social context of district Khairpur of Sindh in particular and overall Sindh province in general. This study looks into the concerns and perceptions of those parents whose male children go to school but the girls stay at home and support their mothers and other female family members in household chores.

The purpose of this study is to look into the detailed accounts of actual practices, concerns and perceptions of people who apparently seem to continue with illiterate women for unknown time
in future unless the real issues and problems are diagnosed and addressed properly in time. Thus without proper education these women will remain deprived of the benefits of economic prosperity that comes with education and their illiteracy will surely have a cross effect on the education of their children. The insights gained in the study are helpful in designing such interventions at local level that can facilitate the empowerment of the women of the communities by properly addressing the issues of schooling for girls which can consequently have a positive effect on the lives of women and enable them to play constructive and decisive role in their lives and the lives of future generations.

LITERATURE ON GIRLS EDUCATION

Research and seminal scholarly works are replete with the social and economic benefits of girls’ education. The benefits of girls education are multiple such as Herz and Sperling (2004) give a list of benefits which include, higher wages, faster economic growth, more productive farming, smaller, healthier and better educated families, safe children’s’ lives, women empowerment and many others. However, women illiteracy is vice versa and has its negative social implications. (Toor & Parveen, 2004) contend that poverty is one of the main hindrance in the enrolment of girls in Pakistan, moreover they infer that “many parents view educating sons as an investment because the sons will be responsible for caring for aging parents” (p.142). Thus the parents are ready to invest in boys’ education. A study carried out in Pakistan in nineties shows that “poor families use 8-10 percent of monthly expenditures for education, somewhat less for girls than for boys” (World Bank, 1996). Since educating girls is crucial for social development the role of communities is of critical impotence. The Community is the key role player in educating the children and community is like a total sum of the parents, (Bray, 2003) contends, “Community activity in education has a long history. Indeed, a perspective of centuries rather than decades would generally show a rather minor role for governments until the twentieth century…”(p.32).

CONTEXT OF THE STUDY

Khairpur is one the districts in Sindh which was a princely state at the time of partition of sub-continent and it is reported that before annexation to Pakistan it was a welfare state where the education was completely free and even the students from flung areas were provided with free lodging and boarding facilities where they were served three times meal free of cost. The writer is the eye witness of such students’ residential facilities. Khairpur is one of the rural districts in interior Sindh where the human development indicators are better, however, the situation when seen at micro level indicate that despite overall view and its comparisons with other districts khairpur might seem better but the other side of the coin presents a different view. Khairpur district is divided into eight Talukas1. According to Reforms Support Unit in 2011 in khairpur district total number of schools was 3,679 out of which 3370 are primary, 166 middle, 29 elementary, 97 high and 17 higher secondary schools. Among total 9325 only 2093 (22%) are

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1 Taluka or Tehsil is a geographical and administrative unit like a sub district
female teachers. In the total enrolment of students which was 331, 884 the number of girls is 130,476 which is only 39% of the total enrolment (RSU. 2011). In district Khairpur there are 3370 primary schools out of which 1325 are for boys 529 are for girls and 1516 are mixed. Thus only 15.6% schools are specified for girls and 39.3% specified for boys. There are 166 middle schools in district Khairpur out of which 61 are specified for girls. There are 29 elementary schools out of which only 3 are for girls and out of 97 secondary schools 23 are for girls. Out of 17 higher secondary schools of the district there is only 1 for girls (RSU, 2011). However, the population of girls is little higher than boys in the district. Except few small towns the whole district Khairpur is rural hence the nature of issues and the dominant socio-economic context is rural where mainly population are related with agriculture.

**METHODOLOGY**

Ethnographic approach was used to know from the parents by long in-depth multiple numbers of semi-structured interviews from the parents. The researcher spent 8 to 10 hours with the every family for interviews and observations. The number of interviews however varied from participant to participant. The interviews continued unless the richness in data was achieved. Thus the number of interviews varied from two interviews to five in different cases. Observations also became the part of data collection strategy. Most part of the observations included the activities of young school-going-age girls who were not going to school but stayed at home. In addition to the concerns the parents were also asked to suggest the viable solutions of such problems which hinder education of their daughters. Regardless of the importance, validity, and practicability of their suggestions, the purpose was to include their voices on the issue that is affecting their lives and will continue affecting in future.

One hundred parents (fifty mothers and fifty fathers) were selected from ten different villages for discussions and semi-structured interviews. All of the parents were purposively selected to represent the parents of both male and female children. Every of the parents had at least one male and one female child, whereas the male child was going to school or had been to school and completed schooling at least till 10th grade and the female child had not been to school or dropped out in the early primary grades. They were from different backgrounds in terms of socio economic status and localities such as families of peasants, small business people, labor class, hailing from small hamlets to bigger villages and towns.

All the interviews and discussion were conducted in their first language (Sindhi) and notes were taken at the time of discussions and immediately after discussion memos and reflective notes were written. The data was analyzed by dividing it into themes and sub themes and the findings are presented into themes that follow the discussion and discussions.
FINDINGS

Parents talked about multiple reasons such as safety security, some unhappy instances that had taken place in various schools, lack of their own awareness, and quality of schools etc for not sending their daughters to school. Below are the detailed findings.

1. Safety and security

Many of the parents (25%) showed their worry about the safety and security of their daughters. Increasing lawlessness was their main concern. A father said, “but you see, God forbid if something wrong happens, who is there to help or support in this lawless country, it is really difficult to take risk for many parents.” Another father said, “There is no safety and security for our girls.” Mother who herself had never been to school said, “We are afraid, if something wrong happens what will we do? You know police will only help if we have money, so it is better that our daughters stay at home.” Thus safety and security and fear of any untoward situation appear to be the main concern of the parents. When asked if there are any such examples, ten parents (seven mothers and one three fathers) mentioned an example of two high school girls, one abducted by an outsider and another example of sexual assault by a school teacher. There are many loopholes in the system where such incidences happen, however, apparently the department of education does not have viable mechanism to stop such things during school hours, moreover, the safety and security is not the domain of education department or schools. Both of the above mentioned incidences happened during school hours and the schools did not do anything.

2. Lack of awareness of parents regarding girls’ education

Another reason that came out as a theme was the lack of awareness and interestingly most of the parents realized that it was wrong on their side that they did not send their girls to school. A father of four uneducated daughters said, “There was no awareness in those days, now everybody wants to educate but what if there is no school.” Some parents think that at the teen age it is not good to send them in schools. “In our village girls go to primary school but after that, they grown up and they are married or parents stop them at home, some of them continue private schooling.”

3. Poverty

Education is free apparently but the parents show multiple concerns and majority of the parents share these concerns. The time the young children spend at home has significant financial benefits for the family such as when the young girls look after their siblings the mothers work in fields. Toor and Parveen’s study (2004) also confirm the same. On the other hand when the parents send a girl to school she needs proper clothing, notebooks and stationery etc. 25% of the parents responded with the same sentence, “assan gareeb manho niyanan je parhai ja kharch Kithan aanyoon” which means, “how can poor people like us afford the expenses of educating
our daughters.” UNESCO (2010) also contends that the primary education in Pakistan is not completely free as the parents have to pay for purchase of notebooks and other stationery items. UNESCO finds a persistent interconnection between illiteracy of women and poverty and terms it a viscous circle which is perpetuated and has a dual effect of keeping girls uneducated and household in poverty. Thus the poverty and illiteracy go hand-in-hand. Uneducated girls have less potential to add in household income and such household retains the same tradition of producing more illiterate females and the circle continues. Most of parents of poor families in a village reported “The chief of the village has announced, no one will send their girls to the school, so we are afraid, we cannot do it, but girls of his family go to school.” This indicates that there are such cruel restrictions for some parents hence they cannot send their daughters to schools.

4. Poor quality of schools

39 parents (31 fathers and 8 mothers) asked, “there is no education in the schools so who will send their daughters in the school?” one of the family shared, there is a girls school in our village but the female teachers do not teach, they do their own work at the school like sewing weaving and then ask the girls to prepare tea for them and the children play whole the day. The father asked, “Can we call it a school?” he added, “No, it is their meeting place or their shop” This indicates there is perhaps no proper monitoring, supervision and support mechanism for school to work properly. A father whose two daughters were not going to school said, “There is nothing in girls’ schools, teachers just come sit and talk and go back girls play whole the day so the parents who are really concerned about education of their daughters send them to boys schools, you can see there are 50% girls in the boys school.”

5. Malpractices and Corruption

One research participant shared something very odd and in fact it indicates the height of corruption. A father said, we do not think that going to school is important, he added, “see if Zarina (pseudonym) can become teacher without going to school for a single day, why should other parents send their daughters to school when they know that it is not the education but it is all relationships and money.” As a result of the probes, he told the whole story of Zarina. According to him Zarina had never been to school but Mr. Shahid (pseudonym) the head teacher of a primary school issued a fake primary pass certificate to her and on the basis of that certificate she appeared in matric examination. She did not appear herself in the exam but another girl impersonated and then another girl impersonated for her in the intermediate examination. Thus she got intermediate certificate from the board and then she was appointed as primary school teacher (PST). The participant then asked, “now what do you think? Will you suggest us to send our daughters to her school?” The malpractices and corruption seems to have
become so severe that people have lost faith in the education system. It is very dreadful situation when people see such practical examples of mockery with education.

SUGGESTED SOLUTIONS

Parents suggested following solutions to address the issues;

I. Compulsory Education for all

A father said, “Education must be made compulsory; if a father does not send his daughter to school he should be arrested by police.” This indicates the height of interest of parent in girls’ education. Despite this keen interest this family could not send her female children to school because of the safety and security. He said, school was not in their village and it was in the nearby village but he shared an example of the sexual assault by a teacher, the incident was reported in the local and international media also.

II. School transport for girls

Mothers specially showed more concern about the security of their daughters, however, they were also very much concerned about education and mostly they suggested the government should provide transportation for the girls to pick and drop them for school. A mother said, “they (political leaders) can spent millions of rupees on their own safety and other extravagant activities why not some amount for girls education.” 15 mothers 10 fathers asked for the transport facility for girls.

III. Monthly stipends for girls on regular basis

A father told that his relatives live in another district where through some NGO funded project the girls are provided with cocking oil dry milk packets and because of that all girls of the village go to school, so if the government can support in this way or at least the girls are provided with regular monthly stipends parents can be motivated to send their daughters to school. Poverty seems the major reason behind not sending girls to school and asking them to support their mothers and household chores or earning activities like labor.

DISCUSSION

1. There is dire need of close coordination between education department and other departments such as police and health. In many instances basic health units (BHUs), rural health centers (RHCs) and government dispensaries exist at some distance from schools, however, there is no mechanism to seek medical help from such facilities during school hours. The schools don’t have resources to send the children to clinic or call the health department personnel to the school. In terms of security, in case of rural villages it is hard to find any police officer to seek help if anything happens or precautionary measures are needed. However, in case of comparatively bigger towns, there are police stations but in Sindh, due to rude attitude of police people hardly
prefer to seek their help and if a school wants to seek their help the police station house officers are hardly ready to cooperate. Hence there is a need of creating some mechanism whereby these three departments-schools, police and health can collaborate for the betterment of the communities.

2. There is readiness among parents to educate their daughters the only thing required is proper planning and making affordable education accessible to their doorsteps. Many activities are being done without planning such as opening new schools, enrolment campaigning without proper planning which results in duplication and wastage of resources. The tax money being used without planning such as opening a new school where it is not needed is just wastage of very useful resource hence there is need of making well informed decisions at district or provincial level.

3. Educating girls is strongly connected with socio economic condition of parents; hence the education department and schools have to think possible ways to connect economic well being of communities. What possible role can school play in suggesting, supporting economic activities of the families, one of the possible input can be introducing skill development programs along with girls education so that the female children along with getting education can learn skills which will also empower them economically and families can benefit from it reasonably.

4. Only teachers coming to school does not serve the purpose, what do they do in the school is more important, hence to ensure the proper functioning of schools a viable monitoring mechanism needs to be developed. The existing monitoring system is very poor in terms of monitoring skills where the monitoring personnel just ensure that the teachers is available in school. The education department should develop some mechanism to assess the quality of student teacher interactions during leaning process. Many teachers are even unfamiliar with the national curriculum; hence their work in the classroom is irrelevant.

5. There is need of proper monitoring and vigilance to stop the malpractices in education department and schools so that the schools can win the respect and trust of the communities can be restored. Many schools in far flung areas are left just on the mercy of teachers; they do what they want it has devalued the image of school. Hence the department needs to be more active and own the schools and remain in close coordination with the schools.

CONCLUSION

The findings reveal that the disparities in girls education exist in Khairpur District and the same is confirmed by the existing literature and surveys carried out by various organizations and the government documents such as economic survey of Pakistan. The efforts to mitigate these disparities have also been made for last about fifty years; however, substantial improvement has not been noticed in the situation. Along with many reasons one potential reason, behind not showing substantial improvement in girls’ education, is not addressing the genuine concerns of the parents. Interestingly the parents’ suggestions are very simple and they have not given a long
list of demands. They have just asked for three things- making education compulsory for all, transport for girls and monthly stipends for girls. Hence it will be extremely important to take into consideration what the parents expect from schools or the government for their female children so that they can send their daughters to schools. Above mentioned suggestions of the parents are genuine and can be addressed within the existing resources available for the schools. In this age when education is considered as a basic right of individuals 50% girls out of schools is a big question mark on the performance of government which is the mass provider of education in country. Hence the authorities are expected to show more responsiveness toward the genuine needs. Without addressing the real issues in existing disparities in girls education there is possibility that the future mothers in Sindh will continue to remain uneducated till the time unknown.
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Grounded Theory: Towards Understanding Ethical Dilemmas by Special Education Leaders in the Philippines

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Chapter One

Purpose of the Study

“Ethical dilemmas arise when two sets of values are in conflict requiring individuals to choose between them” (Pontiff, 2007). Special education leaders are faced with ethical dilemmas in a school setting that offers inclusive services such as mainstreaming and pull-out. As they try to balance the needs of both special and general education students, all the while complying and being accountable to federal laws and mandates, and personal values.

Humphrey’s (2008) study stated the following:

“Ethics plays a part in many decisions that student affairs professionals must make everyday (Blimling, 1998; Canon, 1989; Kitchener, 1985; Winston, Jr., Creamer, & Miller, 2001; Young, 2001). As society becomes more and more litigious and political, student affairs professionals are increasingly pressed to make the right decision (Blimling, 1998; Upcraft & Poole, 1991; Winston, Jr. & Saunders, 1998). Additionally, the higher education landscape continues to grow in complexity with more stakeholders and more at stake (Levy & Kozoll, 1998; Upcraft & Poole, 1991). The problem is that there is no simple recipe for how to resolve those situations in which more than one ethical principle is involved.

For student affairs professionals, the challenge of resolving ethical dilemmas begins with recognizing an ethical dilemma when it appears (Canon, 1996; Levy & Kozoll, 1998; Nash, 1997). This first step is further complicated by the ever-increasing diversity of students that the profession serves (Levy &
Kozoll, 1998; Sundberg & Fried, 1997). Such diversity can create multiple perspectives of a single situation (Levy & Kozoll, 1998; Sundberg & Fried, 1997). Levy and Kozoll (1998) suggested that when faced with such daunting circumstances, student affairs professionals must not run away from the challenge because not making a decision is in essence making a decision.” (Humphrey, 2008, p. 32 - 33)

This study wants to explore ethical dilemmas and leadership in special education in the Philippine setting. What does it take to effectively serve the needs of the special education population in a setting that offers mainstreaming/pullout services?

Special education leaders can have a positive or negative effect on their students’ lives. It is important for them to be knowledgeable, empathetic, and consistent. They are expected to know and model standards that parents, general education teachers, interventionists, and others can emulate and learn from. According to Fielder (1967) leadership is most effective when the style implemented is appropriate to a specific situation. He also identified relationships between leaders, followers, and the situation, which is important in the ever-changing educational setting and population of special education.

The complexity of leadership in special education is increasing with the implementation of Education for All 2015 (UNESCO, 2015), which emphasizes the right of every Filipino access to quality education and is reinforced by Republic Act 9155 also known as the Governance of Basic Education Act 2001 and Republic Act 6655 known as Free Secondary Education Act. (UNESCO, 2015 p.2) This means access to education for children and youth with disabilities. According to the World Health Organization (WHO)
(2015), “disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions.” The Philippines has adapted an Inclusive Education Policy, it is the aim of this policy to reach the un-reached and under served population of learners. (UNESCO, 2015) In the report UNESCO published, Philippine Education for All 2015: Implementation and Challenges (2015), they stated that “DepEd should specifically work on the strengthening and expansion of its SPED classes in the existing public elementary and secondary schools and the strengthening and enrichment of its regular classes to mainstream the people with disabilities.”

This study aims to research ethical dilemmas and leadership in special education leadership in the Philippine setting. It will explore leadership actions, activities, and thoughts that affect decision-making when ethical dilemmas arise. This will be an important addition to current literature as there has been very little literature on the topic. It will also serve as a guide for those special educators and leaders needing guidance in their profession.

According to Department of Education (DepEd) (2015) of the Philippines is pushing the educational system towards the inclusion of special needs students into the general population. However, most schools are not equipped with proper personnel for this transition. In the Philippine setting, special education leaders are usually the classroom teachers themselves without a specific administrator designated to supervise. This has caused many teachers to feel lost within the system as their direct supervisors are not well-informed or educated regarding special education needs and challenges. In a study done in the United States, it has been found that “There is an increasing concern about teacher factors, such as burnout or low efficacy, which have been hypothesized to
Influence student outcomes like achievement or discipline problems.” (Pas, Bradshaw, Hershfeldt, & Leaf, 2010). Special educators and leaders are prone to burnout, due to the exposure to “excessive engagement in overwork, uncertainty about others’ expectations, or excessive worrying on the job coincide with doubts about other people's appreciation…” (Vanheule, & Verhaeghe, 2005)

According to Consolacion (2000), leadership in special education in the Philippines has been riddled with lack of information and transparency that is evident, which makes it unfavorable to the educational community and its different stakeholders (as cited in Orillosa, 2013, p. 13). Different models and perspectives on leadership have been discussed throughout the years. A good example of a leadership model that has grown in popularity since 1970’s is Servant leadership through Greenleaf’s (2007) published works. According to Lanctot & Irving (2010), servant leadership has inspired leaders with a focus of leadership through service. It’s popularity draws from the current societal views of leadership, “truly awful.” (Lowney, 2013, p. 3) Lowney (2013) describes current leaders as, “Too often, those in leadership positions seem preoccupied only with their own status or income. They are unable to inspire or unite us; they are not imaginative enough to solve the seemingly intractable problems that plague us; they are afraid to make the tough choices or even to level with us; and they are insufficiently courageous to lead us through challenge and drive change.” (p.3) The need for research to explore leadership in special education and ethical dilemmas in the profession is imperative especially since it is an emerging field in the Philippines.

The ethical dimensions of teaching have been addressed through different code of ethics imposed in different countries such as the National Education Association’s Code
of Ethics (2015) and Special Education Professional Ethical Principles and Practice Standards from the Council of Exceptional Children (2015). The Philippines also has the Code of Ethics for Professional Teachers (UNESCO, 2015). However, there hasn’t been enough empirical studies done to address the ethical dilemmas in the field of special education especially in schools offering inclusive services such as mainstreaming and pull-out. There is a great need for understanding of professional ethics in the field of special and inclusive education. There is very little known information regarding the different ethical challenges that are encountered in the school setting. The researcher aims to contribute empirical data to the existing body of literature regarding ethics in special and inclusive education by providing insights on leadership in special education and ethical dilemmas.

There are many concerns that plague the special education system in the Philippines. Among these concerns is the lack of “…staff development programs; relevant curricula; inadequate school facilities; instructional tools; and specialized equipment resulting to insufficient funds; comprehensive and accurate data and information not readily available; dearth of researches on the psychology and education of the Filipino child with special needs…” (Orillosa, 2013, p. 13) As of May 22, 2015 according to the Philippine Department of Education (DepEd) website out of the 583,312 teachers only 2,089 are SPED Teachers servicing the growing special needs population of the country.

Special education leaders and educators face a daily variety of responsibilities, from developing individualized educational plans (IEPs), managing student behaviors, coordinating and managing support staff and other service providers, implementing
personalized instruction through modifications, adaptations, and accommodations each student needs for success. To be a special educator they must be able to effectively lead the educational team towards each student’s set of goals and in the Philippine setting the additional role of administrator designee is added.

Different scholars throughout the years have addressed the theoretical and empirical nature of the ethical dimensions of education (Bigbee, 2011; Lucker, 2012; Kieltyka-Gajewski, 2012; Caslib, 2014). However, researches on the ethical challenges within a special and inclusive school have not been the focus. The gap in literature has been noted in the field (Bigbee, 2011; Kieltyka-Gajewski, 2012). As cited in Bigbee (2011),

“ Howe and Miramontes (1992) argue that special education has received minimal consideration as a field of ethical investigation or as a subject in teacher education. Paul et al., (2001) agree, finding it “surprising that a field so replete with…complexities of interests has devoted so little attention to the study and development of applied ethics” (p.1). Despite the long acknowledged need for a greater understanding of professional ethics in special and inclusive education, very little is still known about the ethical challenges experienced by teachers working with the students who have special needs in inclusive classrooms (Berkeley & Ludlow, 2008; Howe & Miramontes, 1992; Keim et al., 1998; Paul et al., 2001; Rude & Whetstone, 2008; Sileo et al., 2008). “ (p.6)

This study aims to contribute to the body of literature in the ethics of special and inclusive education. The results of the study can have enormous implications for policy
Grounded Theory

makers, certifying bodies, teacher education programs, special education leaders’ professional lives as it can provide different insights into the different ethical dilemmas that are present in leading in a school offering special education in the Philippines. This study hopes to influence the development of policies and practices to support leaders, teachers, and the students.

**Research Questions**

The purpose of this study is to examine the ethical challenges and dilemmas that special education leaders experience in their work. The data gathered would hopefully provide insights in the ways in which the leaders manage such ethical issues, the supports available to them, and their recommendation for further supports. A qualitative approach in the form of grounded theory will be used to gain the different perspectives and accounts of the different leaders. Grounded theory allows for the collection of rich data of statements, experiences, beliefs, and events that occur in their school setting.

Research questions will be probing, neutral, and non-leading in order for the story to naturally emerge from the respondents. Questions such as “What does it take to effectively serve the needs of the special education population in a setting that offers mainstreaming/pullout services?”, “What is a typical work day?” or “Can you describe your work day for me?” The questions will be used by the researcher to probe and draw out different notions of ethical dilemmas special education leaders have. As a guide, these questions will not be strictly used as the main interview questions for the respondents but will be used as a motivational start to help respondents in sharing their different notions, opinions, beliefs, and experiences.
Chapter Two

Research Method

An inductive type of qualitative research known classic grounded theory by Glaser (1967) is the proposed method for this study. Previous work on the research problem has been scarce and so this study will take on an exploratory nature. Grounded theory is emergent in nature, it allows for an exploration of the different notions of ethical dilemmas special education leaders have and provides a systematic way to generate a descriptive construct. The research method will allow the researcher to discern, identify, and construct a meaningful theory to explain the phenomena.

Glaser’s grounded theory dictates that everything is considered data. This includes observations, interviews, and artifacts collected from the respondents. In analysis of the data collected, it is imperative to use a systematic treatment of the data to find the concepts out of the different codes. After which, the researcher must then restrict the study to the concepts that are highly related to one another. In doing so, the researcher is able to avoid the potential problem of having different but justifiable interpretations of the data at hand. The objective of grounded theory is to provide an explanatory framework to understand the phenomenon under investigation with theory as its end product. Glaser also dictates that all preconceptions and prior knowledge about the study be cast aside during the procedure, to allow the “emergence of concepts from the data.”

Upon further study of grounded theory, the researcher found that it is best suited for the study at hand. Since there has been little research on the topic, the theory, which will be generated from the data collected, will greatly contribute to literature. It will
hopefully provide insight in the behavior patterns on resolving ethical dilemmas among special education leaders in the country.

**Research Setting and Participants**

Participants are selected based on their knowledge and willingness to share their different accounts on the matter at hand. This study’s participants will be special education leaders who have been in a leadership position for a minimum of five years in a school that has a special education program that offers mainstreaming and pull-out services. In the Philippine setting, the special education classroom teachers most often serve as the special education leaders within a school where there is no specific administrator who is in-charge of the department. This study will make use of both administrative special education leaders and special education classroom teachers who hold administrative duties.

Recruitment of potential participants will be done through personal invitation via email, phone call, or text message. Once the individual has agreed to participate, a letter for voluntary participation will be sent through post or personal delivery. The letter will contain a brief background of the study, proposed dates for the interview, and a copy of informed consent to be signed by the both the respondent and researcher. Interviews will be held at a mutually convenient location, date, and time.
Figure 1. Grounded Theory data collection and analysis process.

**Data Collection**

Grounded theory uses multiple sources of data collection methods such as interviews or personal conversations, observations, and review of different journals or documents. The beginning of a Grounded Theory study begins with a general sense of wonderment regarding a topic. Wherein the researchers are required to begin without having any preconceived notions of the topic. This means that there will be no pre-formulated research questions or guide questions. The study will begin with only a general topic of interest and the initial data collected will be from an open ended interview. A “grand tour” question will initiate the interview. According to Simmons (2009), “A grand tour question is a broad open-ended question related to the general topic area. A grand tour question is designed merely to prompt the participant to respond
to the general topic, on their terms.” Questions that follow the grand tour questions are to be derived from the participant’s response.

Each interview begins with a unique grand tour question depending on the purpose of the interview, as directed by theoretical sampling. Glaser and Straus (1967) defined theoretical sampling “as the process of data collection for generation theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find the data, in order to develop his/her theory as it emerges” (p.45). Each interview length varies per respondent and if the respondent appears to have more to share, a follow up interview may be requested if the analysis of the data reveals that it would be valuable to the emerging theory. Everything that is related to the general topic is considered data and can be analyzed using the constant comparative analysis. As the study continues, the topic is funneled to a more specific area of social concern based on the previously collected data. Each following step after the first interview and data analysis will be determined by the data at hand. The following participants are selected through theoretical sampling, which is contingent on the emerging data and their relevance to emerging theory. When theoretical saturation has been achieved and no new concepts are being yield out of the data, it is the only time the researcher can seize to interview new participants. This is the main reason why the total number of participants in a Grounded Theory study cannot be known in advance.

**Ethical Considerations**

The following ethical considerations have been taken will be taken into consideration during data collection: 1.) Possible discomfort or inconvenience to participants and researchers; 2.) Procedures respecting confidentiality; 3.) The implications of monetary
or other inducements to participants and others to be involved in the research; 4.) Potential conflicts of interest arising between the participant’s affiliations and the research project; 5.) Obtaining informed consent, or when necessary from parent or guardians, including the preparation of a written consent form. The ethical considerations all adhere to the DLSU Code of Research Ethics and Guide to Responsible Conduct of Research and an informed consent form has been drafted for use during the study.

Data Analysis

According to Alony & Jones (2011),

“The process of Grounded Theory encompasses an acknowledgment of the researcher’s bias, the selection of a data collection site, the data collection process, the process of coding and analysis, and the compilation of results. Coding and analysis includes three stages: open coding, selective coding, and theoretical coding. Open coding employs constant comparison and memoing and results in themes, sub-categories, and core categories. These results guide the subsequent sampling of participants through theoretical sampling. The next stage of coding – selective coding – also employs constant comparison and memoing. This stage results in dense, saturated core categories. The core categories are then sorted, written, theorized, and cross-referenced with literature, during theoretical coding. The results of this last stage of coding are a basic social process and a theoretical model.” (p. 101)
Data collected through interviews, observations, and artifacts are reviewed using the constant comparative method. Through its iterative process, it identifies the latent pattern present in the words of the different participants. The researcher reviews lines, sentences, and segments of transcripts and codes them accordingly to form concepts that are data derived.
Open coding is the term coined by Glaser (1967) to describe the analysis of the participants’ transcripts through constant comparison – identifying, naming, categorizing, and describing the different phenomena found in the text. In the process of doing open coding, the researcher does a line-by-line data analysis wherein the researcher compares incidents to other incidents in every possible way. Glaser (1998), encouraged researchers to ask several questions to aid in the coding data. “‘What is this data a study of?’, ‘What category does this incident indicate?’, ‘What is actually happening in the data?’, ‘What is the main concern being faced by the participants?’, and ‘What accounts for the continual resolving of this concern?’” (p. 140) These questions encourage the researcher to be attentive on the patterns emerging among the coded incidents to yield categories.

Holton (2010) states “the coding process is not a discrete stage as it is in some research methodologies but rather a continuous aspect of the analytic nature of classic grounded theory.” In Grounded Theory coding is done in conjunction with conceptual memoing to capture the ideation of the researcher regarding the emerging theory. Memoing is present in every stage of the coding process and is an integral part during the conceptual reintegration during theoretical coding. (Holton, 2010, para 62)

Holton (2010) further explains that the researcher must be knowledgeable as to how and when to engage in the different natures of coding that is essential in “capturing the conceptual power of the methodology.” (para 62) A set criteria has to be applied in the ongoing data collection and analysis as the theory emerges. It is impertinent to tailor fit the criteria depending on the data and applied carefully during the analysis. This allows the data to dictate the direction as to which is relevant to the emerging theory. (Glaser & Holton, 2004, para 51)
Coding the data line-by-line ensures that the researcher is able to validate and saturate categories, lessen the chances of overlooking an important category, and ensures relevance to the emerging theory. The researcher will be able to progress the analysis of the data to “toward to higher levels of conceptual abstraction, core emergence, and theoretical integration” (Holton, 2010). As the process continues and leads to the integration of theories, the researcher is able to clearly see the best fit between memos and data that is relevant to the emerging theory. The themes that come out of the data serves as the foundation for theoretical saturation, wherein no other themes come about in the addition of new data to help progress the theory that has emerged. This aids the researcher to see clearly as to which direction the data is pointing towards resulting in a rich theory that is feels complete. (Glaser & Holton, 2004, para 50)
References


Appendix A

Proposed Timeline

<table>
<thead>
<tr>
<th>Stage of the dissertation writing process</th>
<th>Number of days/weeks needed</th>
<th>Start date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STAGE ONE: Dissertation Proposal Preparation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Choosing of topic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Research and writing for the Concept Paper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Presentation, submission and approval of the concept paper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Reading and research for the initial dissertation proposal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Submission, revision and final approval of the initial dissertation proposal</td>
<td>December 1, 2015</td>
<td>January 29, 2016</td>
<td></td>
</tr>
</tbody>
</table>

**STAGE TWO: Dissertation Proposal**

<table>
<thead>
<tr>
<th>Stage of the dissertation writing process</th>
<th>Number of days/weeks needed</th>
<th>Start date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Reading, research and revising dissertation proposal based on</td>
<td>February</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion with Mentor</td>
<td>March 1, 2016</td>
<td>March 5, 2016</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>c. Approval of dissertation proposal by mentor</td>
<td>March 21, 2016</td>
<td>March 22, 2016</td>
<td></td>
</tr>
<tr>
<td>e. Revising of dissertation proposal based on Panel Comments</td>
<td>March 22, 2016</td>
<td>April 5, 2016</td>
<td></td>
</tr>
<tr>
<td>f. Final Approval of the revised Dissertation Proposal by the panel</td>
<td>March 30, 2016</td>
<td>April 5, 2016</td>
<td></td>
</tr>
</tbody>
</table>

**STAGE THREE: Implementation of the Research**

<table>
<thead>
<tr>
<th>a. Identification of the subjects for the research</th>
<th>March 1, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Initial interview with the subjects</td>
<td>March 30, 2016</td>
</tr>
<tr>
<td>c. Transcribing and decoding the interview after each subject</td>
<td>April 16, 2016</td>
</tr>
<tr>
<td>d. Analysis/Coding of the initial interviews</td>
<td>April 21, 2016</td>
</tr>
<tr>
<td>e. Writing of initial findings</td>
<td>April 21, 2016</td>
</tr>
<tr>
<td>Activity Description</td>
<td>Start Date</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>g. Conducting the follow up interview of the subjects (if needed)</td>
<td>June 1, 2016</td>
</tr>
<tr>
<td>h. Transcribing and coding the follow-up interview after each subject</td>
<td>June 16, 2016</td>
</tr>
<tr>
<td>i. Analysis of follow up interviews</td>
<td>July 7, 2016</td>
</tr>
<tr>
<td>j. Writing of findings from the follow up interview</td>
<td>July 7, 2016</td>
</tr>
<tr>
<td>k. Consultation with Mentor</td>
<td>August 1, 2016</td>
</tr>
<tr>
<td>l. Available dates for more interviews until saturation is reached</td>
<td>October 5, 2016</td>
</tr>
<tr>
<td></td>
<td>October 15, 2016</td>
</tr>
<tr>
<td></td>
<td>October 20, 2016</td>
</tr>
<tr>
<td></td>
<td>October 20, 2016</td>
</tr>
<tr>
<td></td>
<td>November 2, 2016</td>
</tr>
<tr>
<td>m. Writing/Drafting the initial results of the study</td>
<td>November 16, 2016</td>
</tr>
<tr>
<td>n. Consultation with the mentor</td>
<td>December 1, 2016</td>
</tr>
</tbody>
</table>

### STAGE FOUR: Initial writing

| a. Draft the various sections of the dissertation | January 15, 2017 | February 15, 2017 |
| b. Undertake additional research where necessary | January 1, 2017 onward |
| c. Consultation with mentor | February 15, 2017 | February 20, 2017 |
| d. Revision and rewriting based on comments of the mentor | February 17, 2017 | March 1, 2017 |

### STAGE FOUR: The first draft of the dissertation

<p>| a. Compile and collate sections into first draft of dissertation | March 1, 2017 | March 5, 2017 |
| b. Check the flow of the dissertation | March 6, 2017 | March 10, 2017 |</p>
<table>
<thead>
<tr>
<th>Event Description</th>
<th>March 16, 2017</th>
<th>March 10, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. Check the length of the dissertation</td>
<td>March 10, 2017</td>
<td>March 20, 2017</td>
</tr>
<tr>
<td>d. Consultation with Mentor</td>
<td>March 21, 2017</td>
<td>March 30, 2017</td>
</tr>
<tr>
<td>e. Research and revision as needed based on feedback of mentor</td>
<td>March 30, 2017</td>
<td>April 5, 2017</td>
</tr>
<tr>
<td><strong>STAGE FIVE: Final draft for submission for defense</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Check for errors</td>
<td>April 5, 2016</td>
<td>April 8, 2016</td>
</tr>
<tr>
<td>b. Prepare for submission</td>
<td>April 9, 2017</td>
<td>April 15, 2017</td>
</tr>
<tr>
<td>c. Final proof-read and final editing prior to submission for defense</td>
<td>April 16, 2017</td>
<td></td>
</tr>
<tr>
<td>d. Submission for Defense</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STAGE SIX: Dissertation Defense</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Dissertation accepted for scheduling of defense</td>
<td>April 16, 2017</td>
<td></td>
</tr>
<tr>
<td>c. Revision and rewriting based on</td>
<td>May 16, 2017</td>
<td>May 30, 2017</td>
</tr>
</tbody>
</table>
comments during defense

<table>
<thead>
<tr>
<th>STAGE FIVE: Final manuscript for submission</th>
</tr>
</thead>
<tbody>
<tr>
<td>c) Final proof-read and final editing</td>
</tr>
<tr>
<td>f) Submission and acceptance of dissertation</td>
</tr>
</tbody>
</table>
Appendix B

Letter of Participation

Dear Fellow Special Education Leader:

Greetings in St. La Salle!

I am currently working on my dissertation at De La Salle University in the College of Education. I am researching how special education leaders negotiate ethical dilemmas in schools that offer special education programs, which includes mainstreaming and pull-out services. This research will improve the understanding of how ethical dilemmas impact the decision-making process of a special education leader. It will also offer guidance to higher education professionals who seek to improve teacher preparation programs for future special education teachers and leaders.

As a participant, I will interview you at a convenient place and time for you. It should take no longer than hour of your time. If you have any questions, please feel free to contact me at the e-mail address listed below.

I appreciate your time and willingness to participate in this important field of study.

Kind regards,

[Signatures]

Olivia Lou A. Yao, MaED
PhD. Candidate
De La Salle University, Manila
Olivia_Lou_Yao@dlsu.edu.ph

Roberto Borromeo, PhD
Faculty Adviser
De La Salle University Manila
Roberto.Borromeo@dlsu.edu.ph
Appendix C

Informed Consent

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I have read and understood the information about the study, as provided in the information sheet provided by the researcher.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I have been given the opportunity to ask questions about the project and my participation.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>I voluntarily agree to participate in the study.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymisation of data, etc.) to me.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>If applicable, separate terms of consent for interviews, audio, video or other forms of data collection have been explained and provided to me.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>The use of the data in research, publications, sharing and archiving has been explained to me.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Select only one of the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I would like my name used and understand what I have said or written, as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognised.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I do not want my name used in this project.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I, along with the Researcher, agree to sign and date this informed consent form.</td>
<td></td>
</tr>
</tbody>
</table>

Participant:

<table>
<thead>
<tr>
<th>Name of Participant</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

Researcher:

<table>
<thead>
<tr>
<th>Name of Researcher</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>
Appendix D

Memo Interview Protocol

Interviewee:
Location:
Date:
Length in minutes:
Age:
Educational Level:
Profession:
Years of Experience:

1. How did the interviewee appear to me?

2. Atmosphere/Location

3. Disposition to talk/Motivation to take part on the interview

4. Gestures, eye contact, non-verbal signals

5. Interaction during the interview/difficult passages

6. The (three) main points that the interviewee made
Re-establishing a Collaborative Relationship

Marilyn Labrensz, M.S.

Minnesota State University Moorhead

School of Teaching and Learning

INTRODUCTION

The Children’s Preschool at Midwestern University has a long, distinguished history of quality childcare and education. Over the years it has served as a lab school and demonstration site for children of students, faculty, and the community. The Education department at Midwestern University offers a major in Early Childhood Education, providing students the opportunity to complete multiple practica and student teaching at The Children’s Preschool. Within this very experienced staff there existed a strong collaborative relationship with the faculty at Midwestern University. Due to a turnover that occurred at both levels this relationship softened. Each group has something the other needs.

PURPOSE OF STUDY

The purpose of this study was to determine if a collaborative relationship between the preschool staff and the education department faculty could be re-established successfully and if so, how it could be accomplished.

From 1986 to 2008 there existed a strong partnership between these two entities. There were a significant number of events that took place over the years. The dialogue began around the need to coach and guide student teachers. Student teaching seminars were originally prepared by faculty; eventually preschool teachers took over this leadership role. Subsequently, teachers
were invited to give presentations in college classes, faculty members completed research in preschool classrooms often related to dissertations, and preschool teachers and faculty attended national conferences together. Preschool teachers and faculty gave joint presentations at regional conferences, and they attended numerous trainings (such as science training at the University of California, Berkeley; cultural diversity with national experts; and cooperative physical education activities with a nationally published author).

In the fall of 2011, the Children’s Preschool, like many across the nation, was threatened with closure due to budgetary concerns. Former preschool teachers and retired faculty became advocates for the center. Current faculty/staff were added to this group and an advisory board and other committees were developed.

In the fall of 2011, I was hired as a faculty member in the education department. I am a former preschool teacher. As part of my yearly professional development plan, I volunteered to assist and mentor the preschool teachers. Eventually, teachers requested more of a relationship; this was communicated through the director to the Advisory Board, of which I was a member, representing the faculty. As a former preschool teacher, now turned university faculty member, I saw the supportive relationship that used to exist between these two entities. I remember the professional development that took place, the deep friendships that developed, and the close working partnerships that developed between the preschool teachers and the college faculty. Because of a turnover in staff at both levels, this relationship has been lost. As I began my new position, I noticed the need for the re-establishment of this relationship. That leads to two research questions:

1. Can a collaborative relationship between the preschool staff and the education department faculty be re-established successfully?
2. If so, how can we accomplish this successfully?

The goal of the collaborative partnership between the preschool and department is to make sure there is alignment between the two in terms of quality. What is taught about best practices in the college classroom is reflected in the preschool classroom. Working together on this project in the past was characterized by trust and intimacy. This echoed Newbury and Hoskins’ discussion of “relational inquiry,” a methodology that was contextually based, used multiple data, and focused on meaning (p. 644). This collaborative work was based on an ethic of care for the participants, remembering always that being a guest in a teacher’s classroom must be experienced as support, never as a threat.

**METHODS**

This is a human endeavor that involves people, so this research study would lose much if its findings were reduced to numbers alone. A quantitative study would not be concerned about the same factors that I want to take into consideration. Such as, how to establish trust? How can one be sensitive to the feelings of all the participants? How do I help people deal with change? How do you maximize resources that are scarce when they are scarce at every level? How do we improve curriculum so that it reflects best practice?

Qualitative methods were chosen because of the research questions. This was a study of relationships and educational change. The project was informed by the relationship that existed historically. This is about people, and these issues are sensitive, so to reduce it to a quantitative study would diminish the findings.
Another reason this method was chosen is because a qualitative study can be flexible and responsive to changing circumstances. It is responsive to process or the flow of what takes place as the study evolves. Quantitative studies are more product-oriented.

Qualitative research is stronger when the data is triangulated. “The strength of qualitative research lies in collecting information in many ways, rather than relying solely on one, and often two or more methods can be used in such a way that the strength of one compensates for the weakness of another.” (Gay, Mills, Airasian, 2012, p. 393). I used whole group discussion, small group discussion, demographic surveys, pre and post-evaluation surveys, interviews, and individual meetings between the researcher and the participants. I also took field notes on these procedures.

Research Plan: Schedule

What follows is the schedule for the project.

Pre-Project:
1. September 2011 - Establishment of the Advisory Board
2. November 12, 2011 – Preschool birthday party
3. March 2012 - Consultation on Curriculum – Egg Hatching
5. February 2013 – Director consults with teachers about topics for panel discussion
6. February 27, 2013 – Discussion with Bill Ayers about his recent book
7. March 6, 2013 – Discussion on lesson plan format
8. March 19, 2013 – Demonstration of resources – Amaryllis project
9. March 26, 2013 – Round Table Discussion on Superhero Play: Topic #1
10. April 2, 2013 - Evaluation of the panel discussion

Project:
1. April 2013 - Administer survey to both groups (Pre-Survey)
2. April 2013 – Demonstration of egg hatching from the previous year
3. April 16 2013 – Consultation on Curriculum – Farm Animals
5. April 23, 2013 – Round Table Discussion on Prop Boxes: Topic #2
6. April 24, 2013 - Evaluation of the round table discussion
7. May 1, 2013 – Teacher Appreciation: Surprise May Basket
9. May 15, 2013 – Round Table Discussion – Guidance
10. May 17, 2013 - Evaluation of the round table discussion
11. May 23, 2013 – Round Table Discussion on TPA Lesson Plan
12. June 17, 2013 – Administer survey to both groups (Post-Survey)

Research Plan: Ethical Issues

Respecting the rules of confidentiality is very important. All participants need to be reminded of this. There is nothing in this study that would cause harm to people, but we want to be respectful of the feelings of all participants. Because the college faculty is more experienced than the preschool teachers, when making suggestions for improvement, we must be sensitive to and avoid the misinterpretation that we are criticizing the teachers.

Round Table Evaluations

The first round table discussion was on the topic of superhero play. Two articles were disseminated a week prior to the round table discussion. The articles provided a starting point for discussion. Details from each article and ways to implement the ideas in the classroom were debated by the participants during the round table discussion. Teachers made positive comments, such as “more articles on superhero play….the articles were great to start off with and could be put to use in the classroom.” Other suggestions included sharing personal experiences and after trying various techniques in the classroom, it would be a good idea to provide time to revisit or debrief the topic.

The second round table discussion was on the topic of dramatic play prop boxes. Participants discussed appropriate themes, pertinent materials, how to make the prop box multicultural, and created a “wish list” for future prop boxes. Two positive comments from this discussion were
“it was good to hear about other ideas”… “we came up with a great list of things to look for[in the summer]”.

The last round table discussion was on the topic of guidance. This round table discussion was well attended: 15 people in person and one through Skype. Articles were disseminated one to two weeks prior to the round table discussion. As before, these articles were used to provide a starting point for discussion; in addition the articles supported developmentally appropriate practice. Once again, teachers provided positive feedback by stating “a great turnout of educators”… “lots of people with diverse backgrounds and great ideas.” There were also suggestions provided to “return to this topic in the future…to have more time, to repeat the topic twice, and have individual case studies typed up ahead of time.”

**Demonstrations and Panel Discussion**

Demonstrations focused on curriculum and best practice for young children in the early childhood classroom. The first demonstration was on the use of an Amaryllis plant in the classroom. An Amaryllis bulb was given to each classroom/teacher. This demonstration concentrated on how to observe, care for, and record the growth and development of the plant. I also encouraged the teachers to post a picture, which would provide a visual, so children knew what to look for as growth took place. Teachers gave oral comments which I recorded in field notes.

The egg demonstration led to the hatching of chicks and ducklings. This was an extension from the previous year when I brought chicken eggs into the teachers and demonstrated how to set up an incubator, care for the eggs during the incubation period, and care for the chicks once they hatched. This year I extended the experience by providing duck eggs in addition to the chicken eggs.
The farm animal demonstration took place outside of the center, in the parking lot. I brought two chickens, two ducks, a horse, and two goats in a horse trailer. Four faculty members assisted in supervising the animals, while children and teachers from the preschool were involved in a hands-on experience with farm animals. The teachers commented that children REALLY enjoyed the animals and “They talked for days afterwards”. One teacher commented “that most senses were involved, seeing, hearing, touching, and smelling.” After reflecting on this experience, I decided that in the future, I would provide information sheets with simple facts about the animals for teachers to share with children.

The final demonstration was on lesson plans. It was a small group of two teachers and two faculty members. I explained the lesson plan format to the preschool teachers so they understand what future student teachers are required to complete during their experience in the preschool. Teachers provided written evaluations.

There was one panel discussion which took place at the beginning of the project. On the panel were former teachers and faculty who described the history of the relationship between the center and the department. Eighteen people were present. The following categories were represented: former and present teachers, former and present faculty, administrators from both the center and the department, and one faculty from another department. As follow up, teachers generated a list of topics for round table discussion.

**Pre and Post-Survey Evaluations**

<table>
<thead>
<tr>
<th>Item</th>
<th>Teacher A</th>
<th>Teacher B</th>
<th>Teacher C</th>
<th>Teacher D</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship was close</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
The teachers felt closer to the faculty at the end of the project. The teachers felt more alike than different in terms of the faculty. The teachers felt the relationship with the faculty had improved.

The teachers had a more positive attitude about using the faculty as resources.

### Table 2. Teacher Evaluations After the Project

<table>
<thead>
<tr>
<th>Item</th>
<th>Teacher A</th>
<th>Teacher B</th>
<th>Teacher C</th>
<th>Teacher D</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship was close</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2. More alike than different</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>4.5</td>
</tr>
<tr>
<td>3. Share resources</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4. Relationships could be improved</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5. Faculty as resources</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>7. Continue the relationship</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

### Table 3. Faculty Evaluations Before the Project

<table>
<thead>
<tr>
<th>Item</th>
<th>Faculty A</th>
<th>Faculty B</th>
<th>Faculty C</th>
<th>Faculty D</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship was close</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3.25</td>
</tr>
</tbody>
</table>
Faculty felt slightly closer to teachers after the project. Faculty’s attitude of sharing resources was largely unchanged. This may have been because the researcher carried the burden of providing the majority of the resources. Faculty felt relationships had greatly improved. Faculty reported using teachers somewhat less as resources. The limited time of the project may account for this. All parties unanimously and strongly agreed that they wish to continue the relationship.

This project began with two questions:

<table>
<thead>
<tr>
<th>Item</th>
<th>Faculty A</th>
<th>Faculty B</th>
<th>Faculty C</th>
<th>Faculty D</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relationship was close</td>
<td>4</td>
<td>3</td>
<td>3.5</td>
<td>N/A</td>
<td>3.5</td>
</tr>
<tr>
<td>2. More alike than different</td>
<td>4</td>
<td>4</td>
<td>3.5</td>
<td>N/A</td>
<td>3.83</td>
</tr>
<tr>
<td>3. Share resources</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>N/A</td>
<td>3.33</td>
</tr>
<tr>
<td>4. Relationships could be improved</td>
<td>4</td>
<td>4</td>
<td>3.5</td>
<td>N/A</td>
<td>3.83</td>
</tr>
<tr>
<td>5. Teachers as resources</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>N/A</td>
<td>3</td>
</tr>
<tr>
<td>7. Continue the relationship</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>N/A</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4. Faculty Evaluations After the Project
1. Can a collaborative relationship between the preschool staff and the education department faculty be re-established?

2. If so, how can we accomplish this successfully?

The pre- and post-survey results suggest that for the most part, the project was successful, particularly in terms of relationships. Both groups came to see the other more positively. The teachers seemed to be more comfortable using the faculty as resources than the reverse. From the beginning and to the end, both groups saw each other as more alike than different. This remained high and unchanged throughout. The teachers began to see the faculty as more of a resource. Conversely, the faculty have not yet fully discovered how they can use the teachers as resources. Furthermore, more work needs to be done to clarify how the faculty can share expertise.

This project demonstrated several characteristics of collaboration, also mentioned by Hord (1986), such as establishing shared interests, having respectful communication, allotting enough time for collaboration to work, and learning to share resources. As Bickell and Hattrup (1995), noted, “….equity in status is critical.” Both sets of participants in this study saw themselves as more alike than different, which went a long way toward guaranteeing equity. As work progressed on the project problems were solved as they came up, reflecting a negotiation model as described by Lacey (2001).

It became apparent that this collaboration needed to honor the three R’s [respect, responsibility, and reality], (Lacey, 2001). It is crucial to the success of the project that visitors respect the teacher’s turf and not come in as experts with all the answers. Teachers more than anyone, know what is going on in their classroom (Lacey, 2001). There were times during the project when
there was the clash of cultures as described by Goodlad (1993): teachers ready for swift action, faculty prepared for a slower approach to research and its implications. While one can debate the difference between cooperation and collaboration, this brief project on many levels brought together two groups of people who adopted a shared vision and began the renewal of a partnership. The results of the teacher evaluations as well as the pre- and post-surveys, show that a successful collaboration between the Children’s Preschool and the faculty at Midwestern University was successfully begun. To ensure continued success, plans for the immediate future need to be developed.

CONCLUSION

Relationships between teachers and faculty became closer and improved. They saw one another as more similar than different. Relationships were improved. I found that overall, the historical collaboration between the Children’s Preschool and the early childhood faculty at Midwestern University could be re-established. The project was a success in that it revived the collaboration. This new relationship will need to be supported as we continue to grow in our partnership. The findings may be useful to others in education working to establish, maintain, and improve partnerships, align programs and enhance teacher preparation programs.
References


Submission ID: 1184

Create a detailed title page for your submission.

1. Title= “AWARENESS EDUCATION FOR THE OPEN IOT PLATFORM SYSTEM MARKET GROWTH”
2. Topic area= Business Education (or Other Areas of Education)
3. Presentation format = Poster Session
4. Descriptions=[74 words]

The Open-IoT Platform system market for smart house based on ECHONET Lite (Open-IoT standards) is expanding in Japan. For further market growth, the awareness on the benefits of open systems must be promoted among companies (which tend to intentionally enclose their markets by proprietary products) as well as users (who are often unfamiliar with IoT services). In this paper, we report the current situation and problems with awareness education for the Open-IoT Platform market growth.

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“AWARENESS EDUCATION FOR THE OPEN-IoT PLATFORM SYSTEM MARKET GROWTH”
Masao Ishiki Ph.D Prof., Hiroshi Sugimura Ph.D Assoc. Prof., Yuji Sasagawa, Takashi Murakami, Yoshimi Tesigawara Ph.D Prof.

Abstracts

Overview: The Open-IoT Platform system market for smart house based on ECHONET Lite (Open-IoT standards) is expanding in Japan. For further market growth, the awareness on the benefits of open systems must be promoted among companies (which tend to intentionally enclose their markets by proprietary products) as well as users (who are often unfamiliar with IoT services). In this paper, we report the current situation and problems with awareness education for the Open-IoT Platform market growth.

Method: In Japan, a government committee has set a strategic framework [1] for market formation, with the international open standard ECHONET Lite [2] (which is based on IP and therefore perfectly “IoT”) adopted as the key technology. Thereafter, a consortium of corporate parties (JSCA)[3], in cooperation with industry associations centered on the eight important kinds of strategic devices (smart meters, PV, EV, PHEV, battery, air conditioner etc., and HEMS devices as (Fig.1) [4], has been promoting market formation by providing standard-compliant equipment. Currently, products which are compliant with the open standards (ECHONET Lite) are available in one half of the devices on the market [5]. Now, with real products provided on commercial levels, the market formation has entered its first preparatory stage. [6] (Fig.2)

For further developments, efforts to educate various segments of people have been underway: (Fig.3)

1) For companies, the education is primarily focused on the fact that the open standards system can reduce procurement costs and facilitate system adjustments. Also, it gives merit expansion of facilities select ability. Example: consortium seminars and general corporate seminars. [7]

2) For users, the education is aimed at explaining that the open standards system gives a freer choice of service providers and service contents. Example: HEMS seminars and public lectures [8]

3) For small and medium-sized to businesses, the education is aimed at explaining that the improved freedom of equipment procurement makes entry into services easier. Example: HEMS center tours, hackathon, and exhibitions. [8] (Fig.4)

4) For salespersons, the “smart master qualification test” has been introduced for educational purposes. Example: smart master workshop [9]

Results and challenges: For the spread of IoT, both the equipment and services need to be spread in cooperation. We believe that the Open-IoT Platform is advantageous over proprietary (“vertically-integrated”) platforms in that it enables service providers to develop more efficient, flexible and easy-to-use IoT environments while offering users a broader range of services as in the Internet-related businesses. However, in the course of the above-described educational efforts, we have learned the hurdle for the open service formation is high. The problem is common to the service formation in IoT business areas, i.e. the consciousness difference between "proprietary services offered by specific service providers" and "enterprises based on the Open-IoT Platform". This is a matter of business (not technology) and must be handled as such: Firstly, we must develop effective methods for making companies and users more aware of our Open-IoT Platform promotion. Secondly, in the promotion, we must present clearer pictures which show that introducing the Open-IoT Platform into business areas provides various benefits in comparison with the vertically-integrated systems.

Summary: We need to develop more effective methods for the awareness education on the "Open-IoT Platform introduction into business areas."
**8 strategic devices in EMS speak ECHONET Lite**

ECHONET-Lite, owned by ECHONET Consortium, has become open interface since on Dec 21, 2011. With following that strategy change, JSCA, government-industry liaison, has decided for 8 strategic devices to speak ECHONET Lite and promote the growth of DSM in Japan

- Utility
- 1. Smart Meter
- 2. EV/PHV
- 3. Light
- 4. PV
- 5. Fuel Cell
- 6. Battery
- 7. Hot water heater
- 8. Air conditioner

- **ECHONET-Lite** is recommended as the standard interface for connecting appliances and smart meter.
- Communication protocol between HEMS and devices should be based on IP.

Fig.1 Eight strategic devices
Open Platform Creates the World

“ECHONET Lite + Web + Intelligent robot” creates the future of HEMS

Devices and Facilities
Air Conditioner, Laundry M, EV/PHV, Lighting, PV, FC, Battery, ..

ECHONET Lite + Web = Service platform

Intelligent robot

Fig. 2 Open-IoT Platform will be making a future Smart Home! 😊

How to educating the benefit of Open IoT Platform

Education to Service & Device Providers (for Companies and Engineers)

Edication to Small Companies
Service providers (Newcomers)

Local Constructors

Education to Home Suppliers
Major Home Builders

We want get “good education method” for each target peoples.

Fig. 3 Four target arias of Open IoT education

Presentation at Exhibition (CEATEC JAPAN)

Fig. 4 Presentation at Exhibition for small and medium-sized to businesses
Development of an e-Portfolio System for Educational Technology
Research Based on the Warp and Woof Model of Problem Solving

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ABSTRACT

My team has designed an e-portfolio system to support literature reviews and the development of gaming instructional materials to cultivate students’ ability to perform educational technology research. Moreover, I have developed the Warp and Woof model of problem solving to develop gaming instructional materials for STEM subject areas. In this article, I combine the functions of e-portfolio systems designed in past studies based on the Warp and Woof model.

Key Words: e-portfolio system, educational technology research, problem solving, master’s thesis study, the Warp and Woof model.

INTRODUCTION

An e-Portfolio System for Supporting Literature Review Activities

Shimada and Matsuda (2012) and Matsuda and Shimada (2013) discussed the design of an e-portfolio system to cultivate the problem-solving abilities of master’s course students through both course works and master’s thesis research by focusing on literature review activities. Their system incorporates the following four features to aid students in preparing for master’s thesis research:

1) A function for sharing sources and summaries of articles read or written by students
2) A test function and a concept map function (Uchino & Matsuda 2007) to support students in understanding and memorizing technical terms indispensable to their master’s thesis study
3) A function for checking a literature review report and helping laboratory members to conduct seminar discussions
4) A function to support students in learning to read and write research papers in English

These features were designed based on a text analysis function that extracts important keywords from sentences using a Japanese morphological analysis system called MeCab (Kudo et al., 2004). A technical term dictionary for the educational technology domain was also created by Shimada and Matsuda (2012).

However, these functions alone were insufficient to effectively and systematically cultivate students’ problem-solving abilities. Therefore, Shimada and Matsuda (2012) designed a rubric for evaluating students’ literature review activities. This rubric represented an important first step toward systematically developing students’ problem-solving skills in producing a literature review; however, the relationship between the functions of the aforementioned e-portfolio and this method of evaluation using a rubric has so far remained
The Warp and Woof Model of Problem Solving

To rectify the above problem, Matsuda (2015b) proposed the development of an e-portfolio system based on the Warp and Woof Model of problem solving. This model has been constructed by developing several gaming instructional materials for STEM subject areas at the secondary school level based on the analysis of commonality and differences among the problem-solving processes in the National Course of Studies (Matsuda 2015a). The model consists of three elements (Figure 1): a problem-solving script (procedural knowledge common for every problem-solving activities), ways of viewing and thinking, and domain-specific knowledge. General strategies, meta-cognitive skills, and domain-specific knowledge are all elements of human intelligence and expert performance (Bruer 1993).

![Figure 1: The Warp and Woof Model of Problem Solving by Matsuda: The Common Framework](image)

In Figure 1, the warp process is demonstrated by the rectangles on the left side, and it consists of five subprocesses for problem solving. Originally, this process was constructed to integrate Tamada and Matsuda’s (2004) method for cyber ethics education into Matsuda’s (2003) method of teaching informatic ways of viewing and thinking. In each of the main processes, activities to “collect → process → summarize” information are performed simultaneously, utilizing the ways of viewing and thinking shown in the balloon. Domain-specific knowledge is classified into internal knowledge (denoted using cloud shapes in Figure 1), which must be memorized, and external knowledge (represented by disk shapes in the figure), which must be referred to when required. This framework emphasizes the commonality among problem-solving processes in many subject areas; the Warp and Woof activities are common for all of them. Moreover, informatic ways of viewing and thinking should be common for the use of all subjects. Anyone who proposes a new or revised model is required to express woof activities more concretely for understandability, add useful ways of viewing and thinking besides informatic ones, and show important domain-specific knowledge explicitly by classifying it as internal and external.

A Function to Support the Development of Gaming Instructional Materials

To perform educational technology research, the development of a lesson plan, an instructional material, and an assessment test and/or a questionnaire is required so that a trial lesson for examining research questions can be conducted. To this end, Matsuda (2015b) proposed a new function of the e-portfolio to help efficient development of gaming instructional materials based on Figure 1. The aim of the function is to offer basic
dialog templates and sample gaming materials, and to prompt their usage. This will help a developer to focus on considering contents of dialog rather than writing programs for controlling dialog.

The above function allows the e-portfolio system to focus on helping the Generate Alternatives and the Rational Judgment processes. To assist in all educational technology research processes of the system, it is necessary to integrate this function into the e-portfolio for literature review activities based on the Warp and Woof model.

**PURPOSE**

In this article, I discuss the development of an e-portfolio system that integrates two previous e-portfolio systems, one for literature review activities and the other for the development of gaming instructional materials, based on the Warp and Woof model of problem solving. The main objective is to organize menu items in each activity to be not only consistent with the model but also the course curriculum and laboratory works. During this process, it is important to associate the results (log data) of each menu task with others to promote their utilization for research activities as well as the systematic acquisition and understanding of inner knowledge while discussing what kinds of work is required in each task and feedback methods.

**MENU ITEMS AND ACTIVITIES CORRESPONDING TO THE MODEL**

**The Introductory Process**

Before starting the goal-setting process, students need to understand the Warp and Woof model (Appendix), including the relationship between the activities in the model and the contents and tasks of course works and laboratory works, to utilize the e-portfolio system. Additionally, to understand points and useful strategies of learning in research activities and to review activities after finishing a study, it is necessary to clarify students’ readiness. The initial menu of the model before passing the verification test and starting the goal-setting process has the following items:

- 0-1: Understand the Warp and Woof model
- 0-2: Understand the purpose and methods of using this e-portfolio system
- 0-3: Keep a record of my present state for performing research activities
- 0-4: Take the verification test

**The First Task of the Goal-Setting Process**

After finishing the introductory process, students perform research activities based on the model. In the goal-setting process, students need to perform literature reviews and, to understand the model, gain experience on the use of instructional materials developed in related studies. As an output of this task, each student is required to choose an appropriate research study and find his or her own research questions while paying attention to the goodness of the research, as well as the influences of their trade-off relationship.

Although woof activities are expected to be performed only once, some repetition will be required in this case. Therefore, any activity of any process in the model can be chosen at the top menu. In each activity of this process, the choices shown in Figure 2 are provided. In Figure 2, items starting with an “x-” in their code are commonly used in every process, named “common menu items” hereafter. Items starting with “y-” in their code are commonly used in some processes. The system not only support students’ research activities but also helps them to learn about the model, utilize ways of viewing and thinking, and acquire internal knowledge. Therefore,
to guide students’ learning, menu items to help them understand what they should learn and how they should perform tasks are provided from x-1-1 to x-1-7. Items x-2-1, y-2-3, and y-2-4 link to the functions of e-portfolio systems developed previously: reviewing slides presented in the lessons, performing literature review, and experiencing sample gaming materials, respectively. The results of y-2-3 and y-2-4 should be registered by choosing y-3-3 and y-3-4 respectively.

The top menu choices of processes, choice of activities, collect, process, summarize, x-1-1: Overview of the process, x-1-2: Relationship between tasks in the process and course/laboratory works, x-1-3: Output of the process, x-1-4: Necessary ways of viewing and thinking, x-1-5: Internal knowledge, x-1-6: External knowledge, x-1-7: Return to the top menu, x-2-1: Acquire internal knowledge, 1-2-2: Literature review exercises, y-2-3: Access to the literature, y-2-4: Find and use gaming materials, x-2-5: Go to processing information, x-2-6: Return to the top menu, x-3-1: Return to collecting information, x-3-2: Get advice on activities, y-3-3: Register/refer to literature data, y-3-4: Register/refer to experience notes of gaming materials, x-3-5: Summarize/refer to internal knowledge, x-3-6: Writer/refer to elements of my paper, x-3-7: Go to summarizing.

Figure 2: Menu Items for Each Activity in the Goal-Setting Process

To practice the woof procedure and promote the acquisition and utilization of ways of viewing and thinking in association with internal knowledge, the following functions and e-learning materials of the e-portfolio system are developed. First, before starting literature review activities, the good points of educational technology research, the instructional design model including the Warp and Woof Model, technical terms, and methods for designing lessons and instructional materials are discussed in the lessons. These can be learned in x-2-1 and y-2-3, summarized in x-3-5 using the concept map function (Uchino and Matsuda 2007), and so on. Second, to facilitate students’ understanding of the methods of literature review and important information resources, support functions to find and summarize the principles of literature review by oneself based on literature review exercises such as the following are provided:

(a) List more than 50 articles published in a year that are related to interested topics.
(b) Choose the most appropriate book to acquire the domain-specific knowledge necessary for a particular research topic systematically and comprehensively.
(c) Summarize papers on a specific topic in the laboratory by focusing on their relations.
(d) Summarize the trends over five to ten years regarding articles from a specific information resource.
(e) Choose important articles found in exercises and summarize the features of their reference papers.
(f) Find useful information that appeals to the necessity and value of a study by focusing on the reports and surveys referred to in the articles found in exercises (a) to (d).
(g) Find useful information resources outside the laboratory by means of the features found in exercise (e).

On finishing this task, students should be ready to write the “Introduction,” “Literature Review,” and “Purpose” of their papers. They are required to create their own reference database on the e-portfolio (y-3-3) and write sentences under the system’s guidance for quoting each study while registering it in the database (x-3-6).

The Second Task of the Goal-Setting Process
The second task comprises creating a work plan for designing a lesson plan, developing gaming instructional material, and performing trial lessons. To this end, information about possible dates and classes of trial lessons, including initial states of learners, should be collected from a teacher of the school where practical lessons will be carried out. It is important to provide a deadline for showing the instructional material (game) to
the teacher, because its development will be time consuming. Since breaching the deadline damages the trust in the relationship between the school (teacher) and university (professor), students must design both an ideal plan and a safe gaming plan. For this purpose, the author proposes the method of initially creating a quiz-type game and then improving it to the role-playing type to solve conflicts regarding the trade-off between time restriction and game quality.

In addition to the common menu items showed in the previous section, the following items are provided in the collect information menu: “2-2-2: Collect information about schedule and constraints,” “2-2-3: Survey initial state of learners,” and “2-2-4: Collect any materials useful to produce instructional materials.” To increase the reliability of the plan, the following are collected as external knowledge: a useful sample game board; a component to compile information resources; schedules for not only oneself but also the cooperators, which are required to determine deadlines, and so on.

Moreover, in the process information menu, the following items are provided: “2-3-3: make a work plan” and “2-3-4: register useful materials to progress the work.” To consider not only an ideal plan but also a safe plan, students need to acquire internal knowledge about what should be considered ideal and safe plans respectively. This knowledge should be referred to, to explain the reason for the plans.

The Generate Alternatives Process

The main purposes of the Generate Alternatives process are designing a lesson plan, gradually developing an e-learning material (game), and considering assessment methods for confirming educational effects. In this study, games are assumed to be developed using the Instructional Activities Game (IAG) system (Matsuda 2005), because all sample games have been developed by IAG, and it is easy for beginners to develop games using the same. The proposed method requires more than two repetitions between the Generate Alternatives and Rational Judgment processes to complete the game, because it requires the two steps mentioned previously.

In addition to the common menu items, y-2-3, y-2-4, and “3-2-2: find sample test items and questionnaires” are added. For developing game material efficiently, the maximal utilization of a sample game board is important. In y-2-3, a sample game board that offers advice on the description methods of various dialogues in a game board along with their experiences can be chosen.

Moreover, in the process information menu, y-3-3 and y-3-4 are provided to register literature and instructional materials as evidence of lesson design, gaming materials, and assessment methods. However, students need to acquire internal knowledge generalized from this evidence. In x-3-5, the system shows a list of typical devices and policies and prompts students to summarize their priorities and reasons briefly. However, because it is difficult to offer sufficient support through dialogues alone within the system, it is assumed that students will make notes in x-4-1 and update them repeatedly based on presentations and discussions in seminar activities, as well as advice from their professors. Further, in x-3-6, students must mention these notes in their papers in the form of points for designing games and lesson plans while using the technical terms they acquired as internal knowledge through literature review activities.

To register alternatives, “3-3-9: register lesson plans, gaming materials, and evaluation plan” is added. Each alternative is a combination of these elements. The alternative examined in the Rational Judgment process should be generated in this task.

The Rational Judgment Process

The purpose of the Rational Judgment process is to examine alternatives (lesson plans, game flows, slide contents, game boards, and assessment plans) critically to determine issues and formulate an improvement policy. The method proposed for cyber ethics education by Tamada and Matsuda (2004) was utilized as shown in Figure 3.
An “ethical issue” includes copyright infringements, mistakes in contents, educationally inappropriate expressions of contents, and unfaithful actions by a cooperator’s teacher. These issues should be concretely considered, memorized, and utilized as internal knowledge, and the viewpoints showed in Figure 3 play a role in categorizing these issues. In the e-portfolio system, the acquisition and utilization of internal knowledge should be supported while showing the viewpoints and choice of evidence that support rational judgments. To this end, it is important to encourage students to write down rules, viewpoints, and reasons for critically thinking about their judgment in literature review activities and to discuss them in a seminar. After the discussion, students are required to assess their judgment and reconstruct their rule and case database for providing better judgments in the future.

To achieve the above purposes, the following menu items for collecting information are added to the common menu items: “4-2-2: Confirm the purpose of my study and goodness of the gaming material chosen in the goal-setting process,” “4-2-3: Confirm my rational judgment framework,” and “4-2-4: Refer to useful information resources for judgment and improvement.” Moreover, the following menu items for processing information are added: “4-3-3: Construct my rational judgment framework” and “4-3-4: Carry out a critique based on the framework.” 4-2-2 is used to refer to internal knowledge acquired in the goal-setting process (1-3-5) for examining alternatives critically. 4-2-3 is used to refer to own the rational judgment framework registered in 4-3-3 to consider whether new knowledge should be acquired to judge the adequacy of alternatives, and 4-2-4 is used to determine if any new knowledge is required.

**The Derivation of Optimized Solution and the Consensus Building Processes**

Several repetitions between the Generate Alternatives and Rational Judgment processes are required to generate some alternatives to appropriate lesson plans, games, and assessment plans. All the alternatives to an optimized solution should be examined in seminars and be approved by the professor.

However, even when such reciprocal processes are performed, issues that one cannot determine by oneself may remain, such as whether the contents of the game are too easy or difficult or whether the approximate estimated time to complete the game is adequate. Therefore, in the Derivation of Optimized Solution process, since it is necessary to “be aware of the mutual relationship between the rightness and responsibility of a
decision,” developers need to entrust the final judgment to the teacher and ensure flexibility in meeting the teacher’s requests in the Consensus Building process. It is also necessary to design an instructional material that includes some optional plans corresponding to different weights of merit. Based on the above discussion, “4-2-2: Collect useful information for ranking alternatives” in the collecting information menu and “5-3-3: Rank alternatives” in the processing information menu are added to the common menu items.

I believe that it is impossible to complete the development of gaming materials while following every alternative before this process. It is reasonable to complete game development after building consensus with the teacher. Therefore, it is important for students to clarify their reliability regarding completing the game’s development to the teacher in the Consensus Building process.

The Review Processes

After a trial lesson is conducted, its results are analyzed, and a paper/report written, the Review process begins. Mainly, two points are necessary for review: considering the gap between the result and prediction and considering the appropriateness and utilization of acquired knowledge and ways of viewing and thinking. The latter includes a review of the research method and internal knowledge to make a research plan. Students enter their learning outcomes into an e-portfolio and utilize them to write a paper/report. After presenting the paper in a seminar and receiving comments from the supervisor, the review activity should be started, and the inappropriateness of the learning outcomes should be considered based on the supervisor’s comments. It is important for an effective review to utilize, as far as possible, stored learning outcomes in the e-portfolio to write a paper/report. In other words, when designing an e-portfolio system, it is important to prompt students to write elements that are directly referable in a paper/report.

SUMMARY AND FUTURE DIRECTIONS

In this article, I developed an e-portfolio system that integrates previous two e-portfolio systems, one for literature review activities and the other for the development of gaming instructional materials, based on the Warp and Woof model of problem solving. The main objective was to organize menu items in each activity not only consistent with the model but also the course curriculum and laboratory works. The approach this study applied was to design an e-portfolio system that was neither function based nor activity based but model based and that clarified what students should acquire and be able to utilize.

After implementing this system, I need to verify its effects through its practical application in course work that focuses on teaching research methods of educational technology and laboratory work. During this application, I will pay attention to the effect of design based on the model. I expect a log analysis from several perspectives to clarify the relationship among the effects of learning and elements cultivated by students.

ACKNOWLEDGEMENTS

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REFERENCES


APPENDIX: A Warp and Woof Model of problem solving for educational technology research

[Goal Setting]
- Understand and analyze the goal and conditions of the problem
- Determine subgoals and plan for the work
- Consider the negative influence brought by ICT use
- Considering subgoals for improving the alternative

[Generate Alternatives]
- Acquire/confirm ICT knowledge
- Create alternatives that might be able to achieve the goal
- Generate further alternatives that will minimize the demerits of the issue found in the Rational Judgment process

[Rational Judgment]
- Consider the negative influence brought by ICT use
- Considering subgoals for improving the alternative

[Derivation of Optimized Solution]
- Choose the optimal solution from among evaluated alternatives

[Consensus Building]
- Explain the solution to decision makers and ask for a decision

[Collect]
- Useful information resources
- Literature review and use of games
- Clarify conditions for preparing practice lessons
- Use varied information
- Consider varied benefits

[Process]
- Databases and methods of research
- Understanding models and research methods
- Consider various benefits and their trade-off relationship
- Analyze and define the problem from a systematical perspective
- Prior studies
- Conditions of practice

[Summarize]
- Goodness of research, practice, and their trade-off
- Making a work plan
- Sample game boards
- Sample patterns of communication
- Tests and questionnaires
- Ideal & safe plans
- Hypothesis

[Review]
- Self-evaluate the problem-solving activities based on the log
- Reconstruct domain-specific knowledge by choosing useful information
Title of Submission: American Skin (41 Shots); How One Song Can Teach Issues of Race, Identity and Policing in America.

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Abstract

Race, identity and policing regularly surface to the top in America. Recently, with the movement of Black Lives Matter and numerous police shootings of black men, these issues are yet again in the news. Can schools and teachers have a role and responsibility to prepare their students to deal with matters of race, identity and policing? If so, how can this be done effectively in the classroom? This presentation illustrates one effective approach using pedagogy of song and its power to engage students in a more meaningful manner and enhance learning. Research has demonstrated that young people engage more with their music than any other activity on a daily basis, but educators largely ignore this fact. This presentation will demonstrate how the use of popular music can enhance student learning experience and more importantly, make it more enjoyable. Educators can also use this pedagogy with other learning approaches such as Blended Learning, Case Study or Transformational Learning.

by

Adrian John Wouts

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF ARTS

DEPARTMENT OF HISTORY

CALGARY, ALBERTA

March 2013

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Cooperation was the animating feature of the United Famers and Farm Women of Alberta (UFA/UFWA) and was reflected in their reform initiatives during their tenure in the Alberta Legislature between 1921 and 1935. It was the United Farmers and Farm Women of Alberta who instigated the reform of grade school curriculum leading to the shift from history to social studies beginning in 1935. With the advent of social studies in Alberta, gone was a study of the past; social studies worked to establish a democratic and cooperative society in the future.¹

It is the objective of this thesis to contextualize the shift from history to social studies curriculum by considering the cooperative ethos expounded by the UFA/UFWA in Alberta between 1919 and 1935. At the same time, my objective in this thesis is to expand the understanding of the origins of social studies beyond a widely held view among some historians that it was brought to Alberta from the United States by a select group of educational elites. This narrow perspective ignores the local roots of this momentous curriculum development. The shift from history to social studies took place amidst a rising tide of prairie populism sweeping Alberta during the first three decades of the twentieth century. During these decades, UFWA leaders, rural women school teachers, and their interactions with an emerging educational bureaucracy in Alberta contributed significantly to the emergence of social studies. The onset of social studies involved a wider cast of characters and local movements than has been accounted for to date.

¹ Alberta Department of Education, “Program of Studies, Social Studies” (Edmonton: King’s Printer, 1935), 2
ACKNOWLEDGEMENTS

This research project was partly conceived during my experiences teaching high school social studies in a number of Calgary schools. Students often asked the hard-nosed question at the beginning of the semester, what was the point of social studies? I wondered the same thing. Or, more precisely, I wanted to know where social studies came from and why it replaced history curriculum in schools throughout Alberta. I thank students for precipitating my interest to follow up on such questions in a concentrated way for the past few years.

I would like to thank my supervisor Dr. David Marshall for taking an interest in this project and providing direction and support at every stage. I would also like to thank archivist Maggie Shane from the Alberta Teachers Association (ATA) in Edmonton. Maggie supported my research by way of suggestions, guidance, and leaving the lights on in the archives long after their regular closing hours. I am grateful to her. I must also thank my brother Tim Wouts for always being interested in my work and inspiring me to learn more every time I speak with him. And thank you to my dear friend David Sol, who always makes himself available to listen, but demands of me clarity of mind in all that I do.

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INTRODUCTION

Social studies curriculum, taught throughout Canadian schools, regularly garners heated public criticism.¹ Take, for example, the MacLean’s Magazine’s October 2012 cover story, “Why are Schools Brainwashing our Children?”² The article criticizes social studies curriculum for emphasizing ill-defined social justice activities such as organizing student strikes against the proposed Keystone XL Pipeline project.³ A focused study of history is all but absent in Canadian classrooms, according to the author, Cynthia Reynolds. Her argument echoes much of what Canadian historian, Jack Granatstein, has said for years, namely, that social studies does not provide students with an adequate knowledge of Canada’s past, contributing to what he claims is historical amnesia among our youth.⁴

The above-cited article alludes to what educational historians refer to as the so-called “social studies wars.”⁵ The battle is between history and a citizenship-focused social studies for dominance in the classroom. A healthy debate continues to take place regarding which histories should be included in school curriculum and what kinds of citizenship skills students should learn in classrooms.⁶ Rarely, however, are more fundamental questions asked regarding what exactly social studies is and how it differs from its predecessor, secondary history. And why did social studies replace history

³ Ibid.
⁶ Ibid.
curriculum at all grade levels in Alberta schools beginning in 1935? Alberta was one of the first provinces to introduce social studies in Canada, followed by Saskatchewan, Manitoba, the Maritimes, and Ontario. Thus, an examination of the factors leading to the curriculum shift in Alberta makes it a particularly relevant jurisdiction to investigate.

My hope in this thesis is to move beyond a typically polarized or charged debate regarding the rightful place of either history or social studies in classrooms. Instead, I will examine the conditions and movements that precipitated this curriculum transition in Alberta in the first instance. Because education is a provincial responsibility, enshrined in Section 93 of the British North America (BNA) Act, it should come as no surprise that curriculum reform reflects the atmosphere of a province at a given point in time.

In the early decades of the twentieth century, Alberta’s rural society was on the march, and cooperation was their main weapon. Amidst rural degeneration, the economic exploitation of farmers by corporate interests, and fluctuating climactic conditions, farmers organized and cooperated to ensure their interests were heard by government. The United Farmers and Farm Women of Alberta (UFA/UFWA) took direct political action in 1919 and assumed control over the Alberta Legislature in 1921. Thus, a previously unrepresented group in society, farmers, had come to power, and they remained there for fourteen years. The UFA/UFWA rode a wave of prairie populism,

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nourished by the social gospel and political activism that worked to rid society of greed, competition, and violence. Curriculum reforms during the 1920s and 1930s came to reflect the UFA/UFWA’s larger objective to inaugurate a cooperative and democratic order in the future. Just as the UFA/UFWA presented a bold vision for the future, so too did social studies. The same year that this new curriculum was introduced in high schools in Alberta, H.C. Newland, a most ardent promoter of social studies, proclaimed that teachers must be “evangelists for democracy and social engineers.”

Social studies became the vehicle by which the UFA/UFWA expanded their movement by emphasizing cooperative forms of organization and active political citizenship.

In 1935, Alberta’s Department of Education introduced social studies, claiming that “as its name implies [social studies] is socially directed, dealing with the ‘here’ and ‘now’, subordinating the ‘there’ and ‘then’.” A study of the past became secondary to the need to prepare students for active political service in the present. For example, students were asked how cooperative forms of organization such as the Alberta Wheat Pool could combat contemporary crises of economic depression and international conflict. History students in 1919, on the other hand, were expected to memorize the facts of the British Empire and Canada’s role in it.

Despite the rich rhetoric of reform surrounding this momentous curriculum revision in Alberta, historians have largely overlooked its local roots. Scholars have tended to

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11 Alberta Program of Studies for Elementary (Edmonton: The King’s Printer, 1935), 2.
12 See W.D. McDougall’s and Gilbert Patterson’s social studies textbook authorized for use at the secondary level in Alberta: *The World of Today* (Toronto: Ryerson Press, 1937), 147.
13 Program of Studies for History, Alberta Department of Education, 1918.
discuss its genesis primarily in terms of a larger category of educational reform originating in the United States, progressive education. The American influence of progressive education in Canada and Alberta is not contested in this thesis, but to imply, as some scholars do, that progressive education and social studies were imposed upon Albertans wholly from the outside and by a select few, ignores the influence of local leaders, movements, and conditions that precipitated educational reform. I will argue that social studies was not the invention of a single man, women, or government department. Rather, it was the culmination and result of various social and political forces sweeping Alberta throughout the 1920s and 1930s.

The UFA/UFWA and rural school teachers worked at a grassroots level to alter teaching methods and curriculum to better suit the isolated and relatively improvised state in which rural schools operated during the 1920s. These local innovations to teaching methods and curriculum were in fact consistent with what educational experts later termed progressive education and social studies in the 1930s. Ultimately, what I intend to demonstrate is that UFWA leaders and women teachers were vanguards of curriculum change in Alberta and that their roles have yet to be accounted for in the historical record. This is largely because curriculum reforms of the 1920s were usurped by an emerging cadre of educational elites in the 1930s as a means to legitimize and elevate their careers. In this way, social studies was a formal term given to what UWFA and female teachers had informally delivered prior to the arrival of educational elites.

Because social studies curriculum was introduced in the same year that Aberhart’s Social Credit Party ousted the UFA government from the provincial legislature (1935), I
must clarify my decision to focus exclusively on the role of the UFA/UFWA in formulating social studies. It is true that William Aberhart’s Social Credit government promoted and enacted this curriculum change in the legislature, and because of this some may conclude it was the Social Credit that led in the reform of history curriculum. However, most scholars of educational history in Alberta and Canada acknowledge that the momentum for educational change had been developed by the UFA government.\textsuperscript{14} The research I conducted in this thesis, involving a thorough review of Department of Education documents between 1934 and 1935, confirms this assertion. The reform of history curriculum was initiated and promoted by the UFA/UFWA, long before the Social Credit’s assumption of power in 1935.

CHAPTER ONE: HISTORIOGRAPHY

Between 1921 and 1935, the Alberta Department of Education introduced significant reforms to primary and secondary curriculum under the authority of the United Farmers of Alberta (UFA) government. A major pillar of the new curriculum was social studies, the subject that replaced history at all grade levels beginning in 1935. As stated in the Alberta Program of Studies, social studies was to introduce students to the “problems of modern civilization.” According to the report, social studies, “as its name implies is socially directed, dealing with the ‘here’ and ‘now’, subordinating the ‘there’ and ‘then’.” Despite this dramatic change in curriculum focus few scholars have provided a broad-based analysis of the social, political, and intellectual roots of this curriculum revision.

Educational Historiography

First, I will broadly outline some trends in educational historiography and identify opportunities for examining curriculum change at a provincial level. In the 1970s and 1980s historians focused primarily on the development of public education in Ontario in the nineteenth century, a system later adopted by most of the western provinces. Of particular interest to these historians’ examination of the establishment of state education was how schools came to mould citizens amidst shifting social and political values. My perspective is in line with many of these scholars and I consider curriculum in this thesis

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16 Alberta Department of Education, “Program of Studies for the Intermediate Grades” (Edmonton: King’s Printer), 1935, 2.
17 Ibid.
18 Ibid.
as something that transmits culture from one generation to the next, while also meeting the demands of social change.20

An example of a study that examines curriculum in this way is The School Promoters (1977) by historian Alison Prentice. In this work, Prentice highlights how Ontario school reformers worked to improve society through public education in the mid-nineteenth century. Against the backdrop of rapid industrialization and the scramble for wealth and power in cities and factories, Upper Canadians such as Egerton Ryerson expressed concern for the moral and spiritual degeneration of mid-nineteenth Victorian society.21 Historian Bruce Curtis expands on Prentice’s early work in his Building the Educational State (1986), which examines the shift from schooling as an elective activity organized by parents to a project directed and controlled by government in the nineteenth century. Curtis argues that as Ontario emerged into the industrial age schools were designed to protect upper-class interests against the threat of disruption from those perceived to be “dangerous classes.”22 Missing from these works is an examination of how school curriculum changed within a particular social, political, and economic context.

This idea is developed in George Tomkins’ seminal study on Canadian curriculum, A Common Countenance, Stability and Change in the Canadian Curriculum.23 He shows, for example, how school curriculum was used to educate future Christians and citizens in

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22 Bruce Curtis, Building the educational State: Canada West, 1836-1871 (Toronto: University of Toronto Press, 1988), 7.
the nineteenth century, and how it was used to promote temperance and mental hygiene in the twentieth century. In his introduction, Tomkins admits that few scholars have concerned themselves with curriculum issues but encourages others to seek out developments in curriculum by unearthing official and unofficial sources that influenced curriculum policy, curriculum guides, and textbooks. While Tomkins produces a landmark study of curriculum change in a national context over two centuries, less attention is paid to curriculum reform in a more regional or provincial context. In this thesis, I intend to show how social studies became a medium to engage citizens in the cooperative movement emerging in Alberta during the 1920s and 1930s.

The trend in the late 1980s and 1990s towards alternative histories, those that require sources of a non-official nature, including teacher memoirs and oral interviews, emphasized the roles played by non-elite members of society. Thus, studies focusing on historical actors, institutions, and communities traditionally relegated to the margins of state power and authority, namely women, rural schools, and farm communities, have become more commonplace since the late 1980s relative to studies of education of a decidedly national focus, such as those focussing on the establishment of public education in Canada. Paul Stortz’s and J. Donald Wilson’s study, “Education on the Frontier” (1993), is a good example of this shift in focus. They explore the experience of remote one-room schoolteachers in North Central B.C. and unearth their relationship to the community and Department of Education. Their point is to show that rural schools,

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24 Ibid., 4.
25 Ibid., 6.
26 J.D. Wilson, 155.
along with the political and social conditions particular to this region, were markedly different from schools in urban centers.27

Scholar Amy von Heyking has recently published on the contributions made by rural school teachers towards reforming education in Alberta. She argues that rural teachers, mostly women, were pioneers of progressive education and that their pragmatic teaching methods, born out of necessity, were in fact consistent with what educational experts later termed “progressive education.”28 While von Heyking’s argument relates to an issue I raise in chapter three, namely that rural teachers were implementing curriculum reforms that found expression in social studies curriculum in subsequent years, her article does not consider the professionalization of teaching and its relationship to the advent of social studies. I argue that so-called educational “professionals” utilized curriculum reform in Alberta to assert control over the teaching force in the 1930s. Female teachers were never considered “professionals”; they were given prescribed gender roles typical of the period, thus downplaying their innovations as inconsequential relative to those of their male professional counterparts.29 I intend to carefully examine the territory left unexplored by von Heyking, analyzing not only the role that women played in curriculum innovation in the 1920s but also how educational professionals used social studies as a tool to legitimize teaching as a profession and as a way to elevate their own status within Alberta’s growing educational bureaucracy in the 1930s.

In the mid-1980s educational historians Chad Gaffield and Paul Axelrod claimed that the study of education must continue to mature as a field of social history. They argue that “historians must examine the actual ways in which factors such as gender, class, and ethnicity have determined significant educational change.”

But this approach drew criticism from scholars such as Queens University’s Donald Swainson. He laments the demise of the “classical historian” who left one with a feeling that Canada was, at least potentially, an integrated unit. For Swainson, the local and regional historian or the “new historian” leaves one with an atomistic view of the country. But Canada is indeed an amalgam of regions, not to mention a country of limited identities defined by class, gender, and ethnicities, explains historian J.D. Wilson. It is thus not surprising that some historians tend to write of communities, regions, and classes of people rather than the nation as a whole. And because education is indeed a provincial responsibility enshrined in Section 93 of the British North America Act, it should not come as a surprise that reforms to school curriculum reflect, to a certain extent, social and political attitudes particular to a province at a given point in time.

Gaffield suggests that one reason for the relatively few number of examinations of curriculum in terms of shifting social, political, and economic values within a province could be a result of the explosive growth of educational departments in the mid-twentieth century. He claims historians may have assumed that studies of curriculum are

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32 Ibid.
33 J.D. Wilson, 158.
sufficiently covered by those education departments. In part, he is correct. There are a significant number of M.A. and PhD theses on social studies curriculum at the University of Calgary and University of Alberta. But many of these examinations treat social studies more in terms of pedagogical change and the few bureaucratic individuals involved in the shift. Less attention is paid to how curriculum transitions are tied to regional shifts in social and political values in the province. An important exception is Amy von Heyking’s PhD dissertation, which examines citizenship training in Alberta between 1908 and 1965. Still, von Heyking focuses less on the actual transition from history to social studies and glosses over the grassroots leaders involved in the curriculum change.

Despite Swanson’s lament that regionalized studies of education compromise a national outlook, a social historical approach to curriculum reform, including regional and gender analysis, is in fact extremely relevant to educational matters at a national level. For example, Alberta was one of first provinces in Canada to introduce social studies, and in subsequent years, Ontario, the Maritimes, and other prairie provinces adopted the same program as implemented in this province. Thus, an examination of the origins of social studies in Alberta may in fact bear relevance to larger national debates on its genesis in other jurisdictions. While matters of education are technically a

\[\text{\footnotesize 35 Gaffield, 116.} \]
provincial responsibility in Canada, scholars have focused more on the international and national contexts and less on the regional origins of curriculum.

George Richardson, author of “The History and Social Studies Curriculum of Alberta at the End of Empire,” examines curriculum within an imperial framework. He argues that school curriculum emphasized the fundamentally British character of the nation and was the sustaining force of the imperial connection long after the colonial period. Richardson acknowledges that after the First World War Canada developed a more autonomous sense of self and that this was reflected, somewhat, in curriculum. However, by and large curriculum continued to be grounded in the political and cultural heritage of Britain. This imperial tone is evident in the curriculum objectives for history and social studies in Alberta, at least at the level of prescribed ministerial objectives, Richardson’s primary source of research. However, there also exists a significant regional, or Albertan, point of view in the curriculum objectives and textbooks authorized for social studies curriculum after the First World War. This Alberta perspective conveys social, political, and economic concerns particular to Alberta in the 1920s and 1930s and is evident not only in curriculum objectives and textbooks published in Alberta but also in sources not consulted by Richardson. These include the UFA/UFWA education committee meeting records. I will use the latter to show that the UFA/UFWA influenced a shift away from students assuming British values as essential to their national identity towards curriculum goals that emphasized values essential to Alberta’s populist agrarian movement,

39 Ibid., 184.
40 Ibid., 188.
particularly the belief that cooperation must replace the degenerative effects of imperialism, greed, and competition.

Popular rhetoric critical of progressive education in Canada suggests progressive reforms undermined a well-functioning educational system. Ministries of education are not impervious to the polemics of Hilda Neatby’s *So Little For the Mind* (1953) or Jack Granatstein’s *Who Killed Canadian History* (1998). Neatby and Granatstein argue that progressive education, an educational reform movement that migrated from the United States, was an attack on a so-called Canadian approach to education, characterized by rigorous teaching methods and academic subjects such as history.

W.J. Dunlop, the Minister of Education in Ontario after WWII, agreed with Neatby’s rail against progressive education. He declared a war on “fancy subjects, frills and fads” and resolved to “improve our educational system until the last shreds of this so-called progressive education are gone.” Jack Granatstein similarly took aim at progressive educators, particularly those who have come to dominate ministries of education, arguing that they “remain fixated on remedying societal ills such as sexism and racism and on making students feel good about themselves.” For Granatstein and Neatby, teaching must return to being an “intellectually rigorous” activity.

Neatby’s and Granatstein’s attacks have certainly been tempered by contemporary Canadian historians who have demonstrated well that the advent of progressive education

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43 Granatstein, 35.
and social studies in Canada did not mean a wholesale loss of traditional teaching methods or curriculum. Paul Axelrod, for example, attributes much of Neatby’s hysteria to her use of sources, predominantly progressive education literature and department of education documents, undoubtedly filled to the brim with startling rhetoric. In “Beyond the Progressive Education Debate” (2004), Axelrod suggests that school teachers and administrators pragmatically used emerging tools to address their instructional needs together with traditional methods of instruction.44 Amy von Heyking confirms Axelrod’s amalgamation thesis for Alberta. She argues that history and traditional teaching practices were not totally abandoned outright with the advent of social studies. Based on her sources, which include student exams and oral interviews with teachers, she concludes that educators incorporated the old with the new.45

R.D. Gidney and W.P.J. Millar’s recent research on how schools worked examines the extent to which the educational reform agenda of the 1920s and 1930s translated into routine practices in the schools.46 According to Gidney and Millar’s How Schools Worked, the school experience across the country between 1910 and 1940 was not as profound as the debate between traditional and progressive education has suggested.47 They challenge those who tend to characterize the early twentieth-century educational experience as academically rigorous and where students learned by rote and drill. Instead, Gidney and Millar seek to provide a more nuanced portrait of the transition from the

44 Axelrod, 228.
45 Von Heyking, Creating Citizens, 10.
47 Gidney and Millar, xix.
early twentieth-century educational experience to the “new education” or “progressive education” of the 1920s. However, my thesis argues that when specific curriculum transitions in a province are examined, such as history to social studies in Alberta, the lofty rhetoric of progressive education presents itself explicitly in textbooks and curriculum objectives, a revelation not abundantly clear when a more national and curriculum-wide survey is employed.

Both Neatby and Granatstein suggest that progressive education and social studies displaced an educational system that in their view was representative of Canada. But this argument ignores that social and political values were shifting in various regions and provinces of the country, particularly in Alberta during the 1920s. Their viewpoint overlooks that some Canadians envisioned a traditional educational framework, one that was largely a product of nineteenth-century Ontario, as ill-suited to shifting conditions and attitudes in their home provinces. Neatby’s and Granatstein’s attack on the advent of progressive education in Canada also perpetuates an ill-defined notion that progressive education and social studies were somehow alien to Canada – that they infiltrated and broke down a Canadian tradition of education.

While Granatstein and Neatby overlook important developments in progressive education, so too have some scholars in Alberta. For example, Robert Paterson overlooks local aspects of curriculum reform when he claims that progressive education came from emerging educational and philosophical theories originating in the United States. These

48 Ibid., xviii.
ideas, according to him, were imported into Alberta by a select few, primarily elite educators that had studied progressive education at Chicago and Columbia universities in the 1920s and 30s, both leading centers of progressive education in North America at the time. Confirming this notion is a graduate student of Patterson’s in the 1970s, Patricia Oviatt, who characterizes H.C. Newland, a key architect of Alberta social studies curriculum in the 1930s, as a “one-man curriculum machine” ultimately responsible for bringing social studies from the United States and into Alberta.

The American influence on Alberta’s educational landscape is well documented and admittedly justified, given the high number of public officials that attended Chicago University and Columbia University between 1920 and 1938. But to imply, as Neatby, Granatstein, Patterson, and other scholars do, that progressive education and social studies were brought to Albertans wholly from the outside ignores the influence of the local movement. The UFA/UFWA promoted and authorized curriculum reform based upon broad-based support for school revisions beginning in the 1920s, long before social studies was formally adopted in 1935. The seeds for reforming history curriculum were sown in Alberta soil and harvested by educational elites years later. UFA/UFWA leaders and rural school teachers worked at a grassroots level to create teaching practices and curriculum that better reflected the conditions in which rural schools operated.

As already mentioned, Chad Gaffield and David Axelrod suggest that educational history must continue to evolve into the realm of social history. With this in mind, I

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50 Ibid.
52 Patterson, “The Canadian Response to Education,” 64.
intend to expand the understanding of social studies by relating it to a number of key social and political movements: the progressive movement, progressive education, the social gospel, and the UFA/UFWA. I will highlight how scholars have typically analyzed these movements in political and economic terms alone, thus overlooking their interconnections with education and, specifically, curriculum reform.

**The Progressive Movement**

In a general sense, the progressive movement is a term used to describe a host of political, economic, and social reforms that flourished throughout North America from the 1890s to the 1930s. According to American scholar Michael Meir, the roots of progressivism lie in the transformation from a gilded age of nineteenth-century Victorianism to an industrialized age that generated extremes of wealth and poverty, new pleasures, and alien cultures.  

He also claims that progressives carried out their agendas, not in clearly defined policies or in conventional government offices of authority, but in settlement houses, churches, schoolrooms, and unassuming day-to-day activities. In the Canadian context, the progressive movement is described in similar terms. Historians R. Douglas, Richard Jones, and Donald Smith claim the movement encompassed the various social reforms precipitated by massive industrialization, rapid urbanization, and their degenerative effects on Canadian society. However, scholars have focused more on progressive reformers’ work in cities, including campaigns to alleviate urban poverty and

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54 Ibid., 6.
implement prohibition and workers’ rights, while the movement’s rural nuances have been given less attention. What scholars do focus on in the rural Canadian context is the early twentieth-century agrarian revolt, the rise of prairie farmers who mounted a concerted attack on the political and economic structures of their province and nation.\textsuperscript{56} The political and economic roots of the agrarian revolt have been given significant attention by historians. Less examined are the more social aspects of the movement, particularly the role of UFWA leaders and teachers in educational matters, a gap I intend to fill.

The progressive movement also contained an important religious component. For American scholar Robert Crooned, progressive reformers, writers, politicians, and thinkers were never members of any one movement, but shared common moral values and tended to agree that the nation required a spiritual reformation to fulfill God’s plan for democracy on earth. The movement aimed to directly apply Christianity to the collective ills of society to create a perfect “Kingdom of God on Earth.”\textsuperscript{57} This religious impulse or revival as it is referred to by some historians is also known as the social gospel movement, which I will argue fuelled a range of social political reforms in Alberta in the 1920s and 1930s, including in education. Social studies is an important but largely overlooked site of expression of the social gospel influence.


The Social Gospel Movement

The social gospel developed partially in response to a crisis in religious beliefs precipitated by the rise in popularity of the Darwinian concept of evolution. Ramsay Cook claims that with scientific criticisms came a crisis of faith, instigating criticisms of the bible and its monopoly on truth as well as criticisms of the existing social and political order. Faith in the bible as the unquestioned assumption on almost every topic – human nature, science, politics, and so on – was called into question. The result was a profound intellectual revolution, which, according to Cook, affected not only traditional religious feelings or outlooks on dogma, but also led to a transformation of society itself. Critics of religious orthodoxy reinterpreted Christianity to make it more relevant to the everyday lives of Canadians. For them, when properly interpreted, Christianity should provide that standard against which society should be judged.

For scholars of religious history in Canada such as David Marshall and Ramsay Cook, the irony is that these reformers of the social gospel unwittingly made the church increasingly irrelevant in a world in which other institutions had eclipsed the social roles played by the church. The secular professional replaced the religious shepherd as society’s guide. However, the secularization thesis put forth by Cook and Marshall is not universally accepted among religious historians. For example, Nancy Christie and Michael Gauvreau, Richard Allen, and Phyllis Airhart see the work of the social gospel

59 Ibid., 22-23.
60 See Ramsay Cook and David Marshall, Secularizing the Faith: Canadian Protestant Clergy and the Crisis of Belief, 1850-1940 (Toronto: University of Toronto Press, 1992).
as the apogee of Christianity, not as evidence of its decline. For historians who argue against Marshall’s and Cook’s secularization argument, the socially directed work of reformers gave religion a new beginning, albeit in a different form, rather than leading to its eclipse, as Cook and David Marshall assert. Aligning myself with one side or the other of the secularization debate is not something I intend to do in this thesis, as it would divert attention away from my particular topic at hand, the origins of social studies. My interest in the social gospel in this thesis lies only insofar as it is able to provide insight into the popularization of cooperation in society as a vehicle to regenerate society, a key feature of social studies. Hence my examinations of the social gospel will focus less on religious decline or revitalization and more on how changes to traditional religious orthodoxy shifted to more practical and popular messages of social and political reconstruction, which I argue fuelled Alberta’s agrarian movement and their educational reforms.

William Westfall’s *Two Worlds: The Protestant Culture of Nineteenth-Century Ontario* argues that in order to understand significant educational reforms in Canada, one must first appreciate the pervasiveness of Christian ideals in politics and society in late nineteenth- and early twentieth-century Canada. He suggests that school reformers in Ontario could instigate significant educational reforms “because they justified public education by appealing to a popular version of the basic story of Christian redemption.” Since all people bore the weight of original sin, society must sustain public order by

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supporting schools…which moderated the anti-social repercussions of human nature.”

Although Westfall was writing about school promoters in Ontario in the nineteenth century, Alberta reformers used a similar Christian message of social redemption to justify reform in the 1920s and 1930s.

Historians have also overlooked the possibility that rural manifestations of the social gospel were distinct from those in urban centres. Often, scholars insinuate that the social gospel migrated into the prairie West as a “metropolitan concoction that the hinterland came to share.” But as scholar Richard Allen points out, when the social gospel came to the countryside, its proposals were not merely the extension of the amenities and social features of urban life. Rather, the social gospel both adapted to and shaped the particular social and political environment of farmers in the 1920s and 1930s. An important manifestation of the unique rural strain of the social gospel was the advent of social studies, which sprang from rural communities and not the cities.

The social gospel fuelled the construction of the agrarian movement in Alberta, one of the most successful movements in North America, argues historian Bradford Rennie, a movement that toppled the provincial Liberal government in a landslide victory in 1921. Education, particularly citizenship training, became a key building block for the UFA/UFWA movement and was formalized in social studies curriculum. Educational

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63 Ibid.
65 Ibid, 564.
reforms that brought about social studies curriculum in Alberta are best understood by closely examining the fusion of the social gospel and the UFA/UFWA movement.

**The UFA/UFWA**

Many historians such as J.M. Careless describe the UFA/UFWA in specific political and economic terms. The UFA began first as a lobby group that initially focussed on pushing government for legislation that better reflected the political and economic needs of farmers. However, during the agony of social upheaval that accompanied the First World War, the UFA became motivated to take direct political action. In the 1921 provincial election, the UFA won the majority of seats, and it stayed in the Alberta Legislature until 1935. With this victory, a previously unrepresented group in government had come to power: farmers.67

Historian Richard Allen points out that, politically, farmers had been unrepresented in parliament at both provincial and federal levels. While the West was perceived as the stepping stone of nation building, it stood on the sidelines of the federal power structure. Economically, the prairie farmer was disadvantaged by policies of industrialization, which forced him to buy in a protected market and sell in an open one far from the site of production and through agencies entirely unaccountable to him.68 However, Allen also argues that the varied phenomena of the agrarian revolt cannot be explained in economic and political terms alone.

Historian Bradford Rennie takes up Allen’s challenge in *The Rise of Agrarian Democracy*, arguing that the UFA/UFWA was infused with a Christian ethic that forged a cooperative ethos, an ill-defined notion that cooperation should replace competition in economic, political, and social affairs.\(^6^9\) Rennie examines, as few others have done, the rise of the UFA/UWFA in terms of social and spiritual factors, with particular emphasis on the role that gender and education played in constructing the movement. Similarly, in “The Social Gospel as the Religion of the Agrarian Revolt,” Allen suggests that the conditions of farmers were perceived and evaluated in explicitly or implicitly religious terms.\(^7^0\) I intend to build on these scholars’ work by showing that the citizenship training initiated by UFWA leaders helped to build their movement and that this training was the foundation upon which social studies was built. Also, social studies reflected a popular message, its crucible being the social, political, and spiritual environment of rural Alberta, a message of social redemption based on cooperative values.

For the UFA, education was essential for building their movement. According to Rennie, most educational initiatives were left to the UFA’s women section, the UFWA, which was established in 1913. Women of the movement wanted greater autonomy and a name that indicated they were an integral part of the movement rather than a mere auxiliary.\(^7^1\) The UFA did not grant women equality throughout all of the organization, but as Rennie points out, the UFA did endorse a number of the UFWA’s proposed reforms, particularly those on educational matters deemed to be a natural extension of

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\(^{69}\) Rennie, 8.  
\(^{70}\) Allen, 563.  
\(^{71}\) Rennie, 112.
women’s maternal role as caregivers of children. Men, on the other hand, attained positions of political authority in order to protect the interests of farmers through formal legislation. But how men and women of the movement interacted in the case of curriculum reform remains unexamined. This thesis intends to address that void.

A key educational aim of the UFWA, according to scholar Leroy Wilson, was to popularize the study of social, political, and economic questions by various informal means. Doing so would provide rural youth with the tools to improve the conditions in which farmers lived. Wilson examines the UWFA leadership in these matters, but primarily according to broad statements made by leaders in the farmers’ official publication, the *Grain Growers Guide*, and also in terms of what I would suggest was the informal delivery of citizenship training by the UFWA. The UFA’s Farm Youth programs, the Better Farming Trains, and the Library on Wheels were campaigns led and organized by women of the UFWA and were intended as opportunities to raise awareness of the social and economic conditions particular to rural communities and to build the necessary skills to improve farmers’ political and economic circumstances. The UFWA’s involvement in citizenship training in the early decades of the twentieth century became the foundation of social studies curriculum decades later, but this connection between the informal delivery of citizenship training and social studies remains unexamined by historians.

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72 Ibid.
Few scholars have discussed the university extension education initiatives beyond the level of factual description. Ralph J. Clark’s study of the Extension Department at the University of Alberta appears to be the only scholarly account of some of these activities.\textsuperscript{74} UFWA leaders and women teachers, often one and the same, extended access to educational materials in rural communities through partnerships with universities and the railways, delivering citizenship training at an informal level. This type of citizenship training directed towards improving rural communities became the foundation of formal social studies in subsequent decades. The informal delivery of citizenship training, led by UFWA leaders, predates the formal arrival of progressive educational experts to Alberta and the formalization of social studies curriculum in 1935. Social studies was a formal term given to what UWFA women were informally delivering throughout rural communities in the 1920s.

Gender historians such as Dianne Miller are also providing new insights into curriculum reform initiated by rural teachers in isolated communities. Based on a series of oral interviews with rural teachers from the 1920s, she argues that traditional history and Latin were of little utility to increasing numbers of rural students flooding classrooms after the First World War (largely the result of mandatory school legislation and the Great Depression, which saw many returning to school in the wake of high unemployment).\textsuperscript{75} Similarly, scholar Amy von Heyking argues that rural school teachers struggled to accommodate expanding classroom sizes, a short supply of textbooks, inadequate teacher

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training, and students’ varying academic abilities. Amidst these challenging conditions, teachers made changes to curriculum and their teaching methods out of necessity. Teachers’ practical innovations are examined by von Heyking and Miller as being consistent with what educational experts later called progressive education.76 But less discussed by either is how the innovative teaching practices and curriculum adaptations became the foundation of social studies, formally adopted years later. While women teachers and UWFA leaders initiated curriculum change, men in places of public authority asserted control over the teaching force and curriculum reform in order to legitimize a man’s career as a “professional educator.”

The Professionalization of Teaching and Progressive Education

Most scholars of progressive education in Canada appear to be in agreement with leading authority Dr. Peter Sandiford, who contends that progressive education meant curriculum reform based upon the “progressive element in American education.”77 According to Sandiford, top American universities such as Chicago and Columbia, where many of Alberta’s leading educational bureaucrats attended, challenged the established belief that education was synonymous with the acquisition of useful knowledge. Progressive education shifted the preoccupation with subject-centered learning by rigid discipline to more practical activities that allowed students to discover and learn more on their own terms. Expressions such as “learning by doing,” “educating the whole child,” “interest-based learning,” and “democratic education” were typical of the rhetoric of

76 Von Heyking, “Implementing Progressive Education in Alberta’s Rural Schools,”: 93.
reform and captured the support of educators and the public alike, claims educational historian R.S. Patterson. The new school subject social studies, introduced in the United States in the 1920s and supported by leading progressive educators such as William Kilpatrick and Harold Rugg, also captured the attention of Alberta’s educational bureaucracy, especially those men who attended graduate school in the United States. 78

The same year social studies was formally introduced in Alberta, 1935, teaching in Alberta was also recognized by Premier William Aberhart as a “profession.”79 This meant that the Alberta Teachers Association (ATA) would henceforth have input into codes of conduct, salaries, and curriculum design. 80 The culmination of these two events, the introduction of social studies and the government’s recognition of teaching as a profession, relates to a rarely examined topic in educational historiography in Canada or Alberta: the professionalization of teaching and the gendered dynamics inherent in the process. What is the relationship between the advent of social studies and the professionalization of teaching? The emergence of a teaching profession and progressive education in Alberta is tacitly described by historians such as E.S. Patterson and John Chalmers as an achievement by teachers in obtaining control over their trade. 81 This meant that teachers, for the first time, governed curriculum design, textbook writing, and

78 Ibid., 63.
teacher training. No longer did university professors and ministries of education monopolize these areas.\textsuperscript{82}

R.S. Patterson claims it was an “elite few” that brought progressive education and social studies to Alberta from the United States.\textsuperscript{83} As previously discussed, this view is echoed by much of the secondary literature and primary record available, thereby overemphasizing the role of this select few – primarily men – and overlooking female educators. But this so-called achievement by professional educators in establishing progressive education in Alberta was not a gender-neutral or benign process. Because women dominated teaching in Alberta between 1911 and 1970,\textsuperscript{84} a tension existed between practitioners in the field and the authority of men in bureaucratic positions. The contributions of women in curriculum design remained largely unacknowledged by those who asserted control over the teaching force and curriculum development as a means to elevate their own careers.

Allison Prentice and Marjorie R. Theobald explain that the under representation of females in the teaching profession is a result of women being stereotyped as an ancillary to male bureaucratic control, incapable of exerting influence on their own terms. Conversely, men are cast as those directing the political and professional activities on their own accord.\textsuperscript{85} An important point raised by Prentice and Theobald is that the structure of the profession in fact mirrored gender relations in society at large. Just as

\textsuperscript{82} Von Heyking, Creating Citizens, 56.
\textsuperscript{83} R.S. Patterson, “The Canadian Response to Education,” 62.
mothers nurtured children and the family, women were responsible for teaching grade school. And just as men maintained positions of authority in family life, so too were they the primary figures of authority in public life, including in ministries of education.\textsuperscript{86}

I will highlight the lesser-examined role that women played in educational reforms leading to social studies curriculum. At the same time, I will employ a relational approach to understanding interactions between men and women in matters of educational change. Gender historian Joan Scott reminds scholars that the term gender is not to be understood as synonymous with women. Instead it is a relational category of analysis used to explore relationships of power between both men and women.\textsuperscript{87}

My objective is not to deny men’s important contributions; rather, it is to balance their influence with women, who have been all but absent from much of the primary and secondary record. A more nuanced picture of the relationship between the hands-on or grassroots approach of rural women teachers and the influence of men in public positions of authority is warranted. Thus, a relational approach to gender analysis offers insight into the ways in which social studies curriculum was created through interactions of male-dominated governance and female innovation and delivery of education.

Building on Prentice’s, Theobald’s, and Kinnear’s call for further inquiry into the contributions made by female educators is Patricia Coulter’s work on Donalda Dickie. An Alberta rural school teacher, scholar, and one of Canada’s first female historians,

\textsuperscript{86} Ibid., 123.
Dickie authored a significant number of textbooks for social studies curriculum.\(^{88}\) Coulter champions the unexamined role of Dickie in curriculum reform in Alberta during the 1920s and 1930s. I will push Coulter’s argument further by suggesting that Donalda Dickie was a preeminent figure in introducing social studies in Alberta. Notwithstanding, her accomplishments remain muted in the primary and secondary record by those in higher positions of authority, mainly men. Also, I intend to show that Dickie’s experience with male authority figures was typical of the experience of many other female school teachers who interacted with educational bureaucracy.

In his introduction to *Approaches to Canadian History*, Carl Berger reminds readers that “there are hidden factors behind any historical interpretation” and that these need to be raised so that the character of an age in which its authors wrote can be taken into account.\(^{89}\) However, Alberta’s authors of social studies and the textbooks they penned have yet to be contextualized into their time and space. In order to expand our understanding of social studies and reveal those hidden factors motivating historical interpretations, social studies must be brought into the fold of social history. To explore the origins of social studies curriculum is to examine the progressive movement, progressive education, the UFA/UFWA, interactions between rural female teachers in the field, and male educators in positions of authority. Alberta educators, including female teachers, who wrote social studies curriculum and textbooks in the 1920s and 1930s revised the way in which Canadian history was taught throughout Alberta and in many

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other classrooms across Canada. They too should be considered alongside historians as important authors of historical interpretation.
CHAPTER TWO: CITIZENSHIP TRAINING,  
THE SOCIAL GOSPEL, AND THE UFA/UFWA AT WORK

Historian Richard Allen argues that the social gospel was the religion of Alberta’s agrarian revolt. Building on this, I suggest that citizenship training in the 1920s was the agrarian revolt’s primary tool for building its religio-political movement. Citizenship training delivered by the United Farmers and Farm Women of Alberta (UFA/UFWA) in the first two decades of the twentieth century called for the reconstruction of society based on cooperative and democratic Christian values. Through citizenship training, farmers learned that their political and Christian responsibilities were one and the same – to establish a cooperative ethos in society. My objective in this chapter is to show that citizenship training is a unique expression of the fusion of the social gospel and UFA/UFWA movements. And, as I will argue, citizenship training, delivered by the UFA/UFWA in the 1920s, became the foundation for social studies in Alberta in the mid-1930s. To expand our understanding of the origins of social studies is to imagine social studies as a formalized container for the religio-political movement of the UFA/UFWA in Alberta in the 1920s.

By examining citizenship training, the social gospel, and the farm movement in this chapter, I hope to achieve a broader objective in my overall thesis: to decenter the predominant view among educational historians that social studies was an educational experiment imported from leading American universities, by an elite few, and imposed upon Albertans in the mid-1930s.
The UFA was established in 1909 to address the social, economic, and political grievances of farmers.\textsuperscript{90} A movement concerning itself with grievances similar to those articulated by organized farmers at the turn of the century was the social gospel. The social gospel movement worked to apply Christian ethics to social, economic, and political problems.\textsuperscript{91} Both demonstrated a remarkable degree of consistency with each other in their criticisms of society and their solutions to those criticisms. According to the leaders of both the social gospel and the farmers’ movement, there was a fundamental evil at work in politics, economics, and society that had to be eradicated: competitive individualism. For leaders of the social gospel, the solution was to establish the “Kingdom of God on earth,” conceived as a cooperative and democratic order.\textsuperscript{92} For farmers, infusing cooperation and equality throughout society was their Christian obligation for improving Alberta’s political, social, and economic environment.\textsuperscript{93}

The Christian principles of cooperation and democracy formed the basis for the delivery of citizenship training by various formal and informal means. Infusing Albertans with these ideals was crucial to ensuring the survival and vitality of the farmers’ social and political movement. The \textit{Grain Growers Guide}, the official publication of the UFA/UFWA, as well as Sunday schools, UFA/UFWA union meetings, the University of Alberta Extension Department, and UFA/UFWA Youth conferences, served as channels

for educating citizens about how to engage politically and how to work as apostles delivering the province and nation from the evils of greed, competition, and violence. These forums of engagement allowed the social gospel movement to simultaneously achieve its aims. The social gospel’s association with the UFA/UFWA and their educational initiatives helped guide the transmission of Christianity to a wider audience, a broadcast that was not possible from the pulpit of a single prairie church.

Before 1919, the UFA remained a lobby group only. It was after the war that the UFA mobilized to take direct political action, winning a landslide victory in the Alberta Legislature in 1921. The war and the Great Depression intensified the UFA/UFWA’s long-established grievances about competition, imperialism, and greed and affirmed their conviction that they were in the best position to inaugurate a better society. The slow response of governments and traditional political parties in addressing their concerns catapulted the UFA into direct political action. Farmers, a previously unrepresented group in provincial politics, had come to power and remained there until 1935. Prominent social gospel leaders such as E.A. Partridge and Salem Bland were surely happy with the UFA’s landslide victory, since they saw the possibility of having their convictions and initiatives implemented on a provincial scale. A decade earlier, Partridge had encouraged farmers in a 1909 *Grain Growers’ Guide* editorial to “take your love of God…into politics,” arguing that there was “no abler chamber” than politics for achieving the principles of organized Christians.

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94 Rennie, 5.
With the rise of the UFA/UFWA from a lobby group to a political party, the social gospel found new life through its intricate connection with the UFA/UFWA. Citizenship training became a unique expression of this union between the UFA and the social gospel. I intend to show that citizenship training was the vehicle used by the UFA to evangelize citizens throughout Alberta’s rural communities.

The Social Gospel Movement

The social gospel movement applied Christian ethics to social problems such as wealth disparity, poverty, alcoholism, poor schools, and violence. It was a phenomenon that began in the closing decades of the nineteenth century and climaxed around the 1920s. The social gospel was not allied with one specific church or institution; associations between Protestant denominations, social reformers, universities, and political leaders were informal. However, there were prominent disseminators of the social gospel such J.S. Woodsworth, a church minister, and Salem Bland, a professor, both of whom provided influential and powerful leadership of the social gospel throughout Canada and especially in the West. Both leaders reworked such traditional Christian doctrines as sin, atonement, and the Kingdom of God to emphasize a social content relevant to Canadian society at the turn of the century. Materialism, political corruption, economic distress, and urban disorder were by-products of an increasingly industrialized, modernized, and urbanized society in the early decades of the twentieth century.

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century. Amidst the social, political and economic challenges society faced in this new century, Bland and Woodsworth attempted to restate the objectives of Christianity.\(^9^8\)

An evangelical and persuasive pulpit manner was employed by leaders such as Bland to encourage discussion and action in resolving public issues. According to Bland, preaching in evangelical tones involved inspiring and reaching audiences by addressing themes that held universal relevance. This was achieved, for example, by relating the gospel to pressing social, economic, and political issues, while avoiding religious dogma and intellectualism that may detract audiences.\(^9^9\)

The problems of a modernizing nation in the twentieth century were met by a new generation of ministers who claimed that “An old age has passed and a new day has dawned.” The nineteenth-century Victorian-era church, with its adherence to strict theological doctrines such as individual salvation, seemed out of step with the social ills plaguing the nation in the twentieth century. Many critics of the Victorian-era church agreed with Alice Chown, a feminist and social reformer, when she asserted that it was indeed a “dead organism.”\(^1^0^0\) New spiritual leaders emerged and devoted themselves to uniting the Christian heritage of the nation with social service to ensure that their brand of Christianity adapted to, and dynamically interacted with, changes in modern society.\(^1^0^1\) According to Reverend Samuel D. Chown, cousin to Alice Chown and a prominent social gospel leader, “the ill-fitting garments of doctrine and dogma” had eroded the authority

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\(^9^9\) Ibid., 5.
\(^1^0^1\) Ibid., 1.
of the church by severing it from popular culture and the wider social experience.\textsuperscript{102} J.S. Woodsworth condemned theology’s “intellectual standpoints, with its historical creeds, confessions, and standards…a theology whose phraseology is antiquated and its terminology most unintelligible.”\textsuperscript{103} Woodsworth insisted that a new generation of ministers and social reformers must “run the theologs out of power…and enable society to do more effectual work among those who need it.”\textsuperscript{104} The only way to rescue the church from irrelevancy among growing numbers of Canadians, in his view, was to destroy theology so that Christianity could once again command an authority founded upon direct popular appeal. To this end, the Reverend C.W. Gordon encouraged ministers to eschew dogma and sectarianism and to “look for new channels of access to the life of the world and to win the mass of humanity to a more uniform religious faith and purpose in life.”\textsuperscript{105}

Most historians propose that the social gospel movement stemmed from the late nineteenth-century era of rapid urbanization and industrialization. The negative effects of modern industrial society such as materialism, drunkenness, greed, and poverty were met with calls for a “new Christianity.” Social problems required the “incarnation of God in human relations and institutions.”\textsuperscript{106} This “new Christianity” offered the potential for improvement by elevating the goodness of man to the highest power.\textsuperscript{107} Similarly,

\begin{itemize}
  \item \textsuperscript{102} Ibid., 9.
  \item \textsuperscript{103} Ibid.
  \item \textsuperscript{104} Ibid., 4.
  \item \textsuperscript{105} Ibid., 10.
  \item \textsuperscript{106} Richard Allen, \textit{The Social Passion}, 6.
  \item \textsuperscript{107} Ibid., 7.
\end{itemize}
institutions such as the state and business were to “serve mankind as a whole.”\textsuperscript{108} Christianity became, according to historian Ramsay Cook, the benchmark by which to measure society’s wellbeing. A concern for the moral health of society compelled leaders of the social gospel to interact with other movements and institutions. Indeed, their interest in political, economic, and social reform reflected a belief that there were no barriers to the regenerative influence of Christianity.\textsuperscript{109}

Although Richard Allen disagrees with the claim that the social gospel was alien to the West and that it migrated into the prairies from urban centers in the East, he acknowledges the pervasiveness of this viewpoint among some scholars of religious history in Canada.\textsuperscript{110} But as Ramsay Cook suggests, the social gospel was just as much a response to religious doubt in general as it was a response to urban and industrial conditions.\textsuperscript{111} Thus, the social gospel need not be considered an urban import alone; it should also be considered in its local Alberta context. Doing so reveals that citizenship training in the 1920s was born from conditions unique to Alberta in that decade. These conditions included shifting religious attitudes amidst increasingly diverse prairie inhabitants and the spiritual nourishment the UFA/UFWA received from the social gospel movement, both of which effectively boosted the transmission of the organized farmers’ social and political message throughout the province.

\textsuperscript{108} Ibid.
\textsuperscript{109} Phillips, xv.
\textsuperscript{110} Allen, “The Social Gospel as the Religion of the Agrarian Revolt,” 570.
\textsuperscript{111} Ramsay Cook, \textit{The Regenerators, Social Criticism in Late Victorian English Canada} (Toronto: University of Toronto Press, 1985), 5-6.
The prairies presented two regionally specific types of problems for a church intent on expanding into the West with the aim of ensuring that the Christian heritage of the nation was maintained among settlers, immigrants, and bachelors flooding to the region. Chief among these was population dispersal and dwindling numbers of supporters for rural churches.\textsuperscript{112} Rural populations, when compared with urban ones, were sparser, and for many people churches were not accessible. As the \textit{Church Guardian} noted in 1896, many prairie Methodist families were “located eight or ten miles from church,” and “regular attendance at Sunday school was quite impossible.”\textsuperscript{113} Also, because of diversity in rural communities, which included non-Anglo Saxons, bachelors, and immigrants with a wide range of church backgrounds, few areas had sufficient numbers of adherents to a particular denomination to form a single congregation.\textsuperscript{114} Historian Paul Voisey similarly examines population dispersal in the prairies and its impact on church attendance and leadership. He argues that settlers overcame distance and low population density through interdenominational cooperation and church union. Parent churches struggled to supply every rural district with preachers on a weekly basis.\textsuperscript{115} One result was that Sunday services were administered by clergymen from any one of half a dozen denominations. Voisey also claims that when census takers arrived in Vulcan in 1910 many settlers could not accurately report their religious affiliation. For example, some listed their traditional faith, despite the fact that they more often attended services of a different church, while

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\textsuperscript{113} \textit{Christian Guardian}, May 27, 1896, in George Emery, 9.
\textsuperscript{114} Emery, 10.
\end{flushleft}
others named the church they usually attended. According to Voisey, many settlers suggested that they belonged to an interdenominational Christian faith – a category missing from the census checklist.\(^\text{116}\) A key feature of this interdenominational practice was that preachers often took a passage from the bible and treated it as an allegory or parable that revealed some universal moral truth relevant to contemporary society.\(^\text{117}\) Theological discussion rarely crept into any sermon. This approach to religion ensured that its multi-denominational audience could easily digest a message that would unlikely offend any one listener.

Although Voisey avoids labeling these non-sectarian church sermons as representative of a distinct social gospel outlook, he does point out that the social gospel was better suited to the progressive attitudes of this prairie region.\(^\text{118}\) As Richard Allen has pointed out, agrarian reform organizations crusaded for economic and political change with a moral fervor often specifically Christian in nature.\(^\text{119}\) In 1916, a Union preacher in Vulcan spoke on the subject of “Applied Christianity” for a special UFA Sunday service.\(^\text{120}\) An applied approach to Christianity, as opposed to serious theological discussion, was surely more captivating for Alberta farmers given their preoccupation with social, political, and economic reform.

The social gospel provided support to farmers’ causes by framing an emerging agrarian revolt in Alberta in terms of a familiar Christian narrative: a David and Goliath

\(^{116}\) Ibid.
\(^{117}\) Ibid., 186.
\(^{118}\) Ibid., 187.
\(^{120}\) Voisey, 187.
battle between the disenfranchised and suffering farmer on the one hand and eastern
corporate interests representing greed and tyranny on the other. By doing so, religion
spoke to the daily realities of farmers and advocated for improvements through
cooperative action and political association. In this way, the social gospel transcended the
narrowness and increasingly unpopular prairie church sermon preoccupied with rules,
personal salvation, and intellectual theology. Its synergy with the UFA/UFWA not only
helped to build the farmers’ movement, but the union of the two created a more popular
Christian message throughout Alberta.

Alberta Farmers’ Protest and the Social Gospel

From 1908 to 1920, the population of Alberta quadrupled, and nearly sixty-five
percent of the population was rural.\textsuperscript{121} Agricultural settlement in the prairie provinces
represented a golden age for national growth. Nation-building based on agricultural
development and farming took on mythical conceptions among politicians and migrants
alike. Farms in the West were to become the “breadbasket for the world.”\textsuperscript{122} Despite
these mythic notions of riches flowing from farms in Alberta, the region remained
handicapped by national policies and tariffs that served the interests of big capitalists and
big government. For farmers, corporate greed and federal government policy created a
new kind of feudalism, or a plutocracy, based on the seizure of natural resources and the
monopolization of farmers’ labor.\textsuperscript{123} As well, essential infrastructure such as schools,
highways, and medical facilities remained underdeveloped relative to that in Eastern

\textsuperscript{121} Emery, xx.
\textsuperscript{122} Ibid.
\textsuperscript{123} Rennie, 7.
Canada. In the decades leading up until the First World War, farmers perceived themselves as alienated from federal and provincial government decision-making.\textsuperscript{124}

Amidst these hardships, prairie grain growers took up cooperative action on a large scale, according to historian Ian MacPherson.\textsuperscript{125} It was only natural that they should, suggests MacPherson. They had demonstrable power in an entire region; a generally shared experience of immigrating, homesteading, and struggle; a common challenge of dealing with few crops; and identifiable groups apparently exploiting them.\textsuperscript{126} The charges imposed by bankers, grain merchants, and manufacturers and the costs inflicted by the tariff frustrated and enraged farmers. A 1909 *Grain Growers Guide* editorial spoke to farmers’ frustration and their calls for greater cooperation as a tool to combat their perceived enemies:

The spirit of cooperation is in the air and is rapidly spreading throughout the West. Western Canadians have bowed to corporate rule nearly since the country was settled. The time for emancipation has come and there will need to be some able leaders to head the campaign. Cooperation is the only possible avenue of complete emancipation and the sooner the farmers settle themselves towards perfect cooperation the sooner they will begin to secure a fair reward for their toil.\textsuperscript{127}

Farmers believed that cooperation was the animating principle of all relations – between classes, churches, regions, nations, and the sexes.\textsuperscript{128} UFWA leader Margaret Gunn envisioned the substitution of a cooperative endeavor instead of competition as the

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\item \textsuperscript{124} Ibid., 8.
\item \textsuperscript{126} Ibid., 10.
\item \textsuperscript{127} *Grain Growers’ Guide*, September 22, 1909, 13.
\item \textsuperscript{128} Rennie, 159.
\end{itemize}
\end{footnotesize}
dominating factor in society. Molded by Christian beliefs, “cooperation” was for farmers a fundamentally moral principle; its defining essence was “unselfishness,” which, according to Irene Parlby, was the only hope for the protection of farmers and the redemption of a political and economic system fraught with greed and competition. A Grain Growers’ Guide article from 1914 went so far as to assert that “cooperation is a religion pure and simple.” Farmers used this spiritual conception of cooperation to articulate their grievances and rally support for their movement.

At the same time, despite the UFA/UFWA’s rallying principle of cooperation, mass immigration, particularly from Eastern Europe, placed limits on cooperation and treating all farmers as one equal entity. Nativism likely motivated the UFA/UFWA to emphasize citizenship training in schools, as it was regarded as means of assimilating newcomers to become “good” Canadian citizens. But citizenship training can also be

129 Ibid., 159.
131 Emery, 10-1, and Howard Palmer, Patterns of Prejudice: A History of the Rise of Nativism in Alberta (Toronto: McClelland and Stewart Limited, 1985), 592. Emery shows that although a cooperative ethos emanated from Alberta politics in the 1920s, it did not necessarily treat all farmers equally. Eastern European immigrants in particular were met with a mixture of inclusiveness and hostility in Alberta at this time. As the immigrant population of the Canadian West rose from 26 to nearly 40% of the population between 1901-1911, concerns about foreigners and their very “low standards of morality and decency” were prevalent among many Christian leaders. For Principal J.W. Sparling of Wesley College, the foreigners represented a danger for which “we must educate and elevate the incoming multitudes or they will drag us and our children down to a lower level.” Also, because “aliens” were eligible for Canadian citizenship after three years of residence, immigrants, warned Reverend A.E. Smith, “gave the foreigners a controlling influence.” Thus, the UFA/UWFA’s effort to draw all farmers and Alberta citizens into the fold of collective association and action were resisted by other forces in society that worked to exclude some people, asserting that not all were equal. Indeed, the bulk of the UFA’s support was derived from regions of Alberta of primarily Anglo-Saxon Protestant backgrounds and less support was given to the UFA/UWFA in Eastern European-settled regions. On the other hand, Palmer highlights that it cannot be ignored that the UFA/UFWA delivered to the House of Commons the first MP of Ukrainian descent (in 1926) and that the UWFA demonstrated considerable concern for the welfare of immigrant families in prairie communities.
seen in the context of the UFA/UFWA’s attempt to garner support for their movement, specifically by increasing their membership.

Still, it is not surprising that farmers found in the social gospel a spiritual framework to address their political and economic oppression. UFA/UFWA politics and the social gospel worked towards a common end of implementing social justice and the Christian ideal of cooperation and democracy. This fusion of politics and religion allowed for the UFA/UFWA movement to gain broad appeal among an audience needing practical solutions to their immediate circumstances. The politics of the UFA became the new vessel by which religion restated its relevance for society.

The extent to which politics in Alberta intermingled with the social gospel is exemplified by how farm leaders and spiritual authorities became virtually indistinguishable from one another. For example, UFWA leader Leona Baritt argued that two-thirds of Alberta’s rural communities had no church service and that most others had irregular service. She suggested that the UFA/UFWA fill this gap by becoming a quasi-religious institution. Baritt noted that “we are trying to do the social work that the church has been unable to do…and to raise an ethical standard where the church has been unable to obtain a footing.” At local hall meetings organized by the UFWA, members prayed, sang hymns, and read Scripture, and sermons were often delivered on applied Christianity, sermons that celebrated the growing farmers’ movement from a distinctly religious viewpoint. In one of these sermons, Mr. Sheppard, a prominent UFA leader who

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133 Grain Growers’ Guide, September 23, 1921, 7.
134 Ibid.
lived near Edmonton, argued that the UFA was practically a Christian institution.\textsuperscript{135} Referring to Ephesians 4 and 5, Sheppard went on to describe the community, the nation, and the whole earth as places where, “Christ being the head, we must all cooperate with, and in His spirit.”\textsuperscript{136}

Social gospel leaders such as Reverend Salem Bland demonstrated political leadership when he proposed the establishment of a new party led by farmers. His column, “The Deeper Life,” published in the widely read \textit{Grain Growers’ Guide}, the official publication of organized farmers, related resources of Christianity and in particular the social gospel to a broad spectrum of agrarian needs and aspirations.\textsuperscript{137} E.A. Partridge, preeminent leader of the social gospel and of the cooperative movement, made similar connections between religion and political organization of farmers when he claimed in the \textit{Grain Growers’ Guide} that it was necessary “to take your love of God…into politics.”\textsuperscript{138} Practical religion, he continued, is especially important for Election day until our legislative halls are purged of those who represent the most heartless and selfish instincts of the race.”\textsuperscript{139} Reverend Salem Bland proclaimed that it was the business of the church to profess the religion of Jesus, which “was in its inception a social gospel,” and to help erect a socialist Christian state, “sweeping away those existing conditions which throw a pall over the lives of the larger population of our

\begin{itemize}
  \item \textsuperscript{135} Ibid.
  \item \textsuperscript{136} \textit{Grain Growers’ Guide}, June 9, 1915, 12.
  \item \textsuperscript{137} Allen, “The Social Gospel as the Religion of the Agrarian Revolt,” 564.
  \item \textsuperscript{138} Ibid., 562.
  \item \textsuperscript{139} Ibid., 565.
\end{itemize}
people.” This large population included huge numbers of farmers and a growing number of migrants to Alberta.

Historians regard Henry Wise Wood, president of the UFA from 1916 to 1931, as having been the UFA/UFWA’s spiritual leader. Wood, according to scholar W.L. Morton, was devoted to the Gospel according to Saint John. “John taught social reconstruction, and I am a disciple of John,” said Wood. His political work was informed by religion, although he was not a member of any one church. This, according to historian W.L. Morton, was an important aspect of his influence. It allowed Wood and the UFA/UFWA to deliver a message without religious sectarianism and theological dogma, thus in line with the social gospel’s populist, non-sectarian, and non-doctrinal approach.

Calls for a more pragmatic approach to theology were made directly by farmers in their official publication, the *Grain Growers’ Guide*. A 1910 article titled “Training Preachers to Meet Real Challenges” proclaimed that “the preacher’s role in society must change, given the condition that the farmer finds himself in today.” Theological schools, according to the article’s author, must train preachers for social work. He argues that perfection in society can be achieved only when the preacher and the schools of theology become the “makers and menders of men.” To this end, they must study social science to find solutions to improving society’s ills, including disease, poverty, and

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140 Ibid.
142 Ibid., 116.
143 *Grain Growers’ Guide*, June 1910, 16.
144 Ibid.
intemperance. Preachers needed to improve the conditions in which men lived before the quest for personal and spiritual improvement could begin.

Leaders of both the UFA/UFWA and the social gospel movement took on political and social-reform activities. For farmers, spiritual leadership helped to unify the community by building bonds of “oneness,” drawing farmers together for protection and action.\(^{145}\) And for social gospel leaders, political leadership offered a new pulpit from which to Christianize society.

The Great War amplified organized farmers’ well-established pre-war grievances and re-invigorated their commitment to political and social reform, based on a Christian conception of cooperation. Farmers became increasingly agitated with federal leaders such as Robert Borden and Wilfrid Laurier, whose policies merely exacerbated farmers’ pre-war economic circumstances. In the early days of the War, a *Grain Growers’ Guide* stated emphatically that:

> the present serious condition now prevailing in the rural West is very largely due to the unjust burdens which these two gentlemen [Borden and Laurier], in their capacity of political leaders, have laid upon the shoulders of western people for the benefit of a small group of individuals in the financial centers of Quebec and Ontario.\(^{146}\)

For Canadian prairie farmers, the Great War created the transcontinental economy that the national policy had intended to create.\(^{147}\) Farmers were forced to ship their wheat eastward and were required by government to sell on an open market while buying farm

\(^{145}\) Rennie, 44.
\(^{146}\) *Grain Growers’ Guide*, July 29, 1914, 7.
equipment from manufacturers who remained insulated by a protective tariff. While the production of wheat increased during the war, farmers also accumulated unmanageable debt loads to expand production. Farmers blamed their aggravated economic situation and their region’s lack of industrialization and development upon the imperialist policies and greed of Eastern Canada, greed that had become worse owing to wartime demand and overproduction.

The war also accelerated the reform spirit and radicalism of Western Canadian farmers. The human sacrifice of war abroad amplified appeals for justice, democracy, and equality at home. As Nellie McClung argued, “if Canadian soldiers were giving their lives for liberty and justice in Flanders, was it not the duty of those who remained behind to see that these same things prevailed in Canada?” If the sacrifice was not to be wasted, reforms programs had to be implemented. Even Clifford Sifton, hardly an ardent reformer, recognized that the Great War made it necessary for both “Eastern and Western Canada to cast out everything that threatens its moral health.” Thus, reform initiatives such as prohibition took on militaristic and regenerative overtones. The cause itself was “warfare waged against ignorance, selfishness, darkness, and cruelty,” argued McClung. Another reform campaign aided by the Great War was the movement for women’s suffrage. Why, women asked, “could they not enjoy in Canada the same liberty for which their sons were fighting and dying for?”

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148 Ibid.  
149 Ibid.  
151 Thompson, 97.  
152 McClung, 167.  
153 Thompson, 107.
of democracy, should not the same democratic rights of millions of Canadian women be vindicated at the same time?\textsuperscript{154} Ironically, prior to 1914 the women’s movement was staunchly pacifist and regarded war as one of women’s greatest enemies. War was a scheme of masculine domination, one that denied women an effective voice in society.\textsuperscript{155} History, wrote Nellie McClung, has “shown the masculine aspect of war and has surrounded it with a false glory and has sought to throw the veil of glamour over its hideous face.”\textsuperscript{156} The war challenged these pacifist assumptions among many women’s groups, and the same spirit used to fight for democracy in Europe, they argued, could accomplish the purification of Western Canadian society.

Arguments made by the UFA/UFWA for creating a new kind of society based on cooperation, democracy, and equality were bolstered by the trauma Westerners experienced as a result of the First World War. The UFA/UFWA believed it was their duty to inaugurate this new society.\textsuperscript{157} Between 1914 and 1919, the UFA was stymied by governments’ and political parties’ preoccupation with the war and their continuance of national policies that exacerbated farmers’ deprived circumstances. In 1919, the UFA decided to allow direct UFA/UFWA political action, and it won a landslide victory in the Alberta Legislature in 1921.\textsuperscript{158}

\textsuperscript{155} Thompson, 106.
\textsuperscript{156} McClung, 169.
\textsuperscript{157} Rennie, 110.
\textsuperscript{158} Ibid.
The UFA/UWFA and Citizenship Training

While prohibition and the women’s suffragist movement have been well examined by historians as important expressions of the social gospel movement,\(^{159}\) the delivery of citizenship training by the UFA/UFWA in Alberta in the 1920s has received comparatively little attention. To establish a cooperative ethos in society, citizenship education was needed to transform the powerless citizens, farmers, into a group holding a strong collective voting power. One UFA/UWFA leader argued that education “is power...giving light, independence, and freedom. While lack of knowledge – ignorance – is weakness, darkness, dependence, and bondage.”\(^{160}\) Leading in the delivery of citizenship education were farmwomen of the UFWA.

Established in 1913, the women’s section of the UFA, was responsible for much of the delivery of citizenship education. A key emphasis of the UFWA was education rather than politics.\(^{161}\) The majority of rural schoolteachers were women, and they asserted their position as grassroots providers of citizenship education, essential in the alignment of UFA/UFWA and social gospel ideals.

UFA/UFWA unions throughout rural Alberta were the foundation of citizenship education. These unions were described as “schools of progress – the greatest little thinkeries you ever saw.”\(^{162}\) Here farmers secured educational information that would otherwise be out of their reach on subjects such as community relations, the law, cooperation, economics, the farm movement, and civics. Underlying these little thinkeries

\(^{159}\) See Richard Allen’s historiographical discussion in *The Social Passion*, 15.
\(^{160}\) Annual UFA Convention Minutes, Alberta Glenbow Archives, 1912, 9.
\(^{161}\) Rennie, 162.
\(^{162}\) Ibid.
and the information they made available were spiritual and moral undertones. Often presentations would be prefaced with a sermon to provide guidance towards a moral and political end.\footnote{Ibid.}

Through citizenship education based on literature, seminars, books, and debates, members learned to “express themselves clearly, defiantly, and gained invaluable training for future leadership in the province.”\footnote{Grain Growers’ Guide, December 10, 1919, 18.} Citizenship training provided “a continuous army of men and women trained to take up the responsibilities of leadership in the local communities and at the head of our organization.”\footnote{Grain Growers’ Guide, December 22, 1920, 23.} All of these educational activities were underscored with cooperative study, cooperative work, cooperative play, and spiritual values. Men and women, boys and girls, trained in this way, according to Margaret Gunn, were building “for the future of a cooperative community.”\footnote{Ibid., 24.}

Various educational partnerships were forged by the UFA/UFWA in order to deliver education in rural communities and to help build their cooperative movement. For example, the UFWA initiated an important relationship with the University of Alberta’s Extension Department, established in 1912. This department was the first in Canada to offer extension courses, non-agricultural in scope, and was formed to gain support for the university by showing its benefit for all Albertans – thus ensuring its survival. Since the department required public approval, its material had to be popular, and tied directly to the interests and needs of rural communities.\footnote{Ralph J. Clark, “A History of the Department of Extension at the University of Alberta, 1912-1956” (PhD thesis: University of Toronto, 1985), 115.} The content was not determined by elite
university leaders and professors alone; rather, it was developed, in part, by leaders of the UFWA, who requested materials relevant to farmers’ desire for political action in the province. In this way, the University of Alberta Extension Department gave farmers the broad education they wanted on a variety of subjects.

UFA/UFWA local unions were the “principal agency for serving the rural communities” with extension department materials.\textsuperscript{168} News, books, and debate materials on subjects such as history, geography, and rural conditions were loaned to the locals and used by the UFA/UFWA to learn about and protest issues of vital concern to their interests, such as the unequal political status of women. The fourteen most important packages that were requested by local UFA/UFWA unions in 1916, in order of preference, were on women’s suffrage, the war, rural life, the tariff, economics, debating, and cooperation.\textsuperscript{169} Department of Extension materials were used by the UFA/UFWA to help politicize and radicalize farmers for direct political action. The use of state-funded education by the UFA/UFWA points to the Alberta government’s direct involvement in building up the farmers’ movement.\textsuperscript{170} The ability of local UFA/UFWA leaders to shape the content and material provided by the department illustrates the grassroots strength of UFA/UFWA locals in constructing educational opportunities of vital importance to movement.

Another important educational tool for developing citizenship in rural communities was the annual Youth Conferences and their associated publication, \textit{The Voice of Youth}.

\textsuperscript{168} Ibid., 8-9.
\textsuperscript{169} Ibid., 114-17.
\textsuperscript{170} Rennie,167-68.
The objective of these initiatives, which were organized and delivered by the UFA/UFWA, was to strengthen a network of young people for political action. Conferences were held annually in Ottawa where representatives from every part of Canada would participate.171 Another key goal was to develop a Christian ethic in future leaders for the movement both provincially and nationally. These initiatives served as important channels for farmers to disseminate Christian ideals of citizenship. Developing the voice of youth in Alberta and in Canada, the UFA/UFWA built up a movement that worked to replace greed and competition with cooperation. In one Voice of Youth publication after the Great War, a writer claimed that cooperation “represents an attempt to put the Christian obligation into industry.”172 The author highlights that although the growth of the farmers’ movement arose from an economic context of exploited producers, namely farmers, the movement also “involves what is essentially a Christian principle.”173 He concluded that “the working together of people for mutual benefit…has a great attraction for those who are demanding the application of the Christian ethic to our diseased social order.”174

A primary goal for this author and for the youth conferences was to socialize workers and farmers with a Christian ethic that worked to replace greed and competition with cooperation and brotherhood. The author also makes a curious link between the competitive character of industry, Liberal governments, and the church. For him, “it is the Liberal who is afraid of rapid change and who, nine times out of ten, is a member of

172 Ibid.
173 Ibid.
174 Ibid.
these institutions were thus interpreted as custodians of the status quo, obstacles to change that the UFA/UFWA and social gospel worked to overcome. The grassroots approach of the social gospel and UFA/UFWA movements helped popularize the message of reform by circumventing formal institutions resistant to change. This grassroots approach was particularly useful in building up the UFA/UFWA movement prior to their ascendance to political power in Alberta in 1921 when they had little authority to make sweeping changes to the established order. A major purpose, then, of youth conferences, Department of Extension debate packages, and travelling libraries was to socialize farming communities towards a higher conception of citizenship than that available through traditional political parties, industry, and established churches.

Grassroots democratic political power by farmers also necessitated working knowledge of the political process. UFWA leaders felt especially that citizenship education was necessary for women given their lack of electoral and political experience. One UFWA member asked,

how were women to be educated to meet their responsibilities intelligently? Only by participating in public life and forming groups to discuss and consider matters of vital importance to them...here was the importance of training for citizenship training.176

It was only through learning how to participate in public life through forming groups to discuss public matters of vital importance that political action could bring in a new order. Henry Wise Wood described UFA/UFWA conventions and union meetings as “political

175 Ibid.
schools.” Here citizens learned of the political problems and the cooperative methods necessary to solve them. Wood promised that “if farmers attended every year they would develop an understanding of political affairs and a capacity for dealing with them a hundred times more rapidly than they ever had done before.” Extension Department learning materials requested by the UFWA and their political schooling initiatives delivered and accessed at a grassroots level also helped to build the farmers’ movement by increasing membership, particularly of women and youth. For the UFA/UFWA, “every additional member linked up with our great organization in another step towards success at the polls.” In this way, citizenship training served not only to prepare citizens for political action, leading up to and during the First World War, but it also served an important membership recruiting function by activating the voices of youth and women.

**The UFA in Power, 1921-1935**

Once the UFA formed the government in 1921, calls for the reform of formal public education, especially the subject of history, were made. The UFWA urged the UFA Executive to push the Alberta government to introduce curriculum that advanced “society towards a new form of social organization in which the principle of a struggle for private profit shall be displaced by the principles of equity, justice, mutual aid and social well-being.” These calls for reform, articulated at the grassroots level by the UFWA, were clearly heard by Department of Education officials. In 1924 the Department proposed a

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177 *Grain Growers’ Guide*, May 7, 1919, 7.
178 Ibid.
new course in response to major social and political shifts that had occurred in Alberta over the previous twenty years.\textsuperscript{180} Margaret Ayelsworth, who wrote a thesis in 1936 regarding the revision committee work, argues that the UFWA played no small part in its development. She maintains that “a spirit of optimism pervaded the whole enterprise. The regeneration of the world was at hand, and all were eager to have a hand in framing the new course.”\textsuperscript{181}

A committee member in the development of a new program of study, Mrs. R.B. Gunn, insisted that a course was required to foster a spirit of service, truthfulness, courage, courtesy, and justice, a spirit that determines the value of a citizen in later life.\textsuperscript{182} Irene Parlby, minister without portfolio in the UFA government and a longtime activist in rural education, argued for the development of a course for Alberta that emphasized cooperation. Cooperation, she claimed,

\begin{quote}
was not only at the heart of an economic and political movement; it had its roots in the things of the spirit. Love, service, loyalty and honor are spiritual qualities that inform the cooperative movement and in time can transform a world made hideous by the competitive system, into a democracy of hope, justice and happiness for all.\textsuperscript{183}
\end{quote}

Mary Crawford, a rural Alberta schoolteacher whose thoughts were typical of the anti-war pacifist sentiments of the post-war period, criticized traditional history curriculum as dangerous and complicit in creating a violent citizenry that had taken the

\textsuperscript{180} Ibid., 42.
\textsuperscript{181} Ibid.
\textsuperscript{182} Ibid., 161.
\textsuperscript{183} Susan M. Gunn Letters, Gunn to Robinson, 1918, 285. Accession No. 83.507, Provincial Archives of Alberta.
world to war. She advocated for using the state’s control over school curriculum for the greater good of peace and cooperation. She argued that if “militaristic” regimes such as Napoleonic France and Prussia could mold youth according the state’s purpose, then why “should it be unreasonable to contend that …education could…establish a rule of love?”

Echoing this criticism was Margaret Gunn, then UFWA president. She emphasized the importance of citizenship training based on democratic and cooperative principles as a preventative measure against inequality and imposed tyranny by belligerent governments. In the development of democratic citizenship, “The seed of education will ultimately yield a harvest in the field of politics, though the grain may be slow in ripening.” She also criticized traditional history curriculum and its preferred style of teaching by way of regimented memorization of the facts of the British Empire. Such content and learning methods, Gunn argued, stifled the students’ ability to think for themselves and inhibited their ability to question authority. Instead, for Gunn, education should engender democratic citizenship by teaching pupils to question, speculate, and cooperate with each other. She criticized the existing history curriculum as something that glorified the conquests of imperial Britain and treated children as if they were “little jugs into which were to be poured the imperial gallons of facts.” This approach to learning history according to Gunn, destroyed the student’s ability to question and inquire.

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184 See Thompson, 98.
187 Ibid.
188 Ibid.
into the reasons for the Great War and the post-war depression, and thus would continue the present system of greed, competition, and violence. For Gunn, history’s emphasis on British Imperial values was regressive and out of step with the post-war need for building a more democratic citizenry.

Margarett Gunn was not alone in her criticisms of an imperialist approach to writing Canadian history. Canadian historians such as Frank Underhill chastised those who overemphasized Canada’s Imperial connections with Great Britain and neglected the influence of French Canada and the United States on the nation’s development.\footnote{Carl Berger, \textit{The Writing of Canadian History: Aspects of English-Canadian Historical Writing Since 1900}. Sec. Ed. (Toronto: University of Toronto Press, 1986), 61.} Carl Berger claims that a new history or progressive history emerged after the First World War in the United States and came to influence a number of Canadian historians. Proponents of progressive history believed that in an age of reform history itself must be reformed. Interestingly, Berger uses the same words to describe the shift from an imperial to a more pragmatic history as those used by Alberta’s Department of Education in their introduction to social studies in 1935. Berger writes that it was necessary for historians “to subordinate the past to the needs of the present,” to concentrate on the nature and origins of contemporary problems and to broaden the scope of history to include social, economic, and intellectual problems of the common man.\footnote{Ibid.} For UFA/UFWA leaders, British Imperialism was the manifestation of the forces of greed, individualism, competition, and violence. They felt that Eastern Canadian Imperialism, a close derivative of British Imperialism, had alienated farmers from the fruits of their labor and had caused economic and political hardship in pre-war Alberta society. UFWA leaders
and numerous Canadian historians advanced the idea that only a pragmatic approach to history, one that would illuminate the struggles of the common man, would allow laborers and farmers to begin the quest to improve their circumstances.

Many UFWA leaders perceived history curriculum as outdated and poorly suited to Alberta’s shifting socio-political climate of the 1920s. The need for post-war reconstruction, and education’s potential role in serving that end, was echoed in the educational committee work of the UFWA, who in turn informed the UFA executive and Department of Education of their proposed ideas. Although no formal course replacement was proposed in 1924, the consensus was that traditional history curriculum poorly served Alberta’s post-war demands for social, political, and economic cooperation. Committee member Dr. Geneva Misner of the University of Alberta claimed that pre-war history curriculum was deficient because it was authored in a pre-war culture of imperialism and greed that had “culminated in the tragedy of WWI, a universal and crushing burden of debt and intolerable human suffering.”

Committee members were in agreement that pre-war history curriculum required reform. Although social studies had not yet been discussed as a formal replacement of history, its groundwork was laid out in the revision committee work of 1924. The need for an updated secondary course to reflect Alberta society’s desire to regenerate society through social, political, and economic cooperation was clearly articulated after the war.

The reform agenda of the UFA/UFWA movement was further stimulated by the Great Depression and encouraged the infusion of cooperative ideals into Alberta curriculum.

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191 Ayelsworth, 144.
Regional and class loyalties already well established by the 1920s were deepened over the course of the Great Depression. Farmers in Alberta believed they were being exploited by Eastern Canadian corporate interests and doubly resented the organizations and people responsible for farmers’ impoverished condition, real or imagined, in these times of intense adversity.\textsuperscript{192} Thus, as historian Ian MacPherson argues, it was in the hinterland regions, including rural Alberta, where political and economic forms of cooperation flourished best and became more restless as the 1930s passed. It was also in the hinterlands and where restlessness inevitably nourished rural cooperative action.\textsuperscript{193} In 1931, one UFWA member claimed that “the political and economic system of today has its roots in the educational system of yesterday” and, “if we wish to see service instead of profit as the purpose of our industrial or commercial institutions then we should assist the youth in building up a mental structure to do that.”\textsuperscript{194} During an annual convention in 1934, the UFA/UFWA called for sweeping changes to citizenship education so that schools would “advance society towards a new form of social organization, where the principle(s) of ... equity, justice and social well being” replace competition.\textsuperscript{195}

Much of the foundation for social studies had already been laid by the UFA/UFWA during the 1920s. Cooperation and active political citizenship, the basis of citizenship training, became the hallmark of social studies curriculum in the 1930s. However, the open dialogue between UFWA leaders, the UFA Executive, and the Department of

\textsuperscript{192} MacPherson, 42.
\textsuperscript{193} Ibid.
\textsuperscript{194} “1931 Resolutions of the Annual Convention of the United Farmers of Alberta,” File 170D, Premiers Papers, Provincial Archives of Alberta.
Education came to an abrupt end. Curriculum design for social studies, the course that would replace secondary history curriculum, was taken over by an elite and select few, mostly highly educated men from the Department of Alberta Education and the Alberta Teachers Association (ATA). The agrarian movement that had pioneered citizenship training for its rural inhabitants and initiated the reform of history curriculum was usurped by curriculum builders in the mid-1930s. Social studies was used as a tool for legitimizing teaching as a profession. The religio-political movement of farmers and the grassroots delivery of citizenship training became formalized and institutionalized in the form of social studies by 1935.
CHAPTER THREE: THE FORMALIZATION PERIOD OF SOCIAL STUDIES

If teaching was to be deemed a profession, then “the teacher ought to have a say in what he must do, and how he must do it,” argued H.C. Newland, supervisor of Alberta Schools in the 1930s and chair of the committee responsible for the design of social studies in 1934-1936. Teachers asserted influence in curriculum design in the 1930s as a tool to elevate the status of their trade to a profession. The connection between curriculum design and teachers’ professional status became apparent in 1935. It was the year social studies was introduced and the year Premier William Aberhart recognized teaching as a formal profession by vesting power in the Alberta Teachers’ Association (ATA) to control teachers with rules of conduct, including their adherence to curriculum objectives set forth by the province.

Professional educators defended their right to control curriculum by claiming that they were “scientific experts” in the project of educating children. They obtained teaching expertise from graduate programs at Columbia and Chicago universities, leading centers of progressive education in the United States. A scientific approach to teaching allowed leading educators to replace subject experts, such as historians, with teaching experts to write curriculum. Ambitious Alberta educators embraced progressive education as a means to legitimize their authority in educational bureaucracy upon their return to the province. In this way, social studies can be understood as the lever by which

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educators obtained professional status in Alberta. At the same time, this singular focus on the influence of the professional educator overlooks the work of rural school teachers.

While no concise history of the origins of social studies curriculum exists in Alberta, the few studies that address the subject overemphasize the role that a select cadre of “professional” elites played in its formulation between 1934 and 1935. Perpetuating the notion that social studies, a curricular manifestation of progressive education, was the achievement of the professional educator alone is historian R.S. Patterson, who argues that the “underlying philosophy of progressive education did not extend past a few professional educationalists.”

Historian John Chalmers similarly implies the exclusive role of professionals in the development of social studies when he describes Newland as a “one-man curriculum branch.”

While scholar Amy von Heyking works to correct this oversight in her recent publication regarding the contributions of rural teachers in curriculum development at the primary grade level, she continues to emphasize the exclusive role of elite educators such as W.D. McDougall in creating social studies at the secondary level. She suggests it was McDougall alone who created social studies after being asked by Supervisor of Schools H.C. Newland to draft an outline. I intend to show that curriculum reform at the primary and intermediate grades did not involve the separate spheres that historians such

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200 John Chalmers, Schools in the Prairie Provinces: The Story of Public Education in Alberta (Toronto: University of Toronto Press, 1967), 82.
as von Heyking have alluded to. The enterprise approach to teaching and social studies, pioneered by Alberta’s Donalda Dickie, a rural teacher and Oxford graduate, occurred first at the elementary level and informed what McDougall later created for intermediate students.

The influence of H.C. Newland and W.D. McDougall is not contested in this chapter, but the notion that social studies was invented by a select few, or them alone, is. In the previous chapter, I argued that citizenship training, delivered by the United Farmers and Farm Women of Alberta (UFA/UFWA) in the 1920s, would become an essential feature of social studies in the 1930s. In this chapter I will continue to broaden understanding of the advent of progressive education and social studies in Alberta to include the pragmatic curriculum reforms initiated by rural school teachers in the 1920s. I will argue that these early practical initiatives, born of necessity, found expression in the formalized social studies of the 1930s. Von Heyking makes a similar point, namely, that teachers in rural communities pioneered teaching techniques that would become essential features of progressive education and social studies curriculum a decade later. I will examine how the professionalization of teaching worked to control the teaching force and formalize curriculum development, effectively placing progressive education and social studies in the hands of “professionals” only. In the professionalization process of the 1930s, teachers such as Donalda Dickie and Olive Fisher, both of whom were rural teachers and graduates of Oxford and Columbia universities respectively, were never considered professionals, thus concealing their involvement from contemporary historians. Ultimately, it was Dickie and Fisher who pioneered a new approach to learning, thereby
initiating the first social studies program at the elementary grade level. They also penned dozens of textbooks authorized for social studies curriculum.

The exertion of control by professionals over teachers in Alberta was enabled, in part, by the gendered nature of the teaching workforce. Nearly 70% of teachers in Alberta between 1911 and 1970 were female, and in rural communities this percentage was much higher. Leadership positions and professional authority, on the other hand, were nearly exclusively reserved for men. While progressive education, promoted as science, provided the promise of advancing a man’s career, it displaced the experiential knowledge and practical curricular innovations of women working in the field.

Just as church leaders and politicians in Alberta introduced pragmatic ways to deliver Christianity amidst challenging prairie conditions, so too did school teachers provide innovative ways to deliver curriculum in rural schools. Rural school teachers had to accommodate students’ low academic ability, toil through teacher shortages, and make due with a limited supply of teaching resources. Rural classroom instruction, characterized by cooperative student-centered activities that made use of alternative learning resources and materials, was not only a way to expand student learning beyond the narrow walls of the classroom; it was also a matter of survival in isolated rural communities. Although educational historian E.S. Patterson is likely correct that many school teachers did not comprehend the intellectual underpinnings of progressive education, they most certainly understood the challenges that traditional curriculum posed in rural communities and the necessity for adapting curriculum accordingly. An

examination of teacher and student memoirs sheds light on how curriculum was adapted by teachers and experienced by students, and both will be used to some extent in this chapter.

**Progressive Education, the Professional, and Social Studies**

Progressive education is a pedagogical movement that began in the late nineteenth century in both Europe and the United States as a reaction to the alleged narrowness and formalism of traditional education. The term “progressive” was engaged to distinguish this education from the traditional nineteenth-century curriculum, which was rooted in classical preparation for the university. By contrast, progressive education finds its roots in present experience.

The rejection of formalism in education at this time is reminiscent of the social gospel movement’s rejection of Christian orthodoxy and formality. Social gospel leaders, politicians, and progressive educators shared a common conviction that social reconstruction, amidst rapid industrialization, urbanization, international conflict, and economic inequality, all of which characterized the early decades of the twentieth century in North America, required democratic action in the present. Social gospel leaders proposed that the degenerative conditions that flowed from rapid change required the regeneration of society today. To this end, the social gospel infused various reform initiatives from prohibition initiatives to supporting organized Alberta farmers’ campaign

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204 Ibid.
to replace greed and competition in society with cooperation and democracy.\textsuperscript{206}

Progressive education similarly worked to create a more democratic and cooperative order through public education. By replacing the top-down and authoritarian nature of traditional schooling with collaborative forms of teaching among students and teachers, democracy could be practiced, learned, and reproduced throughout society.\textsuperscript{207} And just as the social gospel dethroned the bible as the sole authority in society, so too did progressive education dethrone the textbook as the dominant authority in a classroom.

A key figure in the progressive education movement in the United States was John Dewey, who believed that learning should be active and that traditional schooling was far too restrictive. Children came to school to live in a community that gave them real experiences that fostered their capacity to contribute to society. To achieve this, students needed to be involved in real-life tasks and challenges that fostered democratic and cooperative living.

The larger ideals of progressive education, firmly rooted in the United States at the turn of the century, but not yet in Canada, were indeed consistent with the ambitions of the agrarian movement in Alberta during the 1920s and 1930s and would soon be taken up by visiting Alberta educators at American universities. Progressive education, as it was formally taught at leading American institutions, offered visiting Alberta educators the opportunity to return to their province upon graduation as established experts capable of asserting control over the teaching force and curriculum design.

\textsuperscript{207} Riley, 9
Dewey’s progressive approach to learning drew on many disciplines, including psychology, sociology, and economics. Progressive education, as it was taught by Dewey and at leading American schools, was grounded in science. Historian Doug Owram explores how many university faculties in North America employed a scientific approach after the Great War to legitimize their research and influence in society. Those eager to reform society and legitimize their authority to do so uttered the word “scientific” to ground their solutions in well-founded authority.

Albertans who attended Dewey’s lectures at Chicago University and Columbia College in New York embraced the idea that educational problems could be approached scientifically. Graduate students were also being groomed for leadership while attending these prominent schools, which was evident in the encouragement they received from Columbia professors. George McNally, Alberta School inspector in the 1930s, comments that, while he attended Columbia, professors singled out Alberta’s educational system as one of the most “old-fashioned” in North America. The influence of Columbia College in moulding progressively minded Albertans for leadership in Canada was particularly significant given the large Canadian contingent attending. Between 1923 and 1938, the total number of foreign students at Columbia’s Teacher College was roughly 3500, nearly half of which was Canadian.

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While in the United States, Alberta educators were also exposed to an entirely new course that embraced the scientific and social concerns inherent in progressive education and especially social studies. Harold Rugg, Kilpatrick, and Edgar Dawson were among the most prominent American scholars of this subject and were highly influential with Alberta’s educational leadership.\textsuperscript{212} Dawson, a professor of history in New York, called for a more practical direction to the teaching of history, stating emphatically that it required progressively minded teachers to implement it. In his book, \textit{Teaching the Social Studies}, Dawson delivered a call to arms among teachers to take history curriculum out of the hands of historians and to direct it towards their own immediate classroom needs.\textsuperscript{213}

Professor Dawson argued that historians had failed to develop a vision and direction for delivering their work to students. Thus, it was the duty of progressive educators to develop a vision and direction on history’s behalf. For Dawson, “if the average historian insists on giving narrow and visionless definition to his subject, members of the teaching profession must find another term to describe their work in this field.”\textsuperscript{214} For Dawson, the deficit of traditional history was its poor use by academics in cultivating a more democratic social and political order. He envisioned an opportunity for progressive educators to mould history for the purpose of social and political regeneration.\textsuperscript{215} Dawson worked to empower teachers to articulate the value and role of history in the classroom and to define a broader scope for its use, namely, to emphasize peace, tolerance, and democracy among students.

\textsuperscript{212} Von Heyking, \textit{Creating Citizens}, 64.
\textsuperscript{214} Ibid.
\textsuperscript{215} Ibid., xi.
Of course, classroom needs were informed to a significant extent by the community and region in which curriculum was delivered. Here was the genius of social studies. The content of social studies could be adapted to the local environment, while its larger structure was framed by the popular rhetoric of progressive education. North Americans and Europeans shared a common reaction to the negative consequences of industrialization, urbanization, and competition around the turn of the century. They embraced and promoted progressive reforms designed to improve modern industrial society through educational, spiritual, and political changes.\textsuperscript{216} Drawing on Marshall McLuhan’s concept of the medium and the message,\textsuperscript{217} I suggest that progressive education and the social gospel were the popular and widely received mediums of the day, while social studies was the message or content of that medium that required local input tailored to particular regional circumstances. While social studies was indeed devised in the United States and not Alberta, its content and form in Alberta came to reflect this province’s particular educational environment and social and political attitudes in the 1920s and 1930s. Progressive education, touted as science at American universities allowed graduating Albertans to return to the province and begin to affirm control over teachers and curriculum design by claiming they had attained scientific and expert training in progressive education. These “expert educators” were part of the formalization stage of social studies. The practical innovations of rural schoolteachers and the grassroots movement in Alberta had created fertile ground for educational reform

\textsuperscript{216} Michael McGerr, \textit{A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870-1920} (New York: Oxford University Press, 2003), 5.
\textsuperscript{217} Marshall McLuhan and Quinton Fiore, \textit{The Medium is the Message: An Inventory of Effects} (Berkley: Gingko Press, 1996), 4-7.
and opportunities for experts to capitalize on these shifting social and political conditions as a means to advance their own careers.

The “Arrival” Storyline of Progressive Education and Social Studies to Alberta

A comprehensive examination of the transition from history to social studies curriculum in Alberta, or the professionalization of teaching in the province, has yet to be conducted. The following are the few key secondary and primary sources that do exist on the roots of social studies and the professionalization of teaching in the province. They include John Chalmers’ *The Story of Public Education in Alberta*,\(^{218}\) R.S. Patterson’s PhD thesis, “The Establishment of Progressive Education in Alberta,”\(^ {219}\) and W.D. McDougall’s personal papers, titled “Curriculum builders in Alberta between 1902-1945.”\(^ {220}\) All these works were written between 1965 and 1970. Clearly they are dated, but because little has recently been written on the subject of professionalization of teaching in Alberta or on the advent of social studies except for Amy von Heyking’s 1996 PhD dissertation on Modernizing Alberta’s Curriculum), these sources tend to perpetuate a narrow understanding of the origins of social studies.

A predominant view among the above-mentioned sources is that progressive education arrived in Alberta in 1935 from the United States. But this “arrival” storyline ignores the involvement of teachers in the field and the extent to which progressive education and social studies functioned as wedge to separate teachers from professionals.

\(^{218}\) Chalmers, 18.
The establishment of progressive education and its connection to professionalizing teaching by Alberta’s predominantly male leadership was not a gender-neutral or a benign process. Asserting control over the implementation of progressive education justified men’s leadership positions and demonstrated their control over the teaching force.

For W.D. McDougall, a key figure in the development of social studies in the 1930s, asserting control over curriculum also meant recording the story of his involvement in the process on paper. He made clear in his “Autobiographical Notes on the Development of Social Studies” that he alone wrote social studies curriculum. He claims that “although I did not realize at the time…social studies had its birth” when “H.C. Newland asked me to elaborate on the structure” of this course. He continues that he (McDougall) began to “elaborate on a project that consumed every moment of my free time.”221 In every secondary source that discusses the roots of social studies in subsequent years, McDougall’s autobiographical notes are consulted, and his contention that social studies was his invention is essentially repeated by scholars. Later in this chapter, I will show that this assertion is inaccurate.

In *The Story of Public Education in Alberta*, historian John Chalmers similarly emphasizes the role of the few, primarily male educational leaders, such as McDougall in curriculum development in Alberta. Conversely, he presents teachers as passive subordinates to professional authority, incapable of altering curriculum or teaching

methods on their own terms. His book segregates the modernization of Alberta’s education system into two distinct phases of development. The first was, as Chalmers refers to it, the pioneer phase.\textsuperscript{222} This period includes the early decades of the twentieth century when women were presented as pioneer teachers, brave instructors of the lonely one-room school house. Chalmers describes this pioneer phase in paternalistic and romantic hues, describing female rural school teachers as “magnificent and dignified creatures,” “stately in their shirt waist dresses…long hair piled magnificently on their heads under picture hats.”\textsuperscript{223} The second phase was the arrival from American universities such as H.C. Newland and McDougall, who began the process of implementing progressive education in 1934 through curriculum committee revisions.\textsuperscript{224} What is neglected in Chalmers’ historical account of progressive education in Alberta in the 1930s is that rural teachers were active agents of change in teaching methods and in curriculum design. Instead, he presents female teachers as passive pioneers of the rural school house, delivered from primitive practices by the progressive educator, a professional male figure.

While educational leadership in Alberta was exposed to progressive education and social studies in an American context, Alberta school teachers were in the field grappling with the realities of an out-dated curriculum poorly suited to shifting rural school dynamics.

\textsuperscript{222} Chalmers, 7.  
\textsuperscript{223} Ibid., 12.  
\textsuperscript{224} Ibid., 82-101.
Teachers Respond to Rural School Conditions

In 1910, nearly 70% of Albertans lived in rural communities. Most Albertans were educated only to the eighth grade, while only a small minority, primarily those intending to continue to university or become teachers, continued to high school. In most cases, students that completed grades one through eight returned to farming. In the early decades of the twentieth century, access to high schools in Alberta was limited. Most high schools were only in major cities, and the curriculum they delivered was primarily academic, reflecting the needs of a relatively narrow segment of the population.

However, between 1920 and 1934 school attendance nearly doubled. The growth in high school attendance was particularly dramatic, rising from 20,000 to over 30,000 in just ten years. This increase was largely a result of older students returning to high school because of few employment opportunities in the midst of economic depression. Scholar Margaret Ayelworth also notes that Alberta classrooms overflowed in the late 1920s and 1930s as a result of improved physical access to schools, made possible by the UFA/UFWA. Between 1921 and 1935, the UFA government improved highways, thus giving better access to previously isolated schools. Also, scholarship opportunities for rural students wishing to continue on to high school were initiated by the UFWA.

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225 Chalmers, 42.
226 Ibid., 42-63.
228 Chalmers, 50.
However, increased enrolment created problems for rural teachers. Chief among these was the growing numbers of students with relatively weak academic ability. Compounding this issue was that curriculum in the 1920s and early 1930s was primarily academic, with few vocational or technical options.\textsuperscript{230} As educational historian Neil Sutherland argues, a formal academic approach to curriculum prevailed throughout Canadian schools in the early decades of the twentieth century and was characterized by memory work and drill. “It was a system based on teachers talking and students listening, a system that discouraged independent thought, a system that provided no opportunity to be creative.”\textsuperscript{231} Historian John Chalmers similarly describes curriculum in Alberta at this time as “academic and bookish,” whereby in memorization was deemed integral to students’ success.\textsuperscript{232}

In the midst of growing numbers of students attending schools, including many weaker academic students, both teachers and officials lamented the growing number of “dull” students, identifying large proportions of pupils as “retarded” in their educational development.\textsuperscript{233} Scholar Margaret Ayelsworth claims that some teachers grappling with disparities in student abilities during the 1920s and 1930s described these shifts in the following manner: “Nearly 70\% of students do not belong to that social class which considers school and more advanced education a matter of social necessity. Many

\textsuperscript{232} Chalmers, 106.
\textsuperscript{233} Ibid., 213.
students neither have the native ability, nor the desire to learn…academic subjects.”²³⁴

The combination of academic curriculum and increasing numbers of students with lower than average academic aptitude resulted in high failure rates on provincial examinations. In fact, nearly 50% of students working towards a high school diploma between 1920 and 1930 failed.²³⁵

Provincial examinations at the secondary level (intermediate and high school) were rigorous and included three-hour written tests on composition and grammar, arithmetic, Milton and Shakespeare, Tennyson and prose, trigonometry, physics, Horace and Cicero, Latin Grammar and prose, and constitutional and industrial history.²³⁶ The University of Alberta appears to have had tremendous influence over high school standards and examinations. Textbooks, curriculum, and exam standards were written almost exclusively by University of Alberta professors for the Department of Alberta Education. This tight-knit relationship between the University of Alberta and secondary school curriculum characterized Alberta’s secondary educational system throughout the early decades of the twentieth-century. The dominant feature of secondary education in Alberta at this time was the setting of standards and curriculum by an authority outside of the school system itself.²³⁷ In 1929, Minister of Education Perren Baker exclaimed, “Without a doubt we are the most examined people in Canada and perhaps the world.”²³⁸

²³⁴ Ayelsworth, 17.
²³⁵ Chalmers, 194.
²³⁶ Ibid., 222.
²³⁷ Ibid., 210.
²³⁸ Ibid., 185.
It was not until 1913 with the passing of the federal Agricultural Assistance Act that provinces were encouraged by grants to promote agricultural, vocational, and technical forms of education in high school.\textsuperscript{239} With this federally sponsored initiative, some high schools in the early 1920s adjusted their narrow diploma schemes for normal school and university entrance to include agricultural and industrial high school diplomas. But despite the Department’s recommendations for these expanded programs, many school boards dismissed the recommendation, largely because of costs associated with offering vocational and technical training, and continued to stress university and normal school entrance.\textsuperscript{240} And even if students had the option of vocational training, albeit in a limited number of schools, the majority of students arduously worked towards a high school matriculation for university or normal school entrance. Historian John Chalmers suggests the reason was because of the perceived social and economic status to be gained by obtaining this more academic diploma. He claims, in a rather patronizing tone, that “the matriculation program was a first choice for every self-respecting, middle – class Albertan, rural or urban in the 1920s.”\textsuperscript{241} Thus, high school students, regardless of interest or aptitude, had little choice in the 1920s and 1930s beyond normal school and university matriculation.

Higher student enrolment, however, was not met with a corresponding increase in the supply of teachers or resources. Teacher shortages, inadequate teacher training, and a limited supply of textbooks plagued Alberta’s rural schools in the 1920s and 1930s. In annual reviews Alberta’s Department of Education regularly criticized teachers’

\textsuperscript{239} Ibid., 205.
\textsuperscript{240} Chalmers, 110.
\textsuperscript{241} Ibid., 204.
instruction and their limited supply of resources to adequately teach students during these decades.\textsuperscript{242} In times of teacher shortages it was difficult for the Department to justify a more extensive program for training teachers. Thus, teachers were fast-tracked in a four-week program instead of the usual eight-week program.\textsuperscript{243} Regardless of the length of program, it seems that few teachers felt prepared for teaching in isolated rural school rooms. A series of oral interviews with rural school teachers in Saskatchewan in the 1920s offers some insight as to how Alberta’s rural teachers may have also experienced the inadequacies of teacher training. Teacher Hilda Rennie could not recall “learning anything practical” in her teacher training. Instruction at normal school consisted of classes in reading, writing, and arithmetic, and, according to Rennie, there were no method courses on preparing a teacher to teach a particular subject, and there was no practice in teaching in a rural setting.\textsuperscript{244}

As a cost-saving measure, some school boards dealt with increased student enrolments by simply increasing the sizes of existing classrooms, thus shifting the responsibility onto teachers to deal with varying student abilities. Another cost-saving method was to squeeze multiple grades into a single classroom. In an interview with a rural teacher in Alberta in the 1920s, Doris Mae recalls that rural classrooms were

\textsuperscript{242} Department of Education, \textit{Annual Review}, 1927, pg. 22. See also, \textit{Annual Reviews} for 1928, 1932.
\textsuperscript{243} John Chalmers, 88.
composed of students of various grades and that it was the job of the teacher to plan for each group at the same time.\textsuperscript{245}

Cooperative learning strategies and project-based activities using available resources, such as newspapers and magazines, were among the myriad ways teachers overcame these challenges. Many of these techniques, borne out of necessity, were essentially echoed by the new curriculum released by professionals in 1935. For predominantly female teachers of rural schools, adapting curriculum was a practical matter, while for Alberta’s educational leadership, overhauling curriculum was a means of asserting authority over the teaching force and curriculum development – key to the professionalization of teaching.

As historians Don Wilson and Paul Stortz demonstrate in their examination of rural school teachers in north-central British Columbia in the 1920s, rural teachers were active and innovative in their delivery of curriculum amidst the challenges they faced. They argue that teachers exerted a degree of autonomy and independence in curriculum delivery owing to their relative isolation.\textsuperscript{246} Teachers’ control over curriculum, in the midst of isolation, is a recurring theme in the memoirs of rural teachers in Alberta and Saskatchewan. Yet historians overlook the initiatives that took place in these school settings, suggesting instead that they continued to teach in unchanging ways until professional educators delivered them from turmoil with new curriculum and progressive teaching practices. But as teacher memoirs, oral interviews, and Wilson’s and Stortz’s

\textsuperscript{245} Chalmers, 88.
examination demonstrates, rural teachers were adapting their methods to their local circumstances long before progressive education formally arrived in the 1930s. In this way, rural teachers can be seen as active agents of change in their trade.

Critiques of the academic nature of secondary curriculum in Alberta and demands to make curriculum more practical to rural students did not go unnoticed by UFWA leaders or rural school teachers. (Often UFWA leaders were also school teachers.) Making curriculum more practical for rural youth and adopting more pragmatic teaching methods was the subject of numerous articles in the *Grain Growers’ Guide*, the official publication of the UFA/UFWA. For example, in 1920 a rural school teacher, Mary Crawford, argued “that the era of general education is passing away.” The study of classics, such as Latin and history, were deemed unsuitable to the practical needs of farmers. The curriculum needed to move from the “abstract to the constructive.” Another article in the same publication described how rural school teachers were deviating from academic curriculum and making it constructive. The article includes the accomplishments of rural teachers such as Ms. Wyman, who claimed that the existing curriculum “contained nothing that could be put to practical use in their rural students’ everyday lives.” Wyman took progressive steps in rural school houses to improve this situation. According to Wyman, children wanted to learn by doing things rather than to repeat what others had done. She set up committee work for students to take charge of their learning and to improve the material conditions of the school. Students of Ms. Wyman profiled their own paintings and poetry throughout the room and applied their

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248 Ibid.
mathematical and scientific learning towards the construction of school gardens.\textsuperscript{250} These initiatives applied learning in a cooperative fashion and taught youth that they could take charge of their own learning and the conditions in which they learned. Indeed, these ideas were in line with strands of progressive education that would be formally introduced in Alberta decades later.

Teachers’ and students’ memoirs in Alberta and British Columbia from the 1920s and 1930s indicate some of the ways in which rural teachers pragmatically adapted curriculum in light of limited resources, inadequate training, and large classrooms with diverse student needs. Although some of these memoirs are based on teachers’ experience in other provinces, it is likely that many of Alberta’s rural teachers acted in similar ways. Teacher Hazel McKenzie claims that her Lethbridge school circumvented a lack of teaching resources by utilizing \textit{National Geographic} magazines for research projects. “That box of material bailed me out time after time,” claimed this teacher.\textsuperscript{251} For teachers dealing with students from multiple grades, one adaptation was to organize the whole group around a single theme that all students could work on at the same time. Common themes used by rural school teachers included “Indians and Eskimos” and “Taking a Trip to Europe.”\textsuperscript{252} Penelope Stephenson’s study of rural school teachers in the Okanagan Valley in the 1920s claims that “rural teachers learned to utilize the natural resources on their schools’ doorstep to provide interesting lessons for pupils.”\textsuperscript{253} Roberta Volker remembered her experience in a rural school at Wood Lake with her teacher

\begin{footnotesize}
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\item[\textsuperscript{250}] Ibid.
\item[\textsuperscript{251}] Von Heyking, “Implementing Progressive Education in Rural Alberta,” 101.
\item[\textsuperscript{252}] Ibid., 102.
\item[\textsuperscript{253}] Ibid., 101.
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Margaret Campbell. She remembers a unit on pioneer life: “We used pioneer tools to build and float a raft one week. In a science class we went on nature finds to see wild orchids growing near the school and acorns gathered by squirrels for winter. Our teacher had the ability to make every lesson come alive.”

Volker remembers that “we all came away doing well in math because of her love of the subject and the fun projects she would create to make real life experience for us.”

Rural teachers also seemed capable of creating relevant history lessons for their students. Mildred Rasmussen remembered projects she developed that required her pupils in Dickson, Alberta, to interview their parents in order to write a history of the Danish community in the area. Gordon Little, a former student in the Alberta community of Hither during the inter war years, describes how his instructor divided the six intermediate grade students into two teams to debate the topic: “Resolved, that Japan is a threat to the British and American possessions in the Pacific.”

Students worked on the debate at school and at home, gathering newspapers where they could find them. Some teachers also ordered special maps and early war broadcast news to prepare students for the debate. Thus, theme-based activities utilizing available resources were employed by rural teachers as practical measures to overcome classrooms with multiple-graded students and limited supply of formal teaching materials such as textbooks. School teacher Edith Van Kleek’s published memoirs speak to teachers’ pragmatism in the 1920s

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254 Ibid.  
255 Ibid.  
256 Ibid., 104.  
257 Ibid., 107.  
258 Ibid.
and 1930s. Her memoirs are aptly titled, *The Way things Were*. Because of shortages of teaching materials, Van Kleek encouraged students to use what they could find, including dictionaries and encyclopaedias – anything that could develop students’ ability to research and think.

These practical innovations were consistent with what progressive education professionals in the 1930s would call “child-centered learning,” “discovery-based learning,” and “constructivist” approaches to teaching. These approaches emphasized the need for teaching and content to become more practical and applicable to the everyday life experience of students.

Leading intellectuals such as John Dewey disseminated these progressive ideas from American universities such as Columbia in New York and Chicago University. This is not to say that all rural teachers in Alberta were unaware of such pedagogical innovations emanating from United States in the 1920s. Some had read John Dewey’s widely circulated book, *The School and Society*, and in the exceptional cases of Donald Dickie and Olive Fisher, had attended Columbia to educate themselves in the methods and philosophy of progressive education.

But for the average rural school teacher, adapting teaching practices was a practical matter of survival and not a pedagogical or intellectual exercise. A series of oral interviews from the 1970s conducted at the University of Saskatchewan with practicing rural school teachers from the 1920s confirms this assumption. The interviewer asked a number of former teachers if they had

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259 Ibid., 102.
260 Ibid.
referred to themselves as “progressive educators.” The most common response to this question was that they “did not know what this word meant.” They emphasized that what they had done in the classroom was a matter of necessity. Scholar Dianne Miller goes further, claiming that rural school teachers did not need to read John Dewey to alter their teaching methods. Rather they understood the impoverished conditions in which they operated and made practical adaptations.

By the early 1930s, the Department of Education outlined key problems that plagued Alberta’s schools which were already well-known to the rural school teacher. The department identified the problem of teacher shortages, lack of teaching materials, the inability of students to access high school programming, and high failure rates on provincial exams, and it concluded that the existing academic curriculum was largely irrelevant to many rural students. One solution proposed by the UFA government to resolve the issue plaguing Alberta’s schools was to defer to an “expert” curriculum committee which would rewrite school curriculum with the intention of “lightening the academic” nature of the programs of study.

In charge of supervising the entire re-working of primary, middle-school, and secondary education in 1935 was Dr. H.C. Newland, a Ph.D. graduate of Chicago University and the Alberta Teachers’ Alliance President between 1920-1922. Dr. Newland dedicated much of his effort to introducing an entirely new course that could

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264 Ibid. See audiotapes R-A1499 with Mildred Baldwin and R-A1500 with Florence Bennee.
266 Chalmers, 194.
infuse curriculum and teaching with strands of progressive education emanating from leading American universities.

**Professionalization as the Masculinization of Teaching in Alberta**

To put teaching on par with other professions and to obtain a greater degree of control over teaching conditions and curriculum, Hubert C. Newland worked to increase organization among teachers and publicize their arguments for professionalization. A key tool in this endeavour was establishing the Alberta Teachers’ Alliance in 1918, precursor to the Alberta Teachers’ Association.\(^{268}\) He outlined the following as major objectives of the collective teacher organization: raise the status of teaching in order to secure better salaries; obtain greater teacher representation on curricular committees; and improve professional qualifications for teachers by securing funding for post-graduate training in education.\(^{269}\) However, the benefits of collective teacher organization were not allocated equally across gender lines. For example, Donalda Dicker and Olive Fisher, both female teachers who obtained graduate training abroad, were not granted funding for their studies as their male counterparts were.\(^{270}\) While the *ATA Magazine* served the function of promoting the teaching profession, the *Grain Growers’ Guide* continued to be a forum for populist discussion of educational reform. The *ATA Magazine* featured mostly male contributors, while educational forums in the *Grain Growers’ Guide* were primarily authored women.

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\(^{268}\) Ibid., 23.

\(^{269}\) Ibid., 22.

\(^{270}\) Coulter, 687.
As mentioned earlier, between 1911 and 1970, over 70% of Alberta’s teaching force was female, and in rural communities this number was higher.\textsuperscript{271} Mary Kinnear provides two explanations for the overrepresentation of women in rural schools. First, in the early twentieth century there existed few paid opportunities for women in the labour market other than teaching, and, second, few men wanted to work in isolated communities for relatively low wages.\textsuperscript{272} Kinnear also points out a number of gender role assumptions, typical of the early twentieth century, that informed men’s and women’s career paths. For example, men would enter a profession assuming they would not have to work in other occupations to support themselves or their families. As the “normal breadwinner,” a man needed to earn a respectable, even a superior, living for himself and his family.\textsuperscript{273} Teaching in the 1910s and 1920 was a poorly paid position and not a career that a man could follow to maintain the status of a “normal breadwinner.”

Conversely, the assumption for women in the early decades of the twentieth century was that they would manage the home, children, and their husbands’ emotional well-being. Because of this assumption that women were caregivers in the home, women were also deemed well-suited to teach children, perceived by many as an extension of motherhood.\textsuperscript{274} Amidst these early twentieth-century gender roles, the expectation of women was that they were not supposed to be ambitious beyond the bounds of their family and certainly not for themselves. Thus, according to Kinnear, a woman could never be considered an actively engaged person in her workplace and most certainly

\textsuperscript{271} Kinnear, 180.
\textsuperscript{272} Ibid., 150.
\textsuperscript{273} Ibid.
\textsuperscript{274} Dianne Miller, “Telling Tales in and Out of School,” 16.
could not be considered a professional.\footnote{Ibid.} In the sources available on the development of curriculum and professionalization in Alberta, women teachers are presented as merely symbolic of the private sphere of the home, incapable of fulfilling public roles as agents of institutional and political change. Because these gender roles dictated that only men could be professionals and women maternal caregivers, social studies continues to be framed as the achievement of men. Absent from this predominant view is the role of the practitioners, female rural school teachers who altered teaching methods, thereby contributing to curriculum reform.

The official publication of the ATA, \textit{The Alberta Teachers’ Alliance Magazine}, established by Newland in 1920, rallied support by publicizing the efforts, progress, and achievements of educators who raised the collective status of teachers in society. Throughout the 1920s the magazine, under the editorship of Newland, produced indulgent political rhetoric. In fact, scholar Patricia Obviate, author of the “Educational Contributions of H.C. Newland,” claims the \textit{Magazine} was Newland’s instrument of propaganda in how it made emotional appeals to its readers.\footnote{Oviatt, 12.} The front page of the first published issue of the \textit{ATA Magazine} in 1920 reads in Latin, “Magistri Neque Servi, or “masters not slaves.”\footnote{\textit{Alberta Teachers’ Alliance (ATA) Magazine}, 1 (1920): 1.} Newland certainly benefitted personally from his ambitious involvement with the professionalization of teaching in Alberta, as he rose meteorically in Alberta’s educational ranks from high school teacher to educational scholar, obtaining
a PhD from Chicago’s graduate school of Education in the 1920s. He also served as ATA president and, in 1935, became Schools Supervisor for the Department of Education.\textsuperscript{278}

Just as the lawyer or doctor controlled aspects of his trade, so too did teachers need to control their trade, stated an \textit{ATA Magazine} article from 1920, and this involved asserting control over the teaching force and curriculum design.\textsuperscript{279} The act of professionalizing teaching was analogous to the masculinization of teaching, at least at the level of creating leadership and bureaucratic positions in Alberta education. Teachers, a majority of whom were female, were merely practitioners or an extension of bureaucratic control.

The masculinization of teaching in Alberta certainly squares with the literature available on the subject. For example, men dominated the administration of the \textit{ATA Magazine}, dedicated to the cause of professionalization. The \textit{Magazine} regularly featured jubilant articles on male appointments to positions of authority in the ATA or Department of Education. One \textit{ATA Magazine} article, from 1935, regarding the election victory of Premier Aberhart, a former school teacher himself, reads as a call to arms among male teachers to engage politically and demand professional recognition by their government. “Teachers have received less recognition for their work than other classes. The Premier himself had to leave the classroom to get recognition, and in a few months succeeded in having the highest award conferred upon him.”\textsuperscript{280} The success story of Aberhart is presented as an inspiration to teachers, particularly men, to affirm themselves in

\textsuperscript{278} Oviatt, 15.
\textsuperscript{279} \textit{ATA Magazine}, 1 (1920): 3.
\textsuperscript{280} \textit{ATA Magazine} (1935): 15.
As will be outlined below, men asserted themselves in curriculum design and textbook writing, but primarily at the level of committee leadership and supervision. But the actual work involved in writing curriculum and textbooks was left to women such as Olive Fisher and Donalda Dickie. The author suggests a political calling for teachers and equates their work with that of the politician. “Teachers must demand…. professional status, similar to that enjoyed by lawyers and doctors.” The *ATA Magazine* and its content reflect a predominantly male perspective, preoccupied with establishing authority and leadership in the design of curriculum and control over teaching in the province. Also, in the early 1930s, as the depression shrank the labour market across the Canadian Prairies, calls for men to assume teaching positions held by women throughout the nation were vocalized by education officials. A Saskatchewan Department of Education official suggested that the country’s unemployment problems could be solved if the “55,000 lady teachers in Canada were eliminated from their positions, making way for men who are walking the streets.” While this radical proposal was never implemented, many leaders of Alberta’s education system travelled to the United States in hopes of advancing their careers and legitimizing their authority in curriculum design.

The ways in which progressive education was internalized by men and women attending graduate school in the United States may have differed considering the job prospects available to them upon their return to Alberta. Appointments to leadership and

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281 Ibid.
282 Ibid.
other lofty positions awaited men, while women such as Donalda Dickie and Olive Fisher, who also obtained advanced degrees from Columbia, returned to the only employment option available to them, teaching in rural communities. In this way, Dickie and Fisher may have been more concerned with the social implications of progressive education than the professional implications. An interview with W. D. McDougall, also a student of Columbia University, confirms this notion. He claims that a number of graduates of Columbia, including Donalda Dickie, were “more closely associated with the social aspects of Alberta’s agrarian movement” and were “highly motivated by the social implications inherent in progressive education.”

Beyond McDougall: The Contributions of Dickie and Fisher

If female teachers were to be denied opportunities to lead and secure formal positions of authority, some would shape education in other ways, including in textbook design and curriculum committee work. Donalda Dickie was an Alberta rural school teacher, a normal school instructor, a Columbia and Oxford scholar, and the recipient of a PhD in history at the University of Toronto in 1929. Earning a PhD made her one of only six women to be conferred with a University of Toronto PhD in history prior to 1960. Despite her stellar academic record, she was never considered for a post in a history department. No doubt this was because the hiring of new faculty was done informally by department chairs seeking "good men." As Donald Wright argues, “Sexism not only protected the status of history as a masculine discipline but protected the academic labour

284 “Interview with W.D. McDougall and R.S. Patterson on reform to Alberta education in the 1930s,” 3. University of Alberta Archives, Accession no. 69-29, 3/1, File 1, Box 4.
285 Ibid., 677.
286 Ibid., 680.
market for men.”\textsuperscript{287} Although it is possible that Dickie did not wish to teach at a university and never sought a position, the aversion to female professors in history departments in general suggests more than personal preference was at work. Perhaps, as scholar Rebecca Coulter suggests, Dickie was motivated to overcome overt sexism by achieving exceptional academic excellence.\textsuperscript{288}

In any case, gender pushed Dickie to the margins of male-dominated authority, leaving her to employ a strategy of “practical action.”\textsuperscript{289} Admittedly, Donalda Dickie is an exceptional figure in Alberta’s educational history. But her situation as a practitioner with influence upon curriculum matters despite a lack of professional status was common to many other rural teachers. As demonstrated earlier in this chapter, rural teachers “got things done” as a matter of survival. While getting things done certainly benefited rural school communities, it was not a tactic that could be used to advance a women’s career, especially given the rigid gender roles typical of the period. However, both Dickie and Fisher acted as liaisons between educational authority and practical matters in the field. As established teachers in rural Alberta and as progressive education experts, Dickie and Fisher straddled two worlds. As progressive education experts they played a key role in implementing the theories of progressive education in an intelligible way to teachers. At the same time, Dickie and Fisher also ensured that Alberta’s agrarian movement’s cooperative and democratic values found tangible expression in curriculum reform.

\textsuperscript{287} Donald A. Wright, \textit{The Professionalization of History in English Canada} (Toronto: University of Toronto Press, 2005), 31.
\textsuperscript{288} Coulter, 695.
\textsuperscript{289} Ibid.
When Dickie returned to Canada from Oxford in 1917, she resumed her teaching post at Camrose Normal School, one of three of Alberta’s teaching preparations schools. Here she found the history textbooks used by Alberta students to be “literally incomprehensible to most...young readers.” As a result, Dickie began writing and publishing student textbooks that would be used until the 1960s. If she were denied the opportunity to lead from a formal position of authority, she would shape education in another way: by promoting a more practical reading of history along with a child-centered approach to teaching through textbook writing intended for history and its successor, social studies.

Dickie, a rural school teacher herself, realized that teachers had few resources to rely upon other than a textbook. She also understood that the textbook shaped the ways in which teachers taught. If history textbooks focused on the facts of history, with particular attention to dates and events, then teachers, she claimed, would follow suit by demanding memorization from their students. Furthermore, because the majority of students did not complete high school in the early decades of the twentieth century, what they learned in the primary grades was recognized by Dickie as particularly important in shaping the political consciousness and notions of citizenship among Alberta’s youth. Dickie’s involvement in textbook design and curriculum writing ensured that the implementation of progressive education would be firmly connected to rural communities’ need for practical educational reforms. Thus, Alberta’s agrarian movement, determined to elevate the social and political consciousness of rural students, and the process of

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290 Ibid., 679.
professionalizing teaching, came together though the work of Dickie and Fisher, who worked as practicing teachers in rural Alberta and as progressive education experts.

Alberta’s educational authorities, specifically Fred McNally, the Provincial Supervisor of School in 1934, recognized Dickie’s proven ability for producing teaching and student materials. McNally invited Dickie into the curriculum writing process in 1934. Dickie’s proven expertise in writing textbooks for teachers and students moved her closer to the center of male-dominated authority. There is no indication from the primary or secondary record that she was seen as a threat to the existing relations of power. It would have been difficult for Dickie to be considered a threat, given that she was never appointed to a prominent position of authority or ever referred to as a professional in the primary record. Instead, Dickie is referred to only as a teacher, albeit a very capable one, at the Camrose Normal School.

McNally, like Dickie, attended Columbia’s graduate school, but admits that he “found John Dewey’s lectures incomprehensible.” Possibly because of his confusion regarding practical implementation, he invited Dickie to speak at a conference of school inspectors about the methods of progressive education. Well received by the inspectors, Dickie was assigned to the task of drafting a curriculum that reflected strands of progressive education. While the committee work was supervised by H.C. Newland, much of the actual work was accomplished by two women: Dr. Dickie, and Olive Fisher, a Normal

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292 Ibid.
293 See “Donalda Dickie,” Accession No: 69-29, 3/1-5, Boxes 4-8, University of Alberta Archives.
School instructor in Calgary, also a PhD graduate of Columbia. Central to the plan for this committee was to create an interdisciplinary, child-centered, activity-based curriculum for the primary through to the high school levels. Dickie envisioned this approach as “the cooperative achievement of a social purpose that a teacher presents to her class with a view to having them use it as an experience in intelligent social behaviour.”

Perhaps because of Dickie’s and Fisher’s experience as practicing rural teachers and progressive educational experts, they were better positioned than others to translate theory into practice. Scholar Rebecca Coulter argues that Dickie was always interested in using education to promote social improvement and thought that this could be best achieved by offering students active, purposeful learning activities designed to prepare them for democratic citizenship.

W.D. McDougall’s unpublished memoirs, *Social Studies in Alberta,*” reflects a clear desire to highlight his independence in authoring social studies in the province. He claims that social studies curriculum was without “precedence,” bestowing him alone with the “overwhelming task” of creating a new course. He writes that “social studies had its birth in Alberta” when, in 1935, H.C. Newland invited “me to elaborate on ideas for a new course at the secondary (intermediate and high school) school level.” McDougall claims that from this date forward he was to “live, breath, and sleep social studies.”

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296 Rebecca Coulter, 685.
297 Ibid., 686.
299 Ibid., 3.
300 Ibid.
and high school grades. I do contest, however, historians’ tendency to celebrate McDougall’s independence in writing social studies without reference to the work of others, including Donalda Dickie, Olive Fisher, or rural Alberta school teachers. A singular focus on McDougall also disconnects social studies’ development from the religio-political environment in Alberta, led by the UFA government, that enabled curriculum writers such as McDougall to participate in the first instance. My objective in this chapter has been to put McDougall’s singular role in writing social studies curriculum into a wider context.

While H.C. Newland oversaw the revision and writing of curriculum at the elementary and secondary grades in Alberta between 1934 and 1936, including social studies, the actual work was delegated to others. At the elementary level, Donalda Dickie, Olive Fisher, and William Hay were responsible for writing a new program of studies, which included the introduction of social studies in 1935. In the following two years, McDougall introduced social studies at the intermediate and high school levels. Therefore, the elementary program of studies, which included social studies, represents the very first attempt to formalize and infuse progressive education into Alberta’s curriculum. The elementary program involved teaching around “purposeful activities” that “revolved around central themes” or “enterprises.” Enterprise education involved a chosen theme such as “Foods,” and students would draw upon various disciplines such as health and science to explore the chosen theme. The enterprise program also included activities such as organizing a student council or investigating safety rules in

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301 Von Heyking, “Implementing Progressive Education in Alberta’s Rural Schools,” 95.
302 Von Heyking, Creating Citizens, 71.
communities. The point was that students were to be active investigators and researchers of problems that they confronted in their communities, and they were to draw upon multiple disciplines to solve them. A list of community resources, books, and magazines was included in the program of studies that teachers and students could utilize.  

The integration of content was also key to the enterprise approach. The fusion of history, geography, and civics – social studies – reflected this integration. It encouraged students to see how history, geography and civics were interrelated and useful to think about when enquiring into a theme such as “government and law.” History, geography, and civics were not the only subjects that were integrated for the purpose of exploring broad themes. Science and health, literature and art, were similarly combined. Other subjects that were integrated were not given new titles. The enterprise approach was to engender appreciation for complexity as opposed to being strictly informational.  While some educational experts expressed concern that the quality of curriculum and instruction would suffer, the elementary program was positively received by parents, students, and the general public. In five elementary schools in which this progressive reform, including social studies, was piloted in 1935, the results and reactions of pupils and parents was recorded: “children are more keenly interested in their work; cooperation rather than envy-engendering competition tends to make schools happier places for all.”

303 Ibid.
305 Ibid.
The enterprise approach to education offered rural school teachers relief from two key problems. For teachers with students from multiple grades in their classroom, the enterprise method provided a single theme which could be taught to all students regardless of grade, and students could draw from relevant material to address the theme. Also, teachers could utilize supplies and resources that were at their doorsteps for theme-based activities rather than being tied to a single textbook (that they may not even possess) to guide the learning of specific material. In these ways, Dickie’s and Fisher’s elementary curriculum represents the first formal attempt to deal with the problems of rural school teachers. At the same time, the enterprise approach merely formalized what many rural school teachers had already discovered in their isolated conditions, years before formalization occurred.

Social studies and the enterprise approach to education at the elementary level thus replaced the tradition of drill and memorization with activities, projects, and problems to be collaboratively worked on by pupils. It instilled the notion of cooperation and inquiry, rather than conclusions dictated by the teacher or textbooks.307 The lack of general opposition to the enterprise approach, including social studies, points to the fact that social studies was not entirely revolutionary or without precedence, as Mr. McDougall and other historians suggest.

Although Newland asked McDougall to write social studies curriculum independently in 1936, it was widely and publically discussed at the Edmonton and Calgary educational clubs from 1933-1935, dismissing that which Dickie, Fisher, and McDougall were privy to.

to. The extent to which Dickie, Fisher, and McDougall collaborated on social studies at the elementary level is unclear. What is certain, however, is that social studies was not introduced at the junior and senior high levels until after a review of the elementary enterprise curriculum was done by a subcommittee established by Newland in 1935. It was after this review that Newland appointed McDougall to author social studies at the secondary levels, independent of collaboration. Clearly, an examination of Dickie’s and Fisher’s progressive reforms at the elementary level, including social studies, served, to some extent, as a benchmark for what McDougall would devise at the secondary grade levels. Based on McDougall’s work, there is a clear continuity of ideas and objectives flowing between social studies at the elementary and secondary levels. More than likely, McDougall borrowed from the elementary experiment. The links, however, between the elementary enterprise curriculum and social studies at the secondary level were largely ignored by McDougall and have been ignored by historians.

In a forty-page report written in 1965, “Curriculum Builders in Alberta 1902-1945,” McDougall inserts a miniscule three-page document by Dickie and Fisher on their curriculum writing involvement at the elementary levels, but distances their work from his own. In his prefacing remarks to their report, he discredits its factual basis at the outset, implying its inaccuracy. He writes that their report “was written twenty years after the event without the writers having access to documentary materials,” ignoring the fact

310 Ibid.
that his reports and memoirs were written thirty years after the fact.\textsuperscript{311} McDougall notes that he had penciled in corrections of the supposed errors. One change is particularly significant, considering the existence of circumscribed gender roles separating professionals from practitioners along gender lines. Newland’s official title, “Alberta Schools Inspector,” is absent in Dickie’s and Fisher’s report, but was penciled in by McDougall,\textsuperscript{312} perhaps to emphasize that Dickie and Fisher’s work was accomplished under his authority and not collaboratively as their report may have suggested without this inclusion.

In his report, McDougall also disregards the expertise of Dickie and Fisher as leading progressive educators, both of whom possessed PhDs from leading American centers of progressive education. At this time, McDougall possessed only a Master’s degree in education from the University of Alberta, which may have compelled McDougall to distinguish himself from the Dickie and Fisher based on gender norms that preserved the designation “professional” for men only.\textsuperscript{313} McDougall compliments Dickie and Fisher, commenting that “elementary education in Alberta appreciates the contribution to education by these two distinguished teachers.”\textsuperscript{314} The short document that follows narrowly focuses on the efforts made by Dickie and Fisher to infuse classrooms with practical activities as a means to relieve teachers of the difficulties confronting rural schoolteachers. This selective and short reference to Dickie’s and Fisher’s work

\textsuperscript{311} Ibid., pg. 11.
\textsuperscript{312} Ibid., 2.
\textsuperscript{313} R.S. Patterson, “The Implementation of Progressive Education in Canada,” in \textit{Essays on Canadian Education}, 81.
\textsuperscript{314} McDougall, “Curriculum Builders in Alberta Education 1902-1945,” 3.
demonstrates McDougall’s attempt to frame both women as merely practitioners in the
field, thus ignoring their role in formalizing progressive education in Alberta.

Surely, McDougall was not alone in appropriating social studies as his own invention.
It is likely that H.C. Newland, who appointed McDougall to write the curriculum,
reflected Newland’s desire to ensure that the development of social studies was credited
as an achievement of professionals – men – as a means to justify their influence and
authority in Alberta’s Education Department. A shared and collaborative project between
teachers in the field and professionals would likely tarnish the constructed myth that the
professional delivered the Alberta educational environment from backwardness.

Social studies was not the invention of a single individual. The relgio-political
environment shaped by the UFA/UFWA instigated curriculum revision in the first
instance, rural school teachers were pioneers of what was to become progressive
education, and the role of teacher/progressive education experts such as Dickie and
Fisher was at the forefront of progressive education and social studies’ formalization in
Alberta schools. Echoes of each of these developments and contributors can be heard
when reading the forward in one of the first social studies textbooks authorized for use in
Alberta, *The World of Today:*

The pupil of today is not living in an individualistic society. He is living in a society where men must work together, where men must pool their knowledge and experience if the crucial problems of today and tomorrow are to be coped with successfully. It becomes the duty of the school to furnish the pupil with a variety of experiences in group living. The school must assume responsibility for meeting the particular needs of each pupil in order that he may
thereby be better equipped to contribute to the successful functioning of the social group to which he belongs.\textsuperscript{315}

Alberta’s farm movement, rural school teachers’ innovations as a result of shifting social dynamics, the precedent-setting elementary curriculum of Dickie and Fisher, and the masculinization of the teaching profession in Alberta, all contributed to the advent of social studies. It was not the invention of a single man.

\textsuperscript{315} McDougall and Gilbert Patterson, \textit{The World of Today} (Toronto: Ryerson Press, 1937), 38.
CHAPTER FOUR: CITIZENSHIP TRAINING AND SOCIAL STUDIES: 
THE FULLFILLMENT OF THE UFA/UFWA’S COOPERTIVE MOVEMENT

In the previous three chapters I have attempted to place the origins of social studies into a wider context than has been provided by historians to date. In this chapter, I will examine Department of Education’s files as well as history and social studies textbooks, authorized for use in Alberta classrooms between 1880 and 1960, to determine how the shift from history curriculum to social studies manifested itself at the level of prescribed instruction.

Social studies curriculum in Alberta can be understood as the fulfillment of the UFA/UFWA’s desire to create politically active citizens capable of transforming society according to their own cooperative and democratic values. The animating principle of the Alberta farmers’ movement amidst social, political, and economic adversity was cooperation.¹³¹ Alberta farmers believed they carried the burden of national growth without adequate compensation or political representation. John A. MacDonald’s National Policy, which effectively exploited the West for Eastern Canada’s benefit, was still in place in the early 1920s. For example, farmers in the West established a market for eastern manufactured farm equipment that was more expensive for them because of the national tariff. However, farmers were being forced to buy equipment protected by the tariff while not being afforded the same protection as Eastern manufacturers.¹³² At the same time, basic infrastructure such as highways and schools was undeveloped in the

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¹³² Ibid., 43.
West compared to that in Eastern Canada’s urban centers.\textsuperscript{318} And to make matters worse, climactic drought ravaged the landscape of farmers during the 1920s and 1930s, turning crops into dust.\textsuperscript{319}

It was in this context that farmers wished to improve their immediate economic and political situation. But doing so required altering basic social attitudes. The UFA/UFWA believed that this could best be accomplished through education because an educated and involved citizenry would keep political leaders fixed on the interests of the people – interests informed by the movement itself.\textsuperscript{320} As discussed in previous chapters, various informal educational initiatives, such as the better farming trains and UFA/UFWA youth camps, served the UFA/UFWA’s objective of raising awareness regarding economic and political issues vital to farmers, while preparing citizens for active political duty in order to sustain the movement in the province and the nation at large.

Once the UFA/UFWA took direct political action and formed the provincial government in 1921, a more direct educational approach was employed. Now provincial curriculum would be used to align Alberta students with the active political duties of the cooperative UFA/UFWA movement.

History curriculum taught in Alberta before the Great War taught students to be passive citizens who absorbed British values. After the War, active political citizenship, based on Alberta’s cooperative experiment in group government, came to define post-war curriculum reform. In textbooks and curriculum documents, the concept of cooperation

\begin{flushleft}
\textsuperscript{318} Ibid.
\textsuperscript{319} Ibid., 44.
\end{flushleft}
frequently appeared as a social studies objective. But it was framed predominantly in the context of Alberta’ experience with cooperative organizations such as the Wheat Pool and the UFA/UFWA movement. This regional bias distinguishes social studies textbooks written in Alberta from those authored in other regions of Canada, particularly Ontario.

Citizenship training in the 1920s became the foundation of social studies in the 1930s. Citizenship training became a formalized public school course that replaced history curriculum at the elementary grade level in 1922, and emphasized the need for cultivating cooperative and politically active citizens through practical learning activities, which often replaced the memorization and regurgitation of facts. It is important to note, however, that citizenship and social studies did not liberate students from having values imposed on them by government authorities; rather, it replaced passive learning with active learning and replaced the learning of British values with the prescribed cooperative values of the UFA/UFWA.

How history curriculum was delivered in the classroom is difficult to know, but because textbooks were often the singular resource for students and teachers they represent a key window into the actual content and approach to teaching history. Values, symbols, memories, myths, and traditions can be teased out of books through an examination of the major themes and events that had to be covered in textbooks on Canadian history, according to historian Jose Igartua’s analysis of textbooks used in Ontario after the Second World War. Igartua shows how definitions of Canadian identity were transmitted to the next generation of Canadians through history textbooks used in schools, and he claims that textbooks represent authors’ attempt to fashion history and
ways of perceiving the world that they believed should be shared by society at large. On the other hand, a key difference between history curriculum and social studies was the latter’s dismissal of textbooks as the primary tool of instruction. As the Alberta Program of Studies introducing social studies in 1935 states, “the pupil’s textbook will be the community in which he lives.” This grassroots approach to curriculum; making the community the pivot around which curriculum revolved, was reminiscent of the social gospel movement’s tendency to dethrone the bible and religious doctrine as the main authorities, replacing them with active community service based on Christian ethics. Doing so allowed the principles of Christianity to expand beyond the confines of the church, finding practical application in social and political service in Alberta in the 1920s and 1930s. Similarly, with the advent of social studies, historical inquiry expanded beyond a student’s textbook and the narrow walls of a classroom, permeating social and political service in Alberta through active citizenship. As a result of this shift in focus away from a single textbook, various books and resources were used to teach social studies. The change from history to social studies in Alberta reflects the shifting social, political, and economic values in Alberta during the 1920s and 1930s and will be highlighted through textbook and educational document analysis.

Textbooks and provincial programs of study files reflect, as Iguarta suggests, authors’ attempt to fashion history and mould students in ways consistent with the authors’ beliefs. This is not to say that the authors of social studies textbooks and curriculum were UFA/UFWA leaders; they were written by leading educators such as Donalda Dickie and Jose E. Iguarta, The Other Quiet Revolution: National Identities in English Canada, 1945-71 (Vancouver: UBC Press, 2006), 63.

W.D. McDougall. But it was the UFA/UFWA who applied pressure on the Department of Education to include in school curriculum information about cooperation, as well as social, political, and economic issues particular to Alberta.\textsuperscript{323} Thus, the authors of social studies curriculum and the textbooks they authored cannot be entirely separated from the larger movement that instigated reform. Social studies is accurately understood as the fulfillment of the UFA/UFWA’s desire to shape citizens for active social and political duty.

**Imperial History in Alberta Prior to WWI**

It is important to note that although education was a provincial responsibility, as defined in Section 93 of the British North America Act (BNA), history curriculum prior to WWI in English-Canada was intensely nationalistic and imperial.\textsuperscript{324} Inspiring patriotism for the nation based on British imperial values is something historian Carl Berger has identified as Canadian imperialism.\textsuperscript{325} Curriculum writers and textbook authors depicted a glowing future for Canada, but one solidly grounded within the British Empire. Prior to the First World War, Canadian nationalism and pro-British imperialism were two sides of the same coin. A textbook used throughout Canada for teaching history, titled *Canadian Civics*, captures the essence of pre-war Canadian nationalism. The book’s author, J.S. Jenkins, stated that “the word colony we do not like, and we

\textsuperscript{323} “UFA Annual Conference Resolutions, 1931,” File 170C, Premiers’ Papers, Provincial Archives Alberta.


usually speak of ourselves as a ‘nation.’ Some object to the name ‘nation’ because it
ordinarily means an ‘independent nation’ or ‘sovereign state,’ and we do not claim to be
that, but desire to be part of the Empire.’ A Canadian nationalism based on the idea of
pride and imperial membership was something challenged after the war by farmers. They
interpreted British imperialism as an instigator of greed, violence, and competition. It was
these forces, according to western farmers, that had reduced them to political and
economic subservience.

A national and imperial orientation to history curriculum reflected, in part, the
nation’s demographic, particularly that of the oldest and largest English-Canadian
province, Ontario. According to Canadian census data in 1881, 80% of the population of
Ontario was of British stock, that is, English, Irish, Scottish and Welsh. By 1931 this
number had dropped to 75%, a result of increased immigration from Eastern European
countries and the United States. Critics and the Department of Education in Ontario
were visibly concerned about immigration from non-British countries, fuelling their
campaign to use history to establish loyalty to Canada and the British Empire. George
Wrong, one of Canada’s first professional historians, articulated concern for the
“daunting task of assimilating the vast hoard of newcomers” from continental Europe.
While few historians openly subscribed to the fashionable Edwardian theory of racial
degeneration, these pre-war textbook authors were clear about racial assumptions.
They rarely intimated that Eastern Europeans or Americans had sullied Canada’s British

326 Larry A. Glassford, “Citizenship Literacy and National Self Identity: The Historical Impact of
Curriculum and Textbooks in Shaping the Character of Ontario,” in Active History.ca,
327 George W. Wrong, Ontario Public School History of Canada (Toronto: The Ryerson Press, 1921), 342.
328 Glassford.
heritage, but instead focused on groups such as the French and First Nations as groups incapable of advancing the material and political development of Canada. For example, in *The Canadian West*, authorized for use in Ontario and Alberta schools, Alexander McIntyre asks a series of rhetorical questions regarding why the “Indian” chose not to develop the material and resource potential of the land, thus leaving it up to the British to exploit. McIntyre asks:

Why did the Indian not tame the wild animals about him? Why did he not cultivate plants? Why did he not make greater use of the metals found in the country? Has he [Indian] done any good then? He [Indian] was only a worker in stone and in bone, and these cannot be compared with the iron and steel of today.

The author proceeds to celebrate British fur traders, fisherman, railway men, and politicians as the generators of progress. For these authors, British ethnicity was inherently progressive, while non-British groups in Canada were backwards and incapable of advancing Canada to her true potential.

Like Ontario’s history curriculum prior to WWI, Alberta’s program for history reinforced Canada’s connection to Britain through textbooks that emphasized the material benefits that flowed from the advance of British civilization. Also, because Canadian regional markets for textbooks were too small for publishers to offer province-specific textbooks, those published in Ontario were essentially English-Canadian texts, used by provincial education departments throughout the country, including Alberta.

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330 John Gray, *Fun tomorrow: Learning to be a Publisher and Much Else* (Toronto: Macmillan, 1978), 16.
It is also important to note that Alberta’s ethnic makeup was becoming increasingly diverse, even more so than Ontario’s, as a result of mass immigration before the outbreak of war. The influx of newcomers to Alberta highlighted for some the need to assimilate immigrants. In 1911, Alberta was overwhelmingly made up of new immigrants; only 20 per cent of the population was actually Alberta-born.332 Almost half the population was made up of German, Scandinavian, and Eastern European minorities.333 Political leaders, clergymen, and educators had to come to grips with fact that Alberta’s population was indeed ethnically diverse. Most Anglo-Albertans, including many clergymen, politicians, and educators, agreed that European immigrants were in need of an intensive “Canadianization” policy.334 The focal point for all those concerned with assimilating immigrants in Alberta, according to historian Howard Palmer, was the school system.335

Prior to the war, the goal of the Alberta school system was Anglo-conformity. The values to be inculcated by the schools and the curriculum were those of British-Canadian nationalism, citizenship, and the Protestant work ethic.336 The Department of Education in Alberta claimed that for students of history “the state should ultimately emerge as the highest of human institutions and loyalty to the state as the first virtue of the citizen.”337

History, Alberta’s Department of Education continued, “was the most important subject

333 Ibid.
334 Ibid., 46.
335 Ibid., 48.
336 Ibid.
337 “Report on the Committee on School Curriculum,” 1911-1912, File 26, Box 1, Legislative Papers, Provincial Archives of Alberta, 2.
in developing citizens; it was through the study of history that students would identify
themselves as Canadians and as members of the British Empire.\textsuperscript{338}

Textbooks authored at the turn of the century and used in Ontario and Alberta schools
before the war emphasized stories of discovery, order, and progress – accomplishments
intrinsically tied to the apparent racial superiority of the British. For example, William’s
Swinton’s \textit{Outlines of the World’s History} asks readers to consider, “What have been the
great steps in human progress – the discoveries, social and political changes, advances in
thought and skills, that have carried forward civilization and the ‘betterment of man’s
estate’; and what is the series of events that has brought the world up to its present
standard of enlightenment and knowledge?\textsuperscript{339}” The answers to these questions are found
in his detailed descriptions of improvements to education, transportation, industry, and
politics brought about under British rule.

Historical textbooks also presented a largely teleological interpretation of historical
events. Scholar Herbert Butterfield in his 1931 \textit{Whig Interpretation of History} criticized
this approach to writing history.\textsuperscript{340} Butterfield argues that the tendency among historians,
to draw straight lines between historical events, charting an unbroken narrative of
progress that results in the present, is rooted in the turn-of-the-century conviction that the
era of progress brought about under Queen Victoria’s reign was exceptional.\textsuperscript{341} This
narrative of continual progress was seen as a direct result of British monarchical rule,

\begin{footnotes}
\footnotetext{338}{Ibid.}
\footnotetext{339}{William Swinton, \textit{Outlines of the World’s History} (Halifax: A & W MacKinlay, 1883), iii-iv.}
\footnotetext{340}{Herbert Butterfield, \textit{The Whig Interpretation of History} (London: G. Bell and Sons, 1950), 5.}
\footnotetext{341}{Gerald Friesen and Douglas Owram, “Progress, Science, and Religion: Exploring Victorian Thought in
Canada,” in \textit{Thinkers and Dreamers: Historical Essays in Honour of Carl Berger}, (Toronto: University of
Toronto Press, 2011), 238.}
\end{footnotes}
claims historian Carl Berger, and the spokesmen for this certitude included early Canadian historians.\textsuperscript{342} George Wrong, one of Canada’s first professional historians, wrote textbooks for grade-school students of history, depicting Canada as a peaceful and progressive march from colonial status to responsible government.\textsuperscript{343} This progressive trajectory, Wrong claims, was best learned by paying close attention to the facts.\textsuperscript{344}

Despite their insistence on the importance of learning the facts of the past, historians did not hesitate to make strong moral judgments about those facts in order to shape character and conduct among Canadian students. For example, W.D. Lighthall, a late nineteenth-century Canadian historian, claimed “the seeds of English-Canadian progress were deliberately sewn by strong and intelligent men, who brought with them those principles and customs, acquired through centuries by their island forefathers, that their descendants still cherish as their most precious heritage.”\textsuperscript{345} Consistent with the kind of history being written in the early twentieth century, historian George Wrong incorporated a moralistic and empirical approach to history, claiming the historian’s role was guarding truth and also using truth to express appropriate “standards of conduct and character.”\textsuperscript{346}

An important standard of conduct was loyalty among citizens to Britain. Pre-war history texts condemned those who were disloyal to the British Crown. For example, the rebellions of 1870 and 1885 were dismissed as outright treasonous by authors A.B. Buckley and W.J. Robertson in their text, \textit{A High School History of England and

\textsuperscript{342} Ibid., 239.
\textsuperscript{343} Donald Wright, \textit{The Professionalization of History in English Canada} (Toronto: University of Toronto Press, 2005), 82.
\textsuperscript{344} Ibid.
\textsuperscript{345} W.D. Lighthall in Donald Wright, \textit{The Professionalization of History in English Canada} (Toronto: University of Toronto Press, 2005), 17.
\textsuperscript{346} Wright, 45.
Canada.\textsuperscript{347} Both stressed that Louis Riel had “captured men loyal to Canada,” including “Thomas Scott, a brave, outspoken loyal subject.”\textsuperscript{348} They described the Métis Rebellion of 1885 as a “treasonous and barbaric act,” while celebrating the British forces, which fought with “valour, bravery, and allegiance to the Crown.”\textsuperscript{349} The British conquest over the French was described as a welcome change from the “fatherly despotism” and corruption, which, according to W.H.P Clement, had plagued French colonial administration and was the reason for the British victory.\textsuperscript{350} D.M. Duncan goes further, suggesting the conquest was a development welcomed by the French, liberating them from political backwardness, and he claims the French “became reconciled to the change which had taken place.”\textsuperscript{351}

Canada, according to these pre-war textbooks, should be defined by its relationship with the British Empire. If students somehow missed this point in books, the physical classroom environment reinforced the same message. One schoolteacher described his Edmonton classroom in 1909 in the following manner:

On the end, facing the door is a picture of King and Queen, with neat little Union Jacks and Canadian Flags, surmounting each to loyalty by association...on one side are life-sized portraits of Shakespeare and Milton to inspire admiration and appreciation of our literary inheritance.\textsuperscript{352}

\textsuperscript{347} Arabella B. Buckley and W.J. Robertson, \textit{High School History of England and Canada} (Toronto: Copp Clark, 1891), 259.
\textsuperscript{348} Ibid.
\textsuperscript{349} Ibid.
\textsuperscript{350} W.H.P. Clement, \textit{The History of the Dominion of Canada} (Toronto: W. Briggs, 1897), 122.
\textsuperscript{351} D.M. Duncan, \textit{The Story of the Canadian People} (Toronto: The MacMillan Co. of Canada, 1913), 219.
A shared belief among provincial educational authorities and historians who wrote textbooks and historical curriculum prior to WWI was that learning the facts of history cultivated one’s intellectual and moral character. Knowing the key facts of British history and Canada’s role in it would engender British character and respectability. In the introduction to *The History of the Dominion of Canada*, E.M. Sims and G.M. Wrong claim that a “simple narration of events” would enable students to engender the notion of unfettered progress associated with the advance of British civilization.\(^{353}\) Historian George Stanley recalled this approach to history lessons as a grade-school student in Calgary, noting that it “involved copying notes off the blackboard and repeating them verbatim on the examination.”\(^{354}\)

In a speech to the American Historical Society in 1898, historian George Wrong claimed that “not enough class time was devoted to instruction in history and that textbooks were inferior in quality.”\(^{355}\) Wrong’s criticism was directed primarily at amateur historians who authored numerous historical textbooks used in grade school throughout Canada before the turn of the century. Wrong and many other university historians worked to professionalize the writing of Canadian history as a means to secure work for themselves, argues historian Donald Wright.\(^{356}\) Their successful efforts in professionalizing the writing of history in English Canada resulted in a flurry of textbook writing by historians intended for secondary schools, following the turn of the century.

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\(^{353}\) E.S. Symes and G.M. Wrong, *An English History* (Toronto: Copp Clark, 1905), 17.


\(^{355}\) Wright, 46.

\(^{356}\) Ibid., 47.
and up until the Great War.\textsuperscript{357} Provincial authorities of education in Alberta supported professional historians’ work at this time, claiming that it was they “who are best in a position in society to provide expert status to both teachers and students.”\textsuperscript{358} In classrooms, textbooks became the dominant voice whereby teachers recited facts from the books and students memorized them until the exam. This led one Alberta school inspector in 1915 to report that history instruction “loaded the pupils’ memories with bald facts” recited from the textbook, leading to boredom among most students.\textsuperscript{359}

History textbooks, authored largely by eastern Canadian historians, remained the singular authority for historical instruction in Alberta schools until the late 1920s. Students’ adoption of the facts of history, which meant learning about British superiority and its innate ability to spawn material progress, would lead to what department officials in Alberta called “good character” and the “right ideals of citizenship.” The good citizen was one that knew the facts of the British Empire and absorbed them consciously or unconsciously as their own, claimed J.J. Tilley, who authored training manuals for teachers prior to the war. For him, and early historians such as Wrong, “history abounds in examples of courage, patriotism, devotion to duty…in short all of those higher qualities which ennoble mankind.” For Tilley, when the student properly considers these qualities, the mind will be led to form the correct judgments and will influence the character of the student.\textsuperscript{360}

\textsuperscript{358} Alberta Department of Education, Program of Studies, 1912, quoted in Ibid., 9.
\textsuperscript{359} Alberta Department of Education, \textit{Annual Report of the Alberta Department of Education}, 1907, 43.
Ken Osborne, an expert on history and social studies curriculum in Canada, has pointed out that this passive view of citizenship training was typical of the pre-war textbooks used for history curriculum. He argues that “citizenship education at this time was seen in prophylactic terms, as a way of preventing the spread of political radicalism.”

Alberta adopted Ontario’s intellectual and political opinion that the bulwark against foreign influence and political radicalism was public education and that the active agent for establishing British loyalty and political harmony was history. Inculcating British values among Canadian youth, including increasing numbers of Eastern European and American immigrants, would presumably ensure Canada’s British heritage and political stability. It was not until the 1920s that Alberta exerted influence over curriculum design, challenging a national-imperial history curriculum deemed ill-suited to Alberta’s shifting social and political climate.

After the First World War, the UFA/UFWA mobilized the rural populace in order to foster the growth of its social-political movement. History curriculum and the method by which it was passively taught were targeted as out-dated and ineffective for dealing with contemporary political and economic conditions particular to Alberta. For example, the UFA Committee on Education claimed that the economic crisis of the 1930s stemmed from the educational system of years past. The passive nature of citizenship that had characterized the pre-war era, based on promoting British values, was replaced by active

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362 Ibid.
social and political service in one’s community based on cooperative values moulded by the UFA/UFWA.

Citizenship Training after WWI

Historian Carl Berger argues that in the post-war atmosphere of reform, history itself was reformed to concentrate on the nature and origins of contemporary political and economic problems of the common man – the problems of the individual and not the British empire.364 In 1921, the year the UFA took power, the Alberta Department of Education recognized the importance of revising formal school curriculum to respond to the economic and political challenges facing the province. The cataclysmic events of the First World War, interpreted by the UFA/UFWA as evidence of a world made hideous by competition, imperialism, and greed, spawned the idea among educationalists and textbook authors in Alberta that harmony, tolerance, and cooperation must be learned and fostered in formal school curriculum.365 For UFA/UFWA leaders and educationalists alike, schools should no longer convince students of the material progress and harmony established by British civilization in Canada; rather, students were to be given the skills that would allow them to actively create political and economic stability. The pre-war narrative of progress, as it appeared in historical curriculum and textbooks authorized by Alberta’s Department of Education, was challenged by UFA/UFWA leaders and teachers.

In 1921, the year the UFA took power, the Department of Education undertook an extensive public opinion survey regarding Alberta’s school curriculum. Questionnaires

365 Rennie, 54.
were sent to a wide range of groups, such as the UFA and UFWA locals, women’s institutes, the Teachers’ Alliance, school boards, social clubs, and labor unions. The survey made apparent Albertans’ desire that education should “unite the public in a commitment to community service and social improvement... and should create a sense of group consciousness.”

This survey formed the basis for a major curriculum revision for the entire program of study for Alberta curriculum in 1922, as discussed in chapter two. But it is worth emphasizing again the electric atmosphere that surrounded this reform project, an atmosphere scholar Margaret Ayelsworth referred to as “spiritually charged.” Those involved in the project seemed to believe that the regeneration of the world was at hand. Indeed, many teachers and curriculum writers appeared to support a concept of citizenship that had much in common with the understanding of Christian service that was such an integral part of the social gospel. Teacher W.B. Poaps captured this Christian service sentiment in an *ATA Magazine* article in which he reminded fellow teachers that they cared for children’s souls, stressing that “the school should be a society with interests common to all, and it should promote, as no other agency can do, those altruistic virtues which are characteristic of a righteous people.”

The Department of Education committee in charge of the revision took this advice to heart. In its final report it emphasized “the urgent need for citizenship training...among the children of Alberta.”

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367 Ibid.
The committee unanimously agreed, despite its diverse membership, that every effort must be made “to strengthen the school as a great agent for the development of virtuous self-reliant citizenship with right habits and right ideals.”\textsuperscript{370} Developing character through citizenship training was the ultimate purpose of schooling, and the committee recommended “using the material of the course in history for this purpose.”\textsuperscript{371}

Although social studies was not created by this 1921 revision committee, a new citizenship course was devised and replaced history at the elementary grade levels by 1922. This course would provide opportunities for elementary students to practice the specific virtues of citizenship, defined as helpfulness, sympathy, tolerance, justice, and fair play.\textsuperscript{372} The citizenship course objectives in grades I and II, as described by the Department of Education in 1922, were to “develop group consciousness.”\textsuperscript{373} It was the teacher’s duty to “provide suitable work-like activities in the classroom as a medium through which the citizenship experience obtained by children naturally in family and play-groups will take form and meaning in accordance with what is implied in living as an adult member of present-day organized communities, social and political.”\textsuperscript{374} Students were to “cultivate experience in organization” by participating in “pupil-group” discussions, debates, and competitions or by organizing the school’s Junior Red Cross or Junior Civics League activities.\textsuperscript{375}

\textsuperscript{370} Ibid.
\textsuperscript{371} Ibid.
\textsuperscript{372} Alberta Department of Education, Part I of the Course of Studies for the Elementary Schools of Alberta, English and Citizenship (Edmonton: King’s Printer, 1922), 128.
\textsuperscript{373} Ibid.
\textsuperscript{374} Ibid., 130.
\textsuperscript{375} Ibid., 138.
When historical content was introduced into the citizenship course it was used only in so far as it could inform how to live cooperatively “in social groups.”\textsuperscript{376} For example, the citizenship course objectives stated that when studying the fur-trade era of explorers, traders, and missionaries, teachers must emphasize how these groups built trade relationships and communities in new lands. The Alberta Program of Studies for 1922 instructs that Indian tribes, families, classrooms, and rural towns were to be examined as specific examples of the benefits of group organization.\textsuperscript{377} When incorporating historical content, teachers were directed to avoid the memorization of facts. Rather, students were to incorporate group activities alongside specific historical material that reinforced the benefits to be realized through cooperation.\textsuperscript{378}

The writers of Alberta’s citizenship course were highly educated teachers such as Fred McNally and Donalda Dickie. As discussed in the previous chapter, both graduated from leading centers of progressive education in the United States or Britain. In part, it was there that McNally and Dickie learned how classrooms could incorporate practical activities to unite the public in a commitment to community service and social improvement.\textsuperscript{379} At the same time, these authors did not act on their own accord. They were enabled, in part, by a UFA government eager to bring Alberta’s educational system in line with their own cooperative and democratic values.

Historian Jose Igurata’s analysis of historical textbooks in Ontario includes those that were published in Alberta by Donalda Dickie. However, he makes little mention of the

\textsuperscript{376} Ibid
\textsuperscript{377} Ibid.
\textsuperscript{378} Ibid.,140.
\textsuperscript{379} Von Heyking, Creating Citizens, 34.
differences between her books and those of earlier Ontarian authors. He acknowledges that Canadian history was depicted by Dickie in more positive terms, but suggests that her portrayal was not drastically different from the racial or Euro-centric judgments typical of earlier works.\textsuperscript{380} To be sure, Dickie, like her predecessors, did not refrain from declaring the superiority of British institutions. For example, she describes “Democracy as clearly a British invention and believed that French Canadians would enjoy the progress and economic prosperity brought about by the conquest.”\textsuperscript{381} But Iguarta misses the significance of the cooperative and democratic ethos that underscores Dickie’s re-imagining of Canada’s past. This tendency by Dickie is overt, not subtle, and is a significant departure from earlier writers. Her reinterpretation of Canadian history includes the introduction of citizenship training, consistent with what the UFA/UFWA had implemented in various informal ways to build their movement. Dickie’s interpretations also reveal a distinct Alberta bias, reflecting Alberta’s shifting social and political environment. Alberta’s curriculum writers implemented a formalized citizenship-training course based on social and political action deemed essential to the survival of the UFA/UFWA movement.

In over twenty textbooks, including the \textit{Dent Series Canadian History Readers}, Dickie described cooperation as intrinsic to all Canadian ethnic groups, emphasizing that it is the duty of Canadians to ensure that they continue into the future. The Department of Education in Alberta echoed this objective, identifying the following as a key objective of the new citizenship course: “students must learn mutual understanding, tolerance and

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\textsuperscript{380} Iguarta, 66
\textsuperscript{381} Donalda Dickie, \textit{The Great Adventure: An Illustrated History of Canada for Young Canadians} (Toronto: J.M. Dent and Sons, 1950), 12.
\end{flushright}
cooperation, as the unity and prosperity of our common country depend upon it.” The impulse to create unity throughout Canada was spurred on by fears over the division between French and English exposed by the war, motivating educators and historians alike to deal more kindly with French, English, and Aboriginal Canadians. Historian Carl Berger has identified the tendency among historians in the 1920s to establish a sense of unity and cooperation in their interpretations of Canadian history. Renowned Canadian historian, Arthur Lower, for example, worked to develop a sense of national community among Canadians, united by unspoken assumptions such as the stable bonds that unite a family. Lower identifies cooperation as the most powerful motive for action among men from which the greatest benefits flow. Berger also notes that Lower’s inclination towards cooperation and national unity prompted his interest in the League for Social Reconstruction and in the ideals of the Cooperative Commonwealth Federation, a federal political party founded in Calgary in 1932 by prominent UFA/UFWA leaders such as William Irvine. At the same time, historians such as Lower did not go as far as Dickie in suggesting that examples of cooperation in Canada’s past should be a guiding principle for Canadian citizens in the future.

*When Canada was Young*, published in 1922, Dickie emphasizes commonalities between French and English Canadians, highlighting their unity in purpose in pursuing common social and economic objectives. For example, Dickie describes the life of early French settlers in Quebec as analogous to farmers in western Canada. Quebec settlers,

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384 Ibid., 112.
she claims, toiled through isolation and climactic hardships, as famers in the West had. Also, habitant homes in Quebec were of a similar condition and familiar to those in the West, explains Dickie. They contained families similar in size to those in every other part of the country, and just like the English Canadians, French Canadians took Sunday off for church.  

Dickie describes French habitants and English settlers as sharing common economic aims such as the fur trade and agriculture. She describes how the North-West Company and the Hudson’s Bay Company merged successfully and peacefully because of shared objectives to cooperatively develop the fur trade industry. Dickie’s romantic interpretation of Ukrainians, Chinese, Finns, and First Nations as inherently cooperative was less an historical revision of the past as it was a guide for action in the future. Dickie is emphatic throughout her textbooks that active cooperation between groups is a condition upon which social improvement for all can be realized. If cooperation was the animating principle of the UFA/UFWA, it was also the dominant theme in textbooks authored in Alberta for use in citizenship training classes.

Dickie also criticized historical events that lacked cooperation between groups. While her book, The Great Adventure, published in 1950, was released after the period being examined in this section, it illustrates Dickie’s tendency in her earlier works to emphasize cooperation as an historical truth that should be engendered by students. In this textbook, she argues that Aboriginals have not always been treated well and

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386 Ibid., 101-104
387 Dickie, The Great Adventure, 110.
identifies a lack of cooperation between government and First Nations as the primary cause. She criticizes the Canadian government’s unilateral actions as unwise and maintains that they created “many difficulties and problems for Indians, problems which have not yet been met successfully.”

Dickie also condemns the Canadian government’s trial and execution of the Métis leader Louis Riel without consideration for Metis claims to cultural preservation. In conjunction with her critical assessment, Dickie establishes a cooperative path forward between Aboriginal and Anglo-Canadians by citing examples of profitable cooperative action between these two groups. She describes how a woman from a Mohawk settlement in Ontario worked out an agreement with English settlers to prohibit alcohol in order to remedy what Mohawk women claimed was the degeneration of their men by the white man’s drink. Dickie provides a vignette of a British settler, who corresponded with the Mohawk regarding their request and agreed to communicate with his government regarding prohibition, a request she claims was agreed to.

Dickie also establishes parallels between Anglo-Canadian and Aboriginal forms of social and political organization. She claims that First Nations peoples have enjoyed “the products that flow from cooperation” and that most Aboriginal groups “did all things cooperatively and so had the comfort of company in hardship.” Dickie points out that “the natural products of the tribe’s hunting ground belonged to all in common...the hunter shared his game with all.” Dickie also claims that the “Red Men were democratic.”

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388 Ibid., 112.
389 Ibid., 110.
390 Ibid., 114.
391 Ibid., 115.
392 Ibid.
393 Ibid., 13.
Each chose a leader, according to Dickie, “but the others followed him only when they thought his plan was good.” She states that tribes were governed by councils of leading men, drawing parallels with British concepts of responsible government.

Textbooks authorized for use in Alberta’s citizenship course, but produced in Ontario, did not emphasize cooperation and common cultural pursuits among Canada’s ethnic groups with the same frequency or emphasis as Dickie. For example, while W.L. Grant’s *The History of Canada For High Schools* showed a more sympathetic stance towards French Canadians and Aboriginals than texts produced before the war it still maintains a tone of condemnation. Grant suggests that blame for the Riel Rebellion should be distributed more evenly, but insists Riel was rash, vain, and deserving of his fate. Grant also acknowledges the contributions of French exploration, discovery, and culture in Canada, but reaffirms that British rule was fair and welcomed by most French Canadians. Alberta’s curriculum designers who devised Alberta’s citizenship training course to replace history, and Dickie who reimagined Canadian history as inherently cooperative, were far more bold and explicit than writers in other provinces in adjusting curriculum and textbooks to reflect the shifting social and political climate of their province in the 1920s.

**The Advent of Social Studies in 1935**

Just as Alberta and Ontario drew selectively upon British history to instill the “right” ideals of citizenship before the war, so too did Alberta draw upon rosy and cooperative

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394 Ibid, 17.
interpretations of Canadian history after the war. It was this spirited era of educational reform in Alberta’s history that led to the introduction of social studies in 1935.

The new citizenship course that emerged in Alberta elementary schools in 1922, described as intrinsically cooperative, demanded that teachers promote activities that reinforced the values of cooperation in their classrooms and communities. The tendency of history to be downgraded as secondary to the priority of training students in cooperative behavior was a phenomenon that accelerated in the 1930s, the years of the Great Depression. For example, in 1931 a UFA/UFWA Conference Convention agreed unanimously to pressure the Department of Education to introduce “a special course on cooperation … in schools, and requested that high school teachers be given “a better understanding of the principles underlying our experiment in democratic government, with a view to gaining a more sympathetic attitude on the part of teachers towards this effort.” The UFA/UFWA argued that school curriculum must “advance society towards a new form of social organization in which competition and individualism be replaced by the principles of equity, justice and social well-being.”

The Department of Education responded to UFA/UFWA’s demands by producing social studies curriculum, which eventually replaced history at all grade levels in Alberta by 1937. Curriculum writers and textbook authors such as H.C. Newland and W.D. McDougall echoed the appeals of the UFA/UFWA for a new course. McDougall

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399 Alberta Department of Education, Program of Studies for Secondary Level, 1937.
proclaimed that “in the midst of a world-wide depression and in a period when the war drums were again throbbing in Europe, it did not seem realistic to study the problems of ancient Egypt, Greece and Rome.” And H.C. Newland, the supervisor of the committee that created social studies at the secondary level, concluded that “The present aura of despair caused by the depression required action in the present based on cooperative and democratic principles.”

Social studies curriculum embodied the citizenship training that emerged in Alberta curriculum during the 1922 school revision by subordinating a study of the past to the need for cultivating cooperative citizens in the present. To this end, social studies integrated individual subjects such as history, civics, and geography under the banner of social studies. The point was that learning the facts from various disciplines “must be integrated by a social purpose…and be ready for future” use than are isolated facts, argued Dickie in her teacher manual on progressive education, *The Enterprise in Theory and Practice*, which was the foundation for teaching social studies curriculum. Dickie claimed that subject matter is supplementary and secondary to the need for social training, which is intended to provide experience in living and working together cooperatively.

*The Enterprise in Theory and Practice*, Dickie highlights the potential of schools to meet the aspirations of the UFA/UFWA movement to create politically active and

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400 W.D. McDougall, *In and Out of the Classroom, 1914-1964*, unpublished manuscript in McDougall Papers, University of Alberta Archives.


engaged citizens. The rural school, argues Dickie, is ideal for training in social adjustment.\textsuperscript{403} For her, “the classroom is composed of various age groups, mental abilities and interests and tastes. Thus it produces the same elements and presents many of the same problems as those arising in adult groups.”\textsuperscript{404} She believed that an opportunity existed in classrooms for learning that dependence on each other is good for all, and she concluded that “the rural school classroom can be built into a close-knit model community in which each is loyal to all, a nucleus of cooperation.”\textsuperscript{405}

The Department of Education in Alberta agreed with Dickie regarding the use of the classroom as a training ground for moulding social behaviour. As of the mid-1920s, promotion to a higher-grade level was based on a “credit” system, whereby one credit equalled a certain amount of instructional time. This meant that students could no longer successfully complete courses by simply writing the departmental examination.\textsuperscript{406} Students were required to be in the classroom for instruction. With the introduction of the credit system, students presumably experienced important cooperative learning activities to a greater extent than before. The newly devised credit system reinforced the importance of the classroom as an incubator for creating social change, and it was supported by the UFA/UFWA government and by textbook authors such as Donalda Dickie.

\textsuperscript{403} Ibid.
\textsuperscript{404} Ibid., 14.
\textsuperscript{405} Ibid., 274.
Social Studies Textbooks

It is interesting to note two key differences between social studies textbooks penned in Alberta versus those published in the United States or Ontario. For example, in The History of Canada for High Schools, authored in Ontario, or R.O. Hughes’ The Making of Today’s World, the concept of cooperation is not employed with nearly the same frequency as it is in Alberta textbooks. In fact, when examining the index of these non-Alberta books, cooperation is cited only in the context of the League of Nations after the First World War. In Dickie’s and McDougall’s books, the term is cited in over 40 separate instances and almost always in association with Alberta’s political and economic experience. Based on this experience, Alberta’s version of cooperation is promoted as the basis upon which solutions to national and international conflict could be resolved.407

Another distinguishing feature of Alberta textbooks versus those published in Ontario and the United States was the academic background of the authors. Alberta’s social studies textbook authors, such as Dickie and McDougall, were, first and foremost, progressive educators and teachers in rural communities, not historians. They envisioned, as Dickie suggests, education as a tool for moulding social behaviour.408 Eschewing their newly obtained professional status in 1935, they devised social studies curriculum and wrote textbooks with the goal of creating cooperative and democratic citizens.

Highlighting the extent to which the populist agrarian notion of cooperation had been adopted by the professional educational establishment in Alberta, a 1936 ATA Magazine


article claimed that “the accomplishment of educational engineering...[is] comparable in social importance to those great feats of mechanical engineering of which the present age is justly so proud.”  

The science of teaching was left to progressive educators, and their laboratory was the social studies classroom.

Textbooks published outside of Alberta and authored primarily by historians did not share the same enthusiasm for creating cooperative and democratic citizens as progressive educators demonstrated. They remained committed to traditional conventions of history. For example, R.O. Hughes, a professor of history in New York, writes in his preface to *The Making of Today’s World* that history “gives to us an acquaintance with the past, enabling us to think about the problems of today.”  

Similarly, Canadian historian George Brown envisioned history as an endeavour of appreciation. The study of history, according to Brown, enables us to appreciate the progress Canada has made from the past up until the present. In *Building the Canadian Nation*, Brown claims that students must learn to appreciate the historical output of eminent Canadian historians, and he gives explicit examples of eminent historians, including Donald Creighton and W.L. Morton. For Brown, history is not something that can be used for solving contemporary problems as social studies authors in Alberta envisioned. Rather, “history should be used to seek truth by discovering the facts of about events.”

Alberta’s social studies textbooks concerned themselves less with teaching the facts of history and more with the use of history to guide students towards active political service.

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411 George Brown, 2.
412 Ibid.
Because many social studies textbooks were written by Albertans, it should not be surprising that these texts made clear Alberta’s particular political and economic grievances. For example, W.D. McDougall, together with a representative from the publisher Ryerson Press, Gilbert Patterson, present Alberta’s regional complaints in a particularly provocative manner in *Our Empire and its Neighbors*. The book equates Canada’s prairie provinces with the agricultural South of the United States before the Civil War.\(^{413}\) The authors suggest that Canada’s agricultural regions have been negatively affected by tariffs supporting industrial producers of the East, tariffs that have placed financial burdens upon Western farmers. The authors then ask students to consider, would “Canada be better off today if there had been no tariff barrier to trade between Canada and the United States during the past fifty years?”\(^{414}\) Despite the supposedly open-ended question, the authors make Alberta’s position on the issue abundantly clear. They claim that Eastern manufacturers pressured the Canadian government to place heavy customs on goods arriving from abroad, thus raising the price on products that were much needed by western farmers. The author states that the Canadian government could regulate prices on implements of production that were necessary for farmers, but had made no attempt to do so. McDougall and Patterson summarize this exploitative practice as the “economic imperialism of the East over the West,” which has “caused a great deal of discontent throughout Alberta, but because the population of the province is

\(^{413}\) W.D. McDougall and Gilbert Patterson, *Our Empire and its Neighbors* (Toronto: Ryerson Press, 1937), 236.

\(^{414}\) Ibid.
small, it has not very many members in the Dominion Parliament, and the East continues to control the government.”

To overcome the eastern subjugation of the Alberta farmer, direct political action and economic cooperation were presented as the primary solutions for Albertans. For example, in *The World of Today*, McDougall and Patterson claim that “when the farmer feels he is being exploited, he always expresses his resentment in two distinct ways: by entering politics directly to control government, which will regulate business more in the interests of the producer, and by developing his own cooperative selling and buying organization.” For example, the Alberta Wheat Pool (AWP), established in 1923, allowed farmers to pool their grain, sell it at opportune times, and share equally in the profits. The AWP would end the exploitation of farmers, they believed, by business and banking interests, who benefitted most from high grain prices, leaving farmers with little to none of the profits. Thus, farming cooperatives such as the AWP served to reduce the power of capital and elevated the role of farmers in the production, selling, and distribution of grain. McDougall and Patterson clearly guide students to realize the benefits of cooperation, as they are asked to list the “beneficial changes… as a result of the farmer’s political and economic movement.”

Alberta’s textbook authors, like many UFA/UFWA leaders, were also willing to consider particularly radical measures to alleviate the economic woes plaguing the

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415 Ibid., 236-37.
416 MacPherson, 35.
417 Ibid.
418 McDougall and Patterson, *The World of Today*, 147.
province during the Great Depression, as evidenced in the following statement.

McDougall argues that:

some people feel that the capitalist (competitive) system is out of date in this modern world, and should be modified or replaced entirely by a system better fitted to deal with the problems of today. Three of these plans are especially interesting: the Communist (as in Russia), the C.C.F. and Social Credit.\(^{419}\)

The author asks students to “be careful in judging Russia, and consider which lessons Canada might learn from the Russian experience.\(^{420}\) McDougall’s consideration for various forms of state intervention leads directly into an endorsement for the efficacy of state involvement and a clear rejection of rugged individualism. He argues it is the duty of a society to provide support to those unemployed:

But perhaps the commonest and most heart breaking of all the causes of poverty are lack of employment. There are few things more terrible than the situation of an honest, able-bodied, and hardworking man, with a family dependent on him, who cannot make a living because, through no fault of his own, he cannot find employment. To provide for such victims of misfortune and to try to prevent their misfortune is the plain duty of society.\(^{421}\)

Donalda Dickie similarly supported government intervention based on a higher conception of politics, a belief influenced, in part, by the social gospel’s commitment to social welfare. In her textbook *The Great Adventure*, she criticizes rugged individualism and competition between persons as regressive and refers specifically to Alberta’s experience with cooperative forms of government, claiming that once “farmers and

\(^{419}\) Ibid.
\(^{420}\) Ibid., 321
\(^{421}\) Ibid., 303.
churches who had quarrelled for centuries began to cooperate” society functioned for the betterment of the larger community. She sites three political parties in Alberta that embodied this cooperative ethos that defined the political atmosphere of Alberta in the 1920s and 1930s: the UFA, The Social Credit, and the C.C.F., parties made up of people who believed that politics must assume greater responsibility for the welfare of Canadians and a better distribution of Canada’s natural resources.

In the Great Adventure, Dickie provides historical context to the roots of Alberta’s flare for political and economic innovation relative to Eastern Canada. She claims that Western Canada developed its own unique social, political, and economic institutions, independent of those of Eastern Canada, because of European and American immigrants “who had no loyalty to nation or province, as was the case in Eastern Canada.” She argues that Western Canada is thus, much less province-minded than Eastern Canada, and, supports her claim by citing American-born Henry Wise Wood, who became the president of the UFA, and a founder of the Alberta Wheat Pool. For Dickie the cooperative association of farmers, led by Wood, raised the prices of wheat that farmers laboured for, protecting the interests of farmers against corporate exploitation. Dickie then generalizes this cooperative experience of farmers in Alberta to society at large, claiming that “forming a cooperative society works much the same way as a wheat pool; its ultimate aim is raising the quality of life for all members.”

422 Dickie, The Great Adventure, 393.
423 Ibid., 404.
424 Ibid., 394.
425 Ibid.
426 Ibid.
an example of how political and economic problems of the inter-war years could be successfully addressed.

Alberta textbook writers’ proclivity for expounding the virtues of cooperation led them to consider past enemies of Canada with tolerance. For example, in *The World Of Today*, McDougall and Patterson acknowledge that the First World War was the fault of all the Great Powers and not just one nation.\(^{427}\) Furthermore, the authors claim that the harsh conditions of the Paris Peace Treaty of 1919 placed an unfair burden upon the German people. For these authors, tolerance and cooperation went hand in hand and were values necessary if international peace was to be maintained. For Donalda Dickie, students must learn the power of co-operation through activities in the classroom. The way to accomplish this, according to her, was that students must be provided with opportunities for experience in cooperation. To this end, teachers would facilitate discussion, student inquiry, and group projects that taught students how to cooperate with one another and improve the lot not only of the individual but also of the entire group. Furthermore, teachers helped students organize committee work and student councils as prescribed in the Alberta program of studies guide for Social Studies in 1935.\(^{428}\) The goal was to develop in students those skills necessary for living cooperatively and peacefully with each other.

Alberta’s social studies curriculum and related textbooks were criticized inside and outside of the province. For example, McDougall’s sympathetic treatment of Germany

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\(^{428}\) Alberta Department of Education, “Program of Studies for Social Studies for the Primary Level” (Edmonton: King’s Printer, 1935), 2.
and communist Russia resulted in public scrutiny. In the 1939 municipal election, independent candidate E.H. Starr held McDougall’s book up as an example of the “propaganda being taught in Alberta schools under the title of social studies.” Other critics demanded the withdrawal of the text, *The World of Today*, because of its “leftist tendencies” and apparent justification for the Nazi regime, pointing to McDougall’s assertion that “the harsh peace treaty of 1919 punished the Germans too severely.”

Although Alberta School Inspector H.C. Newland and W.D. McDougall defended *The World Of Today*, arguing that social studies must “raise controversial issues and it is the great value of education in a democratic society that such issues can be raised,” the public and government pressure demanded the textbook be revised. A committee was set up to revise their work, and not surprisingly McDougall was not invited to participate. The Committee concluded, “The text tended to disparage Canada’s political and economic system too severely.”

Alberta’s Department of Education appears to have reacted to mounting public criticism over Alberta’s controversial curriculum and textbooks in the interwar years by using books published in the United States and Ontario that were indeed less sympathetic than McDougall’s textbook regarding Germany. For example, in *The Making of Today’s World*, R.O. Hughes assigns responsibility for the First World War to the Germans and her allies “who will never admit [that it was they] who were entirely responsible for

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430 Ibid.
432 Committee on Social Studies, December 2, 1939. Premiers Papers, File 740b, Provincial Archives of Alberta.
It is interesting to note that after this criticism the Department of Education in Alberta significantly increased the number of textbooks authorized outside of the province, drawing heavily on those published in the United States. This decision may suggest an attempt by Alberta Education to temper public criticism of Alberta textbooks by providing alternative points of view from authors outside the province.\(^{434}\)

Regional differences in school curriculum and textbooks also gained national attention though the Committee for the Study of Canadian History Textbooks of the Canada and Newfoundland Education Associations in 1943 and through a Senate debate on a National History Curriculum in 1944. Both the Committee and the Senate debate expressed concern about differences in content between textbooks authorized throughout the country, calling for a pan-Canadian curriculum that emphasized consistency in agreed-upon facts by leading national and professional historians. During the Federal Senate debate on history textbooks, a number of senators singled out school teachers for creating history that was “sometimes bad and sometimes false and created too many quarrels and too much friction.”\(^{435}\) The solution, according to Liberal Senator Athanese David, was to have professional historians oversee textbooks authorized for grade schools. It was only they, argued David, who could agree on the “truth of history” and avoid regional biases.\(^{436}\)

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\(^{433}\) R.O. Hughes, 736.


\(^{436}\) Ibid.
least at the level of established facts. Criticism of David’s motion came in a statement that asserted it “matters little what is contained in a textbook since the atmosphere and interpretation is derived from the classroom.” A teacher from Manitoba echoed this statement, claiming “it would be undesirable to prescribe one textbook for the nation given that modern teachers are getting away from the old idea that one text is the bible.”

Despite criticism directed at social studies and Alberta textbooks, these controversial statements capture the very essence of Alberta’s social studies curriculum. Alberta teachers and curriculum writers were less concerned with historians’ preoccupations with debating the nature of factual history and more with the potential of these facts to encourage active political citizenship based on cooperative values. As H.C. Newland claimed, teachers were not historians; they were “evangelists for democracy and social engineers.” As progressive educators, they possessed the scientific know-how and established provincial authority based on this knowledge to realize a higher social objective for education than historians articulated. In fact, social studies allowed teachers to emancipate themselves and their students from the paralyzing hold of history by using social studies to promote active social and political citizenship.

The aura of despair caused by WWI followed by the Depression required action in the present based on cooperation and democratic principles. Citizenship training, the driving force of social studies curriculum, provided students with skills for cooperation and

437 Ibid.
438 Ibid.
439 Ibid.
tolerance that could be used as the basis for social activism in the future. The importance of active citizenship and nurturing social responsibility among youth, as prescribed by the UFA/UFWA throughout their reign in the provincial Legislature, was fully realized by 1937. Social studies was implemented at all grade levels in Alberta’s schools by this time.\textsuperscript{441} Alberta’s Department of Education emphatically stated in 1942 that “training for citizenship in a democracy, or in other words, training for social responsibility, is one of the most important, if not the most important objective, of the high school curriculum.”\textsuperscript{442}

Alberta’s students were no longer led to a discovery of who they were through the veneration of British history; rather cooperation, as presented by the UFA/UFWA’s social/political movement, textbook authors, and curriculum writers, would enable students to actively participate in social, political, and economic regeneration after the trauma of the First World War and into the Great Depression.

\textsuperscript{442} Alberta Department of Education, Annual Report, 1942, 14.
CONCLUSION

Alberta witnessed unprecedented social, political, and economic change during the 1920s and 1930s. The cataclysmic events of the First War followed by the Great Depression hastened what farmers saw as the wholesale degeneration of their rural environment and strengthened their sense of political alienation from established centers of power. Against this backdrop, school curriculum faced drastic changes. With the advent of social studies, active political citizenship replaced the passive nature of historical curriculum by 1935. Gone was a study of the past, or at least the memorization and regurgitation of gallons of imperial facts by students. Instead, students of social studies in Alberta were taught that active political citizenship was necessary for establishing a more cooperative, democratic, peaceful, and equitable future. Indeed, these principles were the pillars of organized farmers in Alberta. They were also seen as necessary for improving a political and economic order made hideous by war, greed, and competition.

The social gospel movement concerned itself with problems similar to those articulated by organized farmers, and both worked to apply Christian ethics to social, economic, and political issues. The Christian principles of cooperation and democracy infused the UFA/UFWA movement and their educational initiatives, including their delivery of citizenship training by various formal and informal means. Through citizenship training, rural citizens learned that their political and Christian responsibilities were one and the same – to establish a cooperative ethos in society.

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Social studies is part of the legacy initiated by the UFA/UFWA. As I have shown, the principles of the farmers’ movement, namely, cooperation and active political citizenship, were deeply embedded in the citizenship training delivered by farmers throughout rural communities. This training became an essential feature of social studies in the 1930s. At the same time, I have argued that social studies was not the invention of the UFA/UFWA alone and involved a larger cast of characters than has been accounted for by historians to date.

Rural teachers, mostly women, met the challenges of overcrowded school houses with practical and innovative approaches to curriculum and teaching methods. It has been central to my argument that their pragmatic innovations were consistent with what professionals would call progressive education years later. The professionalization of teaching involved the assertion of control over grassroots developments in education by professional educators who were eager to elevate their status in provincial bureaucracy, which was, significantly, male-dominated. And while male bureaucrats such as H.C. Newland oversaw committees responsible for developing social studies, much of the curriculum and textbook writing was left to prominent female educators such as Donalda Dickie and Olive Fisher.

I have argued that social studies emerged as the religio-political movement of the UFA/UFWA gained momentum and influence over Alberta education in the 1920s, as UFWA leaders and rural teachers pioneered innovative and practical approaches to teaching and learning, and as the professionalization of teaching ultimately formalized changes to curriculum in teaching in the 1930s.
Because of the close allegiance between organized farmers in Alberta, Saskatchewan, Manitoba, and Ontario, an examination of the conditions giving rise to social studies in Alberta may be similar to those in other provinces. The extent to which social studies was born out of similar circumstances throughout Canada would be an interesting line of inquiry to further pursue. Also, the Americanization of Canadian education should be further analyzed given the high proportion of early Canadian professional educators who attended leading American institutes of progressive education. And given that Alberta’s program of studies for 1935 credits the state of Virginia as producing an early template for social studies in North America, the American application of these same ideas should be compared and contrasted to the Canadian context to fully understand the conditions under which they emerged.

Finally, and perhaps most interestingly to me as an avenue for further research, is examining how the advent of social studies coincided with the emergence of third parties in both provincial and federal politics in Canada. The United Farmers of Alberta, Saskatchewan, Manitoba, and Ontario each adopted social studies around the same time frame, and a major national party, the Cooperative Commonwealth Federation (CCF), composed of radical farm elements, emerged at the federal level (and would later become the NDP). While neither the UFA nor the CCF exist as political parties any longer, their central tenants of cooperation and direct political challenge to Conservatives and

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Liberals continue to persist in political parties such as the New Democratic Party (NDP). In this way social studies might have strengthened support for third party ideals that continue to permeate Alberta society specifically and Canadian society in general. An important area of research remains to be completed as to the extent and effectiveness of this permeation.
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Today, with three generations – Baby Boomers, Generation X, and Millennials – working side by side within the workforce, differences, miscommunications, and every day annoyances take place (Glass, 2007). These three generations, each shaped by different life experiences and defining moments in history, share an office environment and bring different expectations as well as distinct approaches to work and communication (Lee Hecht Harrison, 2007). Solutions to these intergenerational conflicts include education regarding generational differences and preferences, instituting mentoring programs and training opportunities, having a trusted organizational culture where different perspectives are valued and creating personality assessments to aid in team building, because teamwork is the key to reducing generational conflict (Deyoe & Fox, 2012).

This study considers the impact of the built environment on different generations, the effectiveness of employees’ interactions, and communications while intending to encourage the awareness of generational differences as well as the value and the impact people have on the built environment. This starts by informing design profession, business organizations, and students prior to them entering the workplace.

As the oldest generation in the workplace, Baby Boomers expect to work at least part time in their retirement years. Their eventual retirement will inflict the largest brain drain ever experienced by corporate America (Lee Hecht Harrison, 2007). This brain drain, also called the human capital flight, will result in corporations losing valuable technical skills and knowledge. The next generations are smaller in size, have limited professional experience, and organizational knowledge and transferring the knowledge that will be needed for future business success must be a priority (Gordon, 2007). Researching each generation and today’s office environment provides a framework for discussing the current workforce and evolving workplace as well as pursuing practices that will leverage both collective and personal knowledge within the organization as well as the best qualities of each generation.

This study presented a prototype office design for the multigenerational workforce that may aid in intergenerational knowledge transfer. The principal investigator conducted behavioral mapping through visual observations in a local professional services office. Behavioral mapping “seeks to identify the uses of space as a factor in ongoing behavior” by recording the activity that is taking place and the location of the activity (Ittelson et al., 1974, p. 232). These observations focused on the interactions between members of different generations. The activities observed were categorized into observational groups reflecting the demonstrated behaviors. The categories are based on Gensler’s four work modes – focus, collaborate, learn, and socialize.

Focus group interviews of each generation followed the observations to uncover common themes within each work mode. Work mode locations and responses to the built environment were compared to assess the qualitative aspects of the workforce’s behaviors, interactions, and utilization of workspace among employees. The results of this data underscore the importance of intergenerational knowledge transfer and the integration of the multigenerational workforce’s needs and preferences when formulating criteria for designing an office space. The research component of this study produced valuable qualitative data for the use of identifying emergent themes presented during the research study. This research study disseminates the collected qualitative data through applied design options and solutions for each of the four work modes.

This study applied information from a review of the literature, the application of observational studies, and valuable insight from focus group interviews to develop a prototype workplace design that placed the need for transferring knowledge between employees as ideal. With the emphasis of this study about the members of the multigenerational workforce and the workplace, it is essential to understand the needs of the generations and implementing a workplace design that aids in intergenerational relationships, communication, and collaboration. The design of today’s office environment facilitates intergenerational knowledge transfer by constructing areas where employees interact, build trust, and form relationships.
Cultivating Social Justice Preservice Teachers through Critical Practices and Anti-Bias Curriculum

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Abstract

In 2013 the Southern Poverty Law Center’s educational project, Teaching Tolerance, developed an online resource called Perspectives for A Diverse America in response to demands for a comprehensive anti-bias curriculum. The Perspectives program focuses on literacy instruction for K-12 teachers that is aligned to the Common Core Standards, while providing educators a conceptual framework and continuum of tools for engagement in anti-bias, multicultural and social justice education. One of its key components is the Critical Practices Anti-Bias Framework and standards that are organized into four domains: Identity, Diversity, Justice and Action. Perspectives’ tools and resources include diverse central texts and anthologies, strategies, and tasks that support educators in creating curriculum lessons and units. This paper will focus on an ongoing research study initiated in response to Teaching Tolerance’s call for faculty in teacher education to participate in an evaluation that examines how they are using the Perspectives curricula and tools in their courses to prepare future teachers. As a faculty member from a social justice-oriented teacher training university, I will begin a preliminary discussion on how I implemented the Perspectives anti-bias curriculum with my colleague in a collaborative elementary foundations/pedagogy course as a way to cultivate future teachers with an educational philosophy rooted in social justice principles. I will focus on discussing how I will capture and provide snapshots of the implementation process including an overview of the curricular road map and some of the instructional approaches, materials, and artifacts that were produced over the past three years. In the final report, I will weave in personal perspectives and anecdotal accounts from a small sampling of preservice teachers, and will conclude by discussing guidance for future research.
Introduction and Context

In 2009, the National Council for the Accreditation of Teacher Education (NCATE) abruptly removed the phrase “social justice” from its standards due to pressure from groups that felt it was politically biased and ambiguous (Heybach, 2009). This action took many teacher educators by surprise but despite NCATE’s change, Standard 4: Diversity continues to require that preservice teachers receive some form of training and experiences that draws from multicultural and global perspectives to help them understand how to work with diverse populations (NCATE, 2008). Thus, it continues to be the responsibility of teacher preparation programs to design programs that provide opportunities for candidates to learn how to become competent practitioners who implement culturally relevant curricula that promote equity in the teaching and learning process to meet the needs of diverse student populations.

Over the years, many seminal researchers and practitioners have defined multicultural education – albeit with multiple conceptual definitions and explanations. For example, multicultural education has been framed by numerous researchers with the idea of furthering the understanding of best practices for teaching diverse populations (Banks, 1979; Banks & McGee, 2001; Gay, 2000; Grant & Sleeter, 2009; Nieto, 1996; Sleeter, 2008). Others have framed the paradigm of multicultural education through practices related to cultural responsiveness (Cazden & Leggett, 1981; Gibson, 1976), and culturally relevant pedagogy (Ladson-Billings, 1995; Sleeter, C., 2008). In addition to their research on multicultural education models or approaches, Grant and Sleeter (2009) have developed multicultural lesson plan models that are found in their Turning on Learning: Five Approaches for Multicultural Teaching Plans for Race, Class, Gender and Disability textbook which are very useful lesson planning tools.

According to Young Ah Lee (2011, p. 15), “The assumptions we develop from our own experiences influence the way we understand the world (Schwandt, 2000). In turn, these understandings influence the ways we learn and teach.” As a teacher educator, my own deeply-rooted teaching philosophy and experiences were shaped by the teacher preparation program where I teach today, which has been grounded in social justice principles. California State University, Sacramento’s College of Education’s TEACHing for Change vision statement, as seen below, is the tenet that serves as our overarching principle of the teacher preparation program and one that embodies my own educational philosophy and teachings.

**TEACHing for Change**
T = Transformative Teaching, Learning and Leadership Roles
E = Equity and Social Justice
A = Active Civic Engagement
C = Collaboration and Communication
H = Human Capital and Diversity

From my own personal experiences, many of our preservice teachers at the university where I teach encounter great struggles and at times, discomfort in conceptualizing how and why to adapt curriculum from a multicultural/social justice perspective. My interest in the Teaching Tolerance Perspectives for a Diverse America program began in the fall semester of 2013 when I was charged to teach my 90 preservice teachers about how to create multicultural/social justice lessons. I had taught this topic for a number of years, and had already developed numerous
lectures and culturally relevant assignments for my students, grounded in multicultural education theories and research, but as always, I wanted to be current on my knowledge related to multicultural education curriculum.

Hence, in late 2013, while in the course of doing a search for recent scholarly research on multicultural curriculum to refine and update my lectures, I stumbled upon the Teaching Tolerance *Perspectives for a Diverse America* curriculum which had just been uploaded to the Teaching Tolerance website that same month (tolerance.org). I was already familiar with Louise Derman-Sparks’ research on anti-bias curriculum in early childhood (1989), but was not aware of the Teaching Tolerance *Perspectives* curriculum which was principally grounded in her scholarly research on socio-emotional learning and young children’s views on diversity. *Perspectives* was a groundbreaking program which was officially launching in early 2014, and one of its major underlying theories is the notion that texts can generate empathy in readers, while building understanding and awareness of diverse experiences.

I explored the *Perspectives* website further and learned that Teaching Tolerance was sponsoring a sponsored two-day professional development training in January 2014 at the Museum of Tolerance in Los Angeles, California, and I quickly recruited my colleague and 16 of my 90 preservice teachers to attend (the training was being held during the university’s break so it was a voluntary event.) We were introduced to the professional development training on *Perspectives* that was contextualized through a tour of the museum’s exhibits that focused on the Holocaust and other historical oppressive events. After extensive debriefings and reflections, we were then provided opportunities to navigate the K-12 online resources and tools such as the anthology of diverse central texts and essential questions, teaching strategies, and tasks. By the end of the two-day training, each participant had developed sample grade-level lessons and units that promote multiculturalism, social justice, empathy, and equity in schools. It was a powerful experience for each participant and we were eager to share what we had learned with our faculty colleagues and preservice students in the spring 2014 semester.

**Purpose of the Study**

In November 2015, I was contacted by the Teaching Tolerance program evaluator to participate in a two-year study to learn about my use of the *Perspectives* materials and how they were being used by my students, and ways to improve the program for a better fit in a variety of teacher preparation classes. I had already collected artifacts from my preservice students in the 2014-15 year, and was eager to have my 2015-16 cohort of preservice students participate in this program. I then decided to initiate a study to explore and capture a snapshot of how the *Perspectives* curriculum was integrated into our preservice course, with a focus on ways that a sampling of approximately 200 preservice teacher candidate participants - over a three-year period - were trained and implemented this culturally responsive curriculum for elementary students in lower performing schools.

The preliminary results will indicate that *Perspectives* helped cultivate preservice teachers into understanding social justice principles, while also supporting them in creating and implementing multicultural/social justice lessons, based on training and guidance received in the foundations/pedagogy course.
Research Objectives

This study is grounded in anti-bias curriculum research conducted by Louise Derman-Sparks (1989) and the theoretical concepts of “practice of freedom” framed by Paulo Freire (1993). It draws from a 2013-14 evaluation of the Teaching Tolerance Perspectives from a Diverse America curriculum and is guided by the author’s experiences as a participant in an ongoing Teaching Tolerance study of teacher educators using the Perspectives tools in their teaching. This paper is guided by the following two research goals and objectives.

- How are the Perspectives for a Diverse America curricular tools used in a teacher preparation program?
- In what ways does the Perspectives for a Diverse America curriculum support preservice teacher candidates to become social justice educators?

Proposed Methodology

Qualitative and quantitative data were collected at multiple points. A case study approach was used to capture the details and nuances of the ways that two teacher educators and a sampling of the 200 preservice teacher candidates used the Perspectives curriculum tools. These preliminary findings were presented in a poster session at the university’s conference on multicultural education in February 2014. The presentation was entitled “Social Justice Curriculum Roadmap: Teaching Tolerance Anti-Bias Framework and Perspectives.” It provided a roadmap for teaching social justice in K-12 classrooms using the Teaching Tolerance Anti-Bias Framework tool, Perspectives for a Diverse America. Artifacts were collected and analyzed, including surveys, lesson plans, and instructional materials. Survey results were validated and analyzed to glean a clear interpretation and representation of the responses.

Expected Outcomes and Conclusion

The data set collection is in the final stages of analysis and should be completed after collecting the final data in May 2017. It is expected that this study will show that through guided instruction, preservice teacher candidates are able to utilize critical practices and the Perspectives tools to develop multicultural and social justice-oriented curricula that promote academic improvement and socio-cultural learning.

Participants focused on a small sampling of preservice teachers enrolled in a foundations/pedagogy course at a social justice-oriented teacher preparation program in California. Data sources include excerpts from lessons plans and responses to surveys.

It is expected that the final survey results and artifact analysis will indicate that the Perspectives curriculum and tools will support preservice teachers in facilitating transfer of content knowledge from multicultural theory into practice, through the engagement of the Perspectives tools and resources as a way to develop lessons that promote a deeper understanding and connection to multicultural and diversity issues from a local and global perspective. As a result, I will argue that the Perspectives curricula should be a more widely used as a powerful tool in teacher education programs.
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Development of A Harmony Training Support System for Wind Instrument Music

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Abstract

In Japan, wind instrument music is prospering in elementary and secondary education. There are many wind orchestras, includes brass bands in schools.

In the performance of the wind instrument music, each player needs to pay attentions to not only musical scales and rhythms but also difference of musical interval among other players. Instructors of the wind instrument music evaluate the quality of the performance based on these elements. Though most of the accomplished instructors have the sophisticated evaluation criteria through their long experiences, in so far as basic ensemble such as harmony training, the quality of the evaluation criteria is common among most of all instructors.

However, it is difficult to provide appropriately skills training to players including beginners in the school wind orchestra because the accomplished instructors are not deployed to all schools. In this time, we propose a harmony training support system for wind instrument music as a new way of teaching methods. This system can support harmony training for instructors and players of the wind instrument music based on calculating difference of frequency of music sound in order to evaluate and improve their performances and qualities.

In the presentation, after having clarified issues of the instructors and wind orchestras in Japanese schools, we will show a developed prototype system and the results of experiments to confirm effectiveness of the system.
Using Virtual Reality to Enhance Curricula and Learning

Curriculum, Research, and Development

Paper Session

This paper explores what is happening with the infusion of VR techniques and applications into the field of education to include k-12 and higher education. It explores how Virtual reality can enhance curricula and learning.

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Using Virtual Reality Techniques to Enhance Curriculum and Learning

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Abstract

A student in the highly rich technology world of today not only has become a social media expert and participant in utilizing photos and videos but is exposed in addition to a variety of challenging visual experiences such as ultra-high definition 3D images and motion. These can be curriculum maximizers assisting students in learning complex concepts more quickly and more thoroughly thus retaining what they learn longer enabling them to utilize the learning outcomes for a larger portion of their lives. While researchers are still verifying just how effective these technology tools can be for enhancing curriculum and the student experience (early indications are positive) technology advances continue to add tools to the mix. The latest one breaking on the scene and the classroom, which can incorporate all the previous tools, is “virtual reality.” The use of VR (virtual reality) has long been used in the military and aviation to provide dangerous and difficult simulations to train and educate people without jeopardizing their health and lives. More recently VR has been used successfully in the field of professional development to include managers, instructors, coaches and therapists (http://www.techcrunch.com Sep 14, 2016). The use of VR in k-12 schools and higher education is just beginning to take off as numerous technology companies such as zSpace, Alchemy, and Immersive VR Education are developing VR-based education curricula packages for the classroom (http://www.techcrunch.com). This paper explores what is happening with the infusion of VR techniques and applications into the field of education to include k-12 and higher education. It reviews how effective (on ineffective) such techniques have been and discusses the challenges of implementing VR techniques in regard to obtaining VR equipment, software and funding as well as acceptance by educators, students, and parents.
The Empowerment and Inclusion of Adjunct Faculty: A Case Study

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Abstract
A case study of how one university in the Pacific formed an Adjunct Faculty Advisory Team (AFAT) for the purpose of representation by having an official body to speak on their behalf, assist with training and professional development, and help foster an inclusive setting with the institution. The impetus was having the support of the Associate Provost for the university who oversaw the Faculty Center and was the facilitator for several Action Teams, including AFAT. The team met frequently and quickly identified priorities. Major successes were found in the area of communication; input; inclusion; and disposition. This was possible due to having an advisory team with a formal capacity to initiate and bring forth proposals, have a voice in the governing process, and the effective support of a key member in the university administration. This paper documents the initiatives, implementation and assessment of the initial year's effort to enhance adjunct faculty opportunities and empowerment for teaching and learning.

Key Words: Adjunct Faculty, Faculty Development, Communication, Faculty Governance
Introduction

At many institutions of higher education, the number of adjunct faculty continues to increase steadily as does their reliance on them to teach our increasing enrollment. Soon the majority of teaching in higher education will be adjuncts (Komos, 2013). Fruscione (2014) found that adjuncts now make up more than 70 percent of higher education faculty in many institutions. However, many adjunct faculty report not feeling that they are a part of the academic organization and not being recognized as a source for knowledge and help (Dolan, 2011). Several universities have seen adjunct faculty begin to discuss these issues, which have resulted in the formation of groups, programs and even unions.

The Associate Provost has oversight of the university’s Faculty Center for Teaching and Learning and was the facilitator for several Action Teams, including AFAT, along with the Teaching and Learning Advisory Board (Think Tank) and an Assessment Advisory Team (AAT). In the fall of 2015, the Faculty Center for Teaching and Learning at a university located in the Pacific, developed an Adjunct Faculty Advisory Team (AFAT). The impetus for the advisory team was to bring representation for adjunct faculty employed by the university and to help create an environment of inclusiveness. The team met frequently and quickly identified priorities, some of which included updating the list of adjuncts teaching for the university, changing the adjunct email address to eliminate ‘adjunct’ and having it standardized with the rest of the university faculty email address system, securing a seat on the Faculty Senate represented by the Chair of AFAT, and creating an adjunct faculty development day - all of which were realized.

This paper is a case study documenting the initiatives, implementation and assessment of the initial year’s effort of AFAT. Major successes were found in the area of communication; input; inclusion; and disposition. Action meetings were held twice a month, as opposed to typically monthly committee meetings. The goal was open discussion, although there was a hyperfocus on action. Each team member left the meeting with an action item and at the beginning of each subsequent, the action items were updated, tracked and benchmarked. Topics actioned during the gatherings included Adjunct Classification; Adjunct Email Address; Adjunct Faculty representative on the Faculty Senate and representative on the Faculty Senate Handbook Committee; Adjunct Faculty attendance at Faculty Retreats and the ability to join Faculty Development Events.

Literature Review

Adjunct Faculty

Colleges and universities benefit from continuing employment of their best adjuncts, who are familiar with the institution, can develop their teaching skills, and administrators can promote a positive work environment to retain. However, institutions often fall short in supporting adjunct faculty (Hoyt, 2012). “The overall perception was that an adjunct instructor was a non-entity within the faculty body and was not well known to management” (Dolan, 2011, p.70). “Institutions of higher education desire quality adjuncts, yet fail to invest in their adjuncts to produce that quality” (Morton, 2012, p.396).

Administrators can help promote faculty loyalty and intent to stay by monitoring job satisfaction of not only full-time faculty, but adjunct faculty as well (Hoyt, 2012). As institutions of higher education increasingly use adjuncts, it is key to attract and retain qualified faculty against the competition (Dolan, 2011). Other ways Hoyt (2012) found to improve adjunct faculty work environment included training, a website with information for adjuncts, and better communication. Dolan (2011) discussed that many adjuncts favored opportunities to increase knowledge through workshops, seminars, social events and other activities that would help foster a stronger sense of community with peers and administrators.
Faculty Development

Adjunct faculty have mixed reviews of the teaching and professional development support provided by their institution (Yakoboski, 2016). As adjunct faculty are no longer used on an occasional basis in higher education, adjuncts play a critical role in teaching students in higher education (Langen, 2011). Development of adjunct faculty is not considered a priority at many institutions, but offering an orientation and professional development opportunities should be encouraged to increase their involvement with staff and support services and time on campus (Datray, Saxon, & Martirosyan, 2014). “Our hope is that higher education institutions will consider their responsibility in development of quality adjunct faculty and embrace the adjunct as a positive contributor to the institution” (Morton, 2012, p.396).

Datray, Saxon, & Martirosyan (2014) recommend providing training for new adjunct faculty, professional development opportunities, assign adjunct faculty to mentors, provide institutional resources and include adjunct faculty in resourcing and strategic initiatives, encourage and support the use of diverse instructional techniques, integrate adjunct faculty in the institutional mainstream, consider the needs and contributions of adjunct faculty when engaging in course redesign initiatives. Morton (2012) discusses the importance of a facilitator to bring about a mentoring program for adjuncts that can expand teaching and classroom skills. However, some institutions lack the vision, management, or funds to have such a program for adjuncts.

Following Ernest Boyer’s (1990) landmark book, Scholarship Reconsidered, faculty development became a more frequent topic of discussion in the university. In this book, Boyer suggested additional ways, beyond the traditional scholarship of discovery to view scholarship in ways of integration, application and the scholarship of teaching and learning (SoTL). Grabowsky and Hargis (2016) found that time was a major issue for faculty development, as competing obligations required additional prioritization, organization, and alignment of appropriate scholarship, which could include SoTL. Hargis and Gilbertson (2010) found that quality, and timely faculty development plays a significant role in new faculty orientation, and subsequent mentoring of new faculty into a collegial environment that supports aligning research with instruction. Yee, and Hargis (2012) identified key attributes to quality faculty development, which included how to create sustainable relationships with faculty through a new model informed by emotional intelligence. The focus on creating relationships was a key attribute for this approach on creating a venue for a broader, more frequent adjunct faculty voice to the Faculty Senate and administration. Faculty Senates can be bureaucratic and indecisive, where frequently a few vocal members can halt progress. Ensuring that an adjunct faculty is a member and in the room can be one way to help the senate maintain awareness of critical issues of teaching load, quality and sustainability, which should be a major role of faculty governance.

Faculty Governance

At colleges and universities in the United States, about 70 percent of faculty are off the tenure track. As such, adjuncts are making themselves more visible and push for roles in governance. Although tenured faculty are in the minority, they are still the power brokers (June, 2012). Overall, adjuncts are largely excluded from Faculty Senates. In a study that examined 105 research universities, about two-thirds had adjuncts off-limits to Faculty Senates. A small minority of universities had Faculty Senate's open to any adjunct faculty (Schmidt, 2013). Adjuncts expressed a strong need to become better informed on a range of institutional matters and clear communication. When there is a lack of communication between administrators and adjunct faculty, a sense of isolation increases (Dolan, 2011). At Saint Joseph’s University, an adjunct association was formed to address the concerns of adjuncts. The executive committee of the association met with the provost and was able to get raises for adjuncts and grant funds to attend a conference if presenting a paper. The adjunct association also requested the Faculty
Senate to allow for participation in faculty governance (June, 2012).

Methods
This study was conducted at a private small liberal arts university in the Pacific. The participants for this case study were six adjunct faculty out of about 100 adjunct faculty, two male and four female faculty with years of experience between 5-27 and mixed cultural identity differences. Data was collected during the 2015-16 academic year. The design is a qualitative case-study using meeting minutes, questionnaires, action items and discussions as assessment and measurement tools.

Procedures
The key attributes for gathering useful data included consistency of meetings, documentation of outcomes and connecting the stakeholders (faculty, adjunct, administration and personnel) on a regular basis. The process for accomplishing this included regular meetings and setting action items with aggressive timelines. The Faculty Center personnel assisted in logistics, continuity, research and brainstorming. The AFAT Chair and Associate Provost met regularly to ensure a consistent message, and both were committed to aggressive movement on issues, which had been historically neglected. All documentation was collected using Google Documents and made available to the academic community for review and input.

Results
There were four major data collection instruments: Meeting Minutes; Action Items; Questionnaires; and Discussions.

Meeting Minutes and Action Items
I. Adjunct Faculty Advisory Team (AFAT) Agenda Items November 17, 2015.
   1. Adjunct Classification. Potential to simplify to one classification: Adjunct Faculty. Discuss how this may affect those who have benefits such as health care as they are categorized as a Senior Lecturer, etc.
      Action Item: The Chair will send a memorandum or meet with the Executive Director of Compliance and Personnel Services for clarification.

   2. Adjunct Email Address request to be consistent with faculty/staff.
      Action Item: AFAT to draft proposal to the Dean of Information Technologies and Support Services, who can discuss with the Provost.

   3. AFAT Representative at Faculty Senate. Recently, Faculty Senate emails are now being sent to adjuncts as well. This has been a positive step in keeping us “in the loop and in the know.” We are also faculty and should be in the loop. Having a member from AFAT to represent adjuncts at Faculty Senate meetings would be helpful in allowing adjuncts to have a voice and to be informed on matters concerning faculty.
      Action Item: Associate Provost can bring this to the attention of the Faculty Senate (FS) President.

   4. Adjunct Faculty Representative on the Handbook Committee.
      Action Item: The Associate Provost has discussed with Faculty Senate President, who agreed in principle on this topic and will take to the Steering Committee on their next meeting, December 2.

   5. Faculty Retreats. Discuss process and logistics of attending faculty retreats and/or create Adjunct Faculty Retreats (Celebrations).
Action Item: The Associate Provost and AFAT Chair will create a proposal for the Provost review.

6. Adjunct Faculty Development (FD) Events. Suggest that we discuss FD events and other community building events, such as a reception before a university athletic event possibly basketball and then attending the game.

   Action Item: Revisit the results of the May 2015 Adjunct Needs Assessment and discuss other workshop topics to create and offer for the spring term. Also, create a schedule for community building events.

II. Adjunct Faculty Advisory Team (AFAT) Agenda Items January 26, 2016

1. Adjunct Classification. Report on final determination of adjunct classification and title after meeting with Compliance.

   Action Items:
   a. What is an “adjunct?” Definition used is what's in the handbook. “Adjunct faculty” is the official title for pay scale.
   b. Classified as two or less classes. If you teach more than two courses, then the health benefits will begin. Should you not teach during the summer, you will need to re-enroll for health benefits once you are teaching more than two classes again.
   c. Discussion as to whether or not Continuing Education credits count toward adjuncts’ two course load. Chair to ask Executive Director of Compliance and Personnel Services for clarification regarding credits counting.

2. Adjunct Email Address. Update AFAT on latest news regarding changing @adjunct.university.edu email to @university.edu email.

   a. By summer they should be able to migrate the information from existing emails over to new “@university.edu” accounts.

   Action Item: The Information Technology Dean needs to receive final approval, but everything on logistics is ready. He will be meeting with approvers this week.

3. AFAT Representative at Faculty Senate. AFAT Chair has been approved to be a voting member at the Faculty Senate. Updates will be provided from the last several meetings.

   a. Chair of AFAT can be a voting member in Faculty Senate. The motion went forward in Faculty Senate, and almost unanimous approval (2 faculty out of 100 voted against).
   b. Chair has attended past three Faculty Senate meetings.
   c. What is the step to disseminating Faculty Senate information to all adjuncts?

   Action Item: Check with Faculty Senate President on determining how Adjunct Faculty receives information.

4. AFAT Representative on Steering Committee.

   a. Chair proposed a Motion: Chair to put in a formal request to join the Handbook Committee. Seconded by AFAT member. No discussion.

5. Adjunct Faculty Development Events. Discuss an activity for the adjuncts for Spring Semester.

   Action Items:
   a. Recreate the Faculty Retreat “Celebration” for the adjunct faculty. Targeting March 5 (first choice), March 12 (second choice), or April 16. Administrative Assistant will look into scheduling as soon as the meeting is finished. Once a date is confirmed, a “save the date” invitation for faculty will be sent out.
b. Schedule Celebrate event for a Saturday when all the classrooms are available.
c. Contact the department admins asking them to send invites to all their adjunct faculty. Additionally, we need to find a creative way to get people engaged/invited/eager to join via AFAT outreach.
d. Topics that might be engaging for faculty: humanizing online learning; active learning methods online; how students function, etc.
e. Chair motion to formally plan adjunct celebration event. AFAT member seconded the motion tentatively for March 5.

6. Discussion on any other topics.
   Action Items:
   a. Shared the aggregated results from the Adjunct Faculty Needs Assessment surveys collected by member. The data is available in the AFAT Google Drive Folder.
   b. Chair to talk to IT Dean to see if there is a means of aggregating adjunct contact information somewhere (on Portal, perhaps?).

III. Adjunct Faculty Advisory Team (AFAT) Meeting March 15, 2016
1. Thank you for the successful inaugural Celebrate Teaching and Learning event.
   a. Associate Provost has talked to Provost about the potential of allowing adjunct faculty to attend the Retreat, and is open to the idea.
   b. Traditionally, the Faculty Retreat is held on the second or third day of fall semester; second or third day for the spring.
   c. AFAT member made a motion to combine the Adjunct Faculty Retreat/Celebration with the [full-time] Faculty Retreat. Chair seconded.
   d. Discussion: Hold an Adjunct Celebrate on the Saturday following the Faculty Retreat as a Plan B. It would be wise to partner with the staff working on adjunct contracts to advertise the event. Vote to approve was unanimous.

2. Analyze Data Summary
   Action Items: Orientation of Adjunct Faculty. Invite new adjunct faculty to apply for 20 seats to the New Faculty Orientation (NFO).

3. Visionary
   a. AFAT share what they have accomplished so far.
   b. Structure of the advisory team and Chair’s joining of Faculty Senate steering committee.

4. Starting subgroups of the AFAT
   a. Faculty Retreat/Celebrate for Adjunct Faculty
   b. First semester family day

5. Acknowledging Adjunct Faculty: certificate of excellence, pins, etc.
   a. Acknowledgment may be more of a department/division initiative.
   b. AFAT member motioned that Chair submit a proposal to Deans requesting they adopt a recognition system for their adjunct faculty.
   c. The Faculty Center can assist with acknowledging adjunct faculty for other forms of participation (e.g. workshop presentations, advisory teams, etc.)

6. Business cards: useful marketing tool, especially for increasing student enrollment.
   a. Chair will forward inquiry on policy to each Dean, copying their AFAT member to
ask on the policy for business cards. From there we can talk about submitting a formal proposal requesting that they provide business cards.

b. AFAT member motioned to have the Chair email the Dean’s asking about their policy for adjunct faculty business cards.

7. Create action items, i.e, next Celebrate?
   A. Adjunct Family Day
      a. Potluck adjunct celebrate: social day to get to know one another, including full-time faculty.
      b. Reserve the lawn in front of the library and under the tents.
      c. Events for the children. Potentially connect with Campus Administration for support with the children activities. Provost agreed this would be a good event for the end of the semester.
   
   B. Malasada May Day for Families: opportunity to welcome the new Administration, and to share the university values.

8. Identify strategy to secure AFAT team members from non-representative Divisions
   a. Adjunct Celebration sign-in sheet uploaded to AFAT folder to help identify potential AFAT recruits.

9. Discuss other initiatives (i.e., business cards, adjunct workshops...)
   a. Business cards are brought up at the Dean level.

10. Provost visit to update next steps
    a. Thanks to the team
    b. Continued support for the AFAT

**Questionnaire**

Celebrate Adjunct Faculty Day: Assessment and Data Analysis

A day to “Celebrate Teaching and Learning” (Seal & Hargis, 2012) was organized for full-time faculty in lieu of the Faculty Retreat in January 2016. A similar Celebration was created for Adjunct Faculty on Saturday, March 5, 2016 from 9:00 am to 2:30 pm, which was a faculty driven event to showcase the exemplar instructional methods currently used by adjunct faculty. For these active sessions, faculty facilitators translated their current effective instructional practices into ‘quick 40 minute chats’ with a focus to engage participants in an active discussion. The goal was not to share a complete framework of methods, but more to begin the conversation, which could further foster collaboration and rhetoric on teaching and learning around the campus. The sessions included:

- Virtual Worlds and Library Resources
- Assessment and Rubrics
- Syllabus Redesign
- Active Learning Methods
- How I Learn Best by Student Panelists
- Appropriate, Relevant and Meaningful Educational Technology
- Effective Practices for Online Teaching
- Scholarship of Teaching and Learning (SoTL)

A hard copy assessment was provided at the end of the day, as well as a link to a Google form provided to everyone afterwards via email. The following represents the items and results (n=15; Likert 1-10, 10 representing very high).
1. How engaged did you feel at this faculty development event?
   Ave = 9.4/10; SD = 0.986

2. What part of the day’s events facilitated your development best?
   Active Learning (5); SoTL (3); All (2); Syllabus (2); Lunch discussion; Virtual Worlds; Student; Collaborating; Energy

3. Please share suggestions on how we can continue to improve our events.
   Keep doing them each semester (2); Saturdays are good; Focus on techniques related to how to teach well; Let’s do this again; More classes on technology; Excellent, this is much needed; How to form a community to collaborate on publishing; Expand on Active Learning; The sessions that showed and shared actual applications and resources available to us were helpful; How to use Canvas; Rooms are too cold; Please continue to post more videos on the adjunct resources page with new teaching methods/experiences.

4. Please share your evaluation of the food provided for this event.
   Ave = 9.6/10; SD = 0.737

5. Which session or sessions benefited you the most?
   All (4); SoTL (4); Active learning (4); Library (2); Syllabus (2); Effective practices for online; Students; Learning about AFAT

6. Which session or sessions were the least helpful to you?
   None (6); Assessment and Rubrics; Active learning (too much focus on technology); Virtual worlds; History of adjuncts

7. Share ideas from today's event that you will be able to integrate into your courses.
   All (3); SoTL (3); Plickers (2), Library database (2); Zoom; Student's income; Rubric chart on outcomes alignment; Bloom’s taxonomy; Tech gut may not be able to use them all; Second Life; Flipping the class; Syllabus redesign.

8. Overall, please assess the quality of this faculty development event.
   Ave = 9.5/10; SD = 0.834

9. What topic(s) would you like to see at our next event?
   Educational Technology (3); Filming lectures; Peer review; How to stimulate meaningful discussion without technology; How to teach effectively; Teaching with limited technology resources; New teaching methods; Assessment; Collaboration among faculty; Green Screen video technology.

The Faculty Center for Teaching and Learning included adjunct faculty in each one of their offering, sending emails to them when events were scheduled and posting a special link on their webpage for adjunct faculty. Specifically, adjuncts were welcome at the summer week long Backward Redesign Courses (Wiggins & McTighe, 1998), of which the Chair of AFAT attended both sessions, significantly redesigning two different courses (Hargis, et al, 2016).

**Discussion and Conclusion**

The Adjunct Faculty Advisory Team (AFAT) brought a voice for adjuncts in an official capacity, assist with professional development, and help foster an inclusive setting with the institution. This was possible due to having an advisory team with a formal capacity to initiate
and bring forth proposals, have a voice in the governing process, and the effective support of a
key member in the university administration. The impetus was having the support of the
Associate Provost for the university who oversaw the Faculty Center and was the facilitator for
several Action Teams, including AFAT. The Faculty Center at the university became a
tremendous resource for adjunct faculty by having an open invitation to all workshops and
professional development activities. The center also developed and maintained a dedicated
page on the university website for adjunct faculty resources and information for new hires.
Adjuncts that do not have office space were welcomed to use the space at the Faculty Center.
The relationship with the Associate Provost overseeing the Faculty Center and the support staff
became instrumental in the formation and backing of AFAT.

Inaugural AFAT Meeting

The Associate Provost serving as the facilitator and the Chair for AFAT spent the
months leading up to this inaugural meeting with recruiting other adjuncts willing to serve on the
team and brainstorming several of the initial agenda items. The goal was to have at least one
adjunct member representing a division in the university. Once an adequate representation was
met, the timing was right to hold the inaugural meeting.

The inaugural meeting of AFAT took place on November 17, 2015 and an ambitious
agenda was discussed as having priority to adjuncts at the university and turned into action
items. One of the key items discussed was with regards to adjunct classification. There was
confusion over what the official title was as there were varying terminologies used. The faculty
handbook was clear that part-time faculty are designated by the title of adjunct faculty. However,
seemed there were other terms used. Therefore, AFAT decided on making an action item to
send a memorandum or meet with the Executive Director of Compliance and Personnel 
Services asking for clarification of the official term for part-time faculty.

Another item discussed was a passionate one brought forth by the Chair with regards to
eliminating the term adjunct from the university email address [jane.doe@adjunct.university.edu]
and have it consistent with full-time faculty and staff [jane.doe@university.edu]. The reasoning
was there should be no distinction to the students that a faculty member is full-time or an
adjunct. The AFAT decided to draft a proposal to the Dean of Information Technologies and
Support Services to seek if it would be possible to have the email address for adjuncts
consistent with the rest of the campus.

The AFAT wanted to address the role of adjuncts in the faculty governance at the
university. Adjuncts have been invited to attend the Faculty Senate meetings, but not as a
voting member. At the start of the academic year, the President of the Faculty Senate added the
emails of adjuncts to receive Faculty Senate emails. This was a much appreciated gesture as it
allowed adjuncts to be kept “in the loop.” However, AFAT felt a need to have a voice in the
Faculty Senate. After discussion during the meeting about finding the right balance that could be
deemed acceptable by various stakeholders, it was decided to propose having an adjunct
selected by AFAT to be a representative and voting member in the Faculty Senate. This adjunct
would be able to report back to AFAT on topics and issues discussed at the Faculty Senate. It
would also allow adjuncts to have a voice in bringing forth proposals, address concerns, and
have a vote in the Faculty Senate. As an action item, AFAT agreed to request the Associate
Provost to bring this request to the President of the Faculty Senate and decide how best to
proceed ahead.

Full-time faculty are required to attend the retreats held before the start of Fall and
Spring semesters. Adjuncts do not have this requirement and are excluded from attending the
faculty retreats. During the meeting, it was brought to the attention of AFAT by the Associate
Provost that there were about 400 adjuncts according to a spreadsheet provided by the
Personnel Department compared with a little over 100 full-time faculty at the university. This
was a surprise to the members of AFAT as the number of adjuncts seemed way too high. It was
realized that if the administration was using the current number, the logistics of inviting adjuncts to a retreat would be daunting as well as other events. The members of the AFAT team reviewed the list and realized that many of the names were adjuncts that were no longer active as teaching at the university for several years or more. Therefore, it was decided that the AFAT team would work to finding the true number of adjuncts at the university. Members of the team broke the list down and would take it to their respective division Dean or administrative assistant for verification on which adjuncts have been active in teaching for the university. This was a priority to know the accurate number as it would factor on the feasibility of being included in university events or a separate function for adjuncts.

The suggestion was made during the inaugural meeting to brainstorm events that can help with adjunct faculty development and community building. The need for adjuncts to know they are connected and a part of the university and to interact with their fellow peers was a top priority for AFAT. It was decided to develop workshop topics to help with faculty development for adjuncts and what events would help with community building.

Subsequent Meetings

The following meetings throughout the year maintained enthusiasm and a clear focus on action items which consistently produced a result. With regards to adjunct classification, the Chair was able to meet with the Executive Director of Compliance and Personnel Services who was recently hired at the university and was currently performing a thorough review of university policies. It was clarified that all adjuncts are classified by the title of adjunct faculty. Any other titles used for adjunct faculty were not official. What was of interest from the meeting was the information that if an adjunct taught more than two courses a semester, then he/she would qualify for health benefits. This would be a rare occurrence as adjuncts are usually teaching two or less courses a semester, but this information was important to relay to all the adjuncts through AFAT.

After the inaugural meeting, the Chair of AFAT sent a memo to the Dean of Information Technologies and Support Services regarding adjunct email addresses. The Dean was supportive of the request and mentioned that the logistics was not an issue to make the update. The Dean received final approval from the Provost and all adjunct emails were migrated from @adjunct.university.edu to @university.edu.

The President of the Faculty Senate accepted the request to bring forth the motion to allow one adjunct faculty member assigned by AFAT to be allowed as a voting member in the Faculty Senate. It was decided that whoever holds the Chair of AFAT would serve as the adjunct member at the Faculty Senate should the motion pass. The Chair of AFAT was invited to the final Faculty Senate meeting of the semester to speak on behalf of the motion that was brought forth to the body. The motion passed and the Chair of AFAT was able to vote on other items during that Faculty Senate meeting. It was a milestone moment of faculty governance by having the adjuncts represented with a vote in the Faculty Senate.

After working on verifying the current number of active adjunct faculty members, there were a little over 100 and presented at the meeting. This new number reflected verification with each university division and the updated list was provided to the administration. The ratio of full-time faculty to adjunct faculty was almost one to one. With this important and accurate information, the AFAT team passed a motion to proceed ahead with planning an event for March 5, 2016, that would serve as an adjunct faculty retreat, provide faculty development workshops, and allow community building.

Celebrate Adjunct Faculty Day

One of the many significant successes was the creation of a “Celebrate Adjunct Faculty Day,” held on March 5, 2016 and had a strong showing of attendees. The support of the staff at the Faculty Center was instrumental with helping to plan the logistics of the event. The event
was held on campus with breakfast and lunch provided and an opportunity to interact with their peers. Full-time faculty members provided their support for adjuncts and the event by volunteering their time as facilitators of the active sessions held throughout the day. The sessions included: Virtual Worlds, Assessment & Rubrics, Library Resources, Syllabus Redesign, Active Learning Methods, Student Panel Session On How Best Students Learn, Scholarship of Teaching and Learning, Effective Practices for Online Teaching, Update From AFAT, and Appropriate, Relevant and Meaningful Educational Technology. During the Update From AFAT session, the adjuncts in attendance were briefed with the outcomes of several agenda items. They were extremely pleased to hear that the university email address will no longer contain adjunct and be consistent with the rest of the faculty and staff.

AFAT met on March 15, 2016 to do a recap of the event. An emphasis was placed to continue the momentum with planning for future events. The evaluation results from the attendees were presented during the meeting. Overall, the attendees expressed strong satisfaction for the event and the content covered. Most importantly, the attendees felt a stronger sense of connection to the university and knowing that they are valued.

Conclusion
The formation of an official body to represent adjuncts within the university organizational structure and the backing of one high-level administration official were vital in achieving the major successes in a short span of time.

Further Work
This paper illustrates what is possible for adjuncts through organizing a formal team in the university organizational structure. The literature showed that at one other university, there were successes with actions items as was also found with the university discussed in this paper. Continued efforts are needed to build upon and sustain AFAT to be a permanent fixture at the university. In the second year of AFAT, there was a transition to a new chair and continued representation for adjuncts at the Faculty Senate as a voting member. A second Adjunct Faculty Celebration Day took place in the fall of 2016 with workshops and activities to assist adjuncts, continuing the work that starting the previous academic school year. More work needs to be done to help adjuncts with representation at universities.

References


A Study on the Use of Company Structure in STEM Group Activities at Junior High Schools

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California State University, Fullerton

Abstract:

STEM-Inc is a 3-year NSF ITEST (Innovative Technology Experiences for Students and Teachers) project designed as an after-school program targeting 7th and 8th graders from Junior High schools, especially those from traditionally underrepresented groups. This project creates a mini technology business 'incubator' in an afterschool program at the Anaheim Union High School District (AUHSD). The project focuses on getting the students involved in exciting real-world projects that involve Engineering and Computer Science (ECS) subjects, business concepts and entrepreneurship practices. Junior-high school students participating in STEM-Inc work in groups to complete their ECS design projects. Each group is led by a student peer leader; and everyone in the group has a designated business role similar to those seen in a real company. Accordingly, both formative and summative evaluation was used to assess the student learning outcomes; and positive outcomes had been observed in preliminary research results.

1. Introduction

The STEM-Inc program sets out to inspire and encourage middle school students to pursue STEM related fields. By utilizing a company like structure in the classroom, students of different interests engaged in developing projects closely associated with the real-world. From developing applications that have the capability of saving individuals’ money on their electricity bills, to developing a partially functioning robotic arm that can pick up dog feces in a backyard, students utilized their critical thinking and problem solving skills to tackle real world problems. In addition, the STEM-Inc program sought out to break down the natural mental barriers of “I am not good enough” by having students understand the pathway of many successful entrepreneurs like Elon Musk and Steve Jobs. A pathway that is made up of hard work, failures, perseverance and persistence. In hopes to develop the students critical thinking abilities, preserve their creative thinking and improve upon their communication skills, the program mirrored the real world and inspired young minds to contribute to the advancement of humanity. Data reflected in this paper are from the first two years the program has been in place. The program objectives are as follows:
Goal 1: To engage diverse junior high students in engineering and computer science by familiarizing them with relevant career and business/entrepreneurial opportunities.

Goal 2: To help diverse students develop career-readiness skills in engineering and computer science.

Goal 3: To expand teachers’ understanding of engineering and computer science career opportunities and the skills students will require to pursue them.

2. Program Description

STEM-Inc., an afterschool program that exposes Junior High School students from traditionally underrepresented groups, to engineering concepts and entrepreneurship practices. Throughout the school year, participating students are mentored by engineering and business students from the California State University of Fullerton (CSUF), and teachers from the AUHSD. In small groups, students brainstorm and research problems within their community or a least developed country in order to find a feasible solution. Upon approval of the CSUF mentors, students work diligently to develop a partially functioning prototype and a business plan of their ideas. By the end of the school year, students showcase their projects and put their acquired business skills to the test and try to convince people that their idea is worth investing in. Engineering topics and activities that were covered are: 3d design, 3d printing, circuitry design, Arduino, MIT app inventor and how to program a robotic car to perform certain tasks. Simultaneously, students were exposed to entrepreneurship practices through a series of interactive workshops that focused on lean startup methodology, traditional venture creation, design thinking, go to market strategies, financial planning and fast pitch communication skills. The two hour long after school program was implemented across four Junior High Schools within the AUHSD.

3. Methodology

Participants

To test the veracity of this pedagogic framework, the use of a longitudinal study was implemented. Comprehensive surveys were used to measure the students’ attitude towards STEM in general and more specifically their attitudes regarding to how STEM is related to their futures, including potential career choices, using Likert-scale questions. The surveys were administered at the beginning and end of the school year. Students that were surveyed in year one and two, expressed greater interest in STEM fields at the end of the school year. Currently, year one and two surveys have been completed and year 3 surveys are currently being
administered. Additionally, personal observations of the CSUF mentors and evaluators have been documented for years one and two. The design and development research study integrates mixed methods using both quantitative and qualitative approaches to evaluate goals one to three.

Population Served Across Four Junior High School’s

STEM-Inc., in 2015-2016 had a higher proportion of Black and Latino students in comparison to the 2014-2015 school year (Figure 1). These differences are reflected below by the 51% Latino students in the Traditional group and 10% Black students in the Lean group in the current school year. STEM-Inc. is increasingly recruiting students from historically underrepresented groups in STEM careers. 48% of STEM-Inc. student participants identified as Black or Latino in Year 2, compared to 30% in year 1. 49% also identified as female in Year 2, compared to 32% of student participants in Year 1. STEM-Inc is making an effort to keep recruiting and retaining students from traditionally underrepresented populations. In Year 2, seventy percent of students identified as Hispanic or Latino. In addition, a higher portion of female students participated in Year 2 as compared to Year 1.

![Figure 1. Race/ethnicity of STEM-Inc. student participants, by year and treatment group](image)

Group Activities and Student Roles

Students throughout the year worked in small groups that emulated a start-up like environment. Students, with the help of their mentors and teachers developed partially functioning prototypes of their ideas and a business plan. Throughout the school year students engaged in several interactive activities that aimed to improve their self-efficacy. Activities introduced were: fast pitch events, design thinking workshops, prototype development workshops and workshops that were designed to reduce student fear of failure. Research in Year 2 showed that students fear of failure did not significantly change throughout the school year. In addition, students took on executive roles such as CEO, Chief Engineer, CFO, CMO; and delegated work amongst
themselves. This company like structure proved to be a huge success both in Year 1 and Year 2 of the program and many students now aspire to be engineers and business owners.

**Purpose of a student Peer Leader in STEM-Inc.**

Mid way throughout the year, the program identified eight student peer leaders from each school that have consistently shown abilities to lead a team. The students were trained in the areas of project management, time management and conflict resolution. In addition, students were encouraged to manage their own teams and make decisions that is critical for their success. From survey results one student reported “I learned how to be a more effective group member,” on their contributions. Other students reported learning “how to communicate with my group members and cooperate.” “It showed me how to work with people more appropriately”; “I learned about leadership”; and “I learned how to contribute to others and not care what people think about you”. Overall students reported “greatly benefiting” from the leadership training.

From fall to spring in year two of the program, student peer leaders significantly improved their management of time and resources (M diff=.53, p<.05) as well as listening to others (M diff=.69, p<.05, Figure 2). Peer leaders were asked to rate their agreement to 6 leadership items based on the 21st Century Skills rubric and according to a Likert scale where 1= “Strongly Disagree” and 5= “Strongly Agree”.

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<th>Total (n=16)</th>
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<tr>
<td></td>
<td>Mean (pre)</td>
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<tr>
<td>I can usually think of lots of new ideas with or without specific guidelines</td>
<td>3.56</td>
</tr>
<tr>
<td>I don't get much out of working with others (negative)</td>
<td>2.69</td>
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<tr>
<td>I can usually only think of one way to reach a goal for a project (negative)</td>
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<tr>
<td>I'm willing to voice and support an opinion, even if it will be unpopular</td>
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</tr>
<tr>
<td>I consistently manage time and resources in an efficient manner</td>
<td>3.4</td>
</tr>
<tr>
<td>I listen to others and am receptive to their ideas</td>
<td>3.88</td>
</tr>
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Engineering Activities Introduced

3D Printing

The 3D printing hands-on learning plays a critical role in the program. Not only does it allow for students to imagine and design objects utilizing Sketchup, but they learn how to print a tangible object as well. This is a project-based learning approach that has been successful in helping students design rapid prototypes of their ideas and testing them on the end user.

Visual Programming on Android

Visual programming is taught by demonstrating sample functional blocks including commands, logic, variables and more; and creating sample applications using MIT App Inventor. At this stage, in-depth coverage of computational thinking skills, including logic building, command sequencing, variables and parameters were taught by the mentors to the student participants through learn-by-doing methods. When the majority of the student participants were able to handle those sample Apps on their own, the curriculum then moves on to a Mobile App design contest, in which students worked in groups to design a Mobile App using their own ideas. In this stage, it’s mostly student self-driven with mentors just providing technical supports when needed.

C-Coding Program

In order to make C-coding fun and interactive for students at this age group, they have been instructed to learn C-coding through the programming of a robot. The robotic kits, Arduino-based Robotics Shield Kits from Parallax are used in STEM-Inc. These kits are beginner-friendly; and no prior programming experience is necessary to work on these kits. The platform for C-code to drive the robot is an Arduino microcontroller. Arduino is an open-source prototyping platform based on easy-to-use hardware and software. It provides students with a fundamental understanding of C programming as well as exposure to technologies in real-world.

Using samples from Parallax, students were taught by the mentors how to assemble the kits and integrate various electronic components including some sensors, for example distance, temperature and motion sensors, onto the kit to make robots function in different ways. Working in groups, the students then learned about basic programming in C to complete different tasks on the robot including driving/navigating the robot on its own; and instructing the robot to follow lines and avoid obstacles on the way through the use of sensors. Through practicing per mentor’s guidance, students also learned about the basics of C-programming, including syntax, logic-building, task-planning and variables and parameterizations.
**Engineering Outcome**

Seventy-nine percent of students reported that they had an increased interest in STEM activities then in comparison to their interest before the program (Figure 3). Sixty-nine percent of students also reported they are now more effective in solving science and math problems than prior to the program.

![Figure 2. Student self-report of change in STEM interest and science/math problem solving as a result of STEM-Inc. activities](image)

**Business Activities Introduced**

Throughout the program students engaged in interactive workshops that taught the fundamentals of the business world. Topics of workshops introduced are as follows.

**Lean Startup Methodology**

The lean startup methodology is a formal process that is widely used by several successful entrepreneurs. This process consists of a constant user feedback loop that allows entrepreneurs to identify areas of improvement early on in the development phase. Students across all schools engaged in activities that helped them identify problems within their community, find a solution, either through a product or service, and obtain feedback on their ideas from end users to determine if their proposed product or services meets the needs of the user. By receiving constant feedback throughout each step of development cycle, students were able to identify whether or not their idea would be profitable.
**Design Thinking**

Design thinking is a five-step cycle, that is very like lean methodology. It utilizes constant feedback from the end user to determine whether or not the product or service developed meets the users needs. Students learned how to make working prototypes of their ideas utilizing the knowledge acquired from engineering concepts.

**Fast Pitch Communication**

Fast pitch communication skills teach the fundamentals of communicating a business idea fast and effectively under 60 seconds. This form of communication has impacted the middle school students positively according to pre and post survey results. Student gained confidence in their ability to communicate in front of an audience and some even reported taking this form of communication into their presentations.

**Financial Planning**

Students learned how to financially plan the cost of their idea utilizing excel spread sheets. As a team, students tracked the cost of the parts being used for their idea, marketing budget and with this information, they calculated their projected profit or losses.

**Team Building/Management**

After attending leadership training, students learned how to effectively manage and work in teams. Students took on executive roles such as chief financial officer, chief marketing officer, chief technical officer and chief executive officer to gain an understanding of how companies operate. From observations, we have found that students were very enthusiastic about their roles and were more motivated to learn.

**Business Outcomes**

The program staff asked students to complete an 8-item self-assessment at the end of the program year regarding their degree of agreement to learning business/entrepreneurship skills from STEM-Inc. activities. Teachers also completed a similar assessment on students but for the whole classroom (i.e., one assessment for all-students). On a scale from 1=“Strongly Disagree” to 5=“Strongly Agree,” students agreed to have learned most business/entrepreneurial skills (Means ranged from 3.7 to 4.1; Figure 4).
4. Findings

Compiled research has been evaluated and compiled by Arroyo Research Services, an external evaluator. Below is a summary of findings for Year 1 and Year 2 of the STEM-Inc. program.

a) STEM-Inc. is increasingly recruiting students from historically underrepresented groups in STEM careers.

b) Forty-eight percent of STEM-Inc. student participants identified as Black or Latino in Year 2, compared to 30% in Year 1. Forty-nine percent also identified as female in Year 2, compared to 32% of student participants in Year 1.

c) Participants were generally satisfied with and benefitted from program activities. Around 90% of student participants were satisfied or very satisfied with the afterschool and fieldtrip activities.

d) College mentors and teachers agreed that fall professional development activities enhanced their content knowledge, teaching skills, and professional growth to some extent.

e) 79% of participants agreed or strongly agreed that they experienced a greater interest in STEM activities over the course of the program.
f) STEM-Inc. is developing ECS career-readiness skills among participating students, per self-report.

g) STEM-Inc. training and after school sessions are increasing teacher confidence with ECS concepts.

5. Acknowledgements

The research in this paper was supported by an ITEST grant from National Science Foundation with grant number DRL #1433851. In addition, the authors would like to thank all project staff including the AUHSD teachers and CSUF college student mentors, and our project evaluator: Arroyo Research Services for their contributions to this research.
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ABSTRACT

This study aims to capture a deeper understanding of the phenomenon that the school administrators experience within the first year of being transitioned out of the classroom and into the administrative office. Although the transition from teacher to administrator would seem to be just a straightforward change in roles and responsibilities, studies have shown that the transition is more than a change in the physical location of office or a change in the position title. The transition would mean a discontinuity of the teacher’s life inside the classroom and the beginning of a new life in the administration office.

Although it may seem logical for a faculty member to move out of the classroom and become a school administrator, the transition to the administrative post, according to the literatures reviewed, may not always be a smooth and easy ride as it requires new ways of thinking, communicating, behaving, emoting, and seeing the educational world and one’s place in it. But given the need to field effective and efficient administrators to manage the operations of the schools, and that the best source of school administrator-talents are the incumbent faculty members, the ability of the teachers to successfully transition to the administrative post within the first year of movement between offices is becoming a concern of the school management. To address this concern, there is a need to surface how the administrators lived through their experience of the transition, and then be able to make sense of that experience through an interpretative account of what it means for the school administrators to transition in their particular and unique transition contexts. As such, the study hopes to determine the answers to its
main question: *What is the essence of the transition experience of school administrators from teaching?*

The study employs an Interpretative Phenomenological Analysis (IPA) to reveal the lived experience of the teachers transitioning to administrative posts. IPA’s primary goal is to investigate so as to understand what it is like to experience the phenomenon from the point of view of the participants.

IPA’s approach is *phenomenological* in that it involves detailed examination of the participant’s life-world. It attempts to explore personal experience and is concerned with an individual’s personal perception or account of an object or event. The analytical process in IPA is often described in terms of a *double hermeneutic* or dual interpretation process because firstly, the participants make meaning of their world, and secondly, the researcher tries to decode the participants’ meaning making. IPA relies upon the principle of *idiography* - an in-depth analysis of single cases and examining individual perspectives of study participants, taken in their own unique contexts.

The study engages 5 full-time administrators, from 5 different schools, with no prior experience in administration. They have been moved out of teaching, and are currently functioning as administrators for less than a year, to date.
Through the use of semi-structured, in-depth, one-on-one interviews, the researcher will generate rich, detailed, and first-hand descriptions of how individuals are experiencing the transition as the phenomenon, enabling the researcher to conduct an in-depth exploration of the lived experiences of the participants, and acquire the participants’ accurate account of how they make sense of their experience.

For the purpose of this study, the researcher composed an interview schedule that covers three main topic areas: 1) Description of the Transition; 2) Experience of the Transition, and 3) How Transition Fits in with the Participant’s Life. The questions will elicit the sensory perceptions, mental phenomena (thought, memories, associations, fantasies), and individual interpretations of the participants about the phenomenon.

IPA aims to give evidence to the participants’ making sense of the phenomenon being investigated, at the same time, document the researcher’s sense making. In general, IPA offers a set of flexible guidelines in a form of analytic stages, which this researcher intends to adapt, in order to unfold an analysis of the study.

Forewarned by the literatures about the complex and time-consuming activity that the data analysis method of the IPA framework may bring, this researcher has have also been made aware by the same readings that the data analysis methods can be an inspiring activity as the researcher immerse herself in the data and try to step into the participants’ shoes as far as
possible. To achieve this state, the following stages of data analysis will be conducted to usher the expected results of the study:

**1st Stage: Multiple Reading and Making Notes:**

By reading through the transcripts of the interview and listening to the audio recording a number of times, the researcher will immerse himself in the data to provide him with new insights. The researcher’s notes, observations and reflections will focus on the following: Content; Context; Initial interpretative comments; Comments on personal reflexivity; Distinctive phrases and emotional responses.

**2nd Stage: Transforming Notes into emergent Themes**

The aim of this stage is to transform the notes into emerging themes. The researcher will formulate concise phrase at a slightly higher level of abstraction which may refer to a more psychological conceptualization.

**3rd Stage: Seeking Relationships and Clustering Themes**

This stages involves looking for connections between emerging themes, grouping them together according to conceptual similarities, and providing each cluster with a descriptive label. The researcher will develop a final list of clustered themes which may comprise of numerous superordinate themes and subthemes.
4th Stage: Writing Up an IPA Study

This narrative account of the study will involve taking the identified themes and write them up one by one which will include both the participant’s account of his experience in his own words, and the interpretative commentary of the researcher. The narrative account may engage several levels of interpretation, from low-level interpretation of data to a highly detailed, interpretative and theoretical level, that may generate new insights.

The Conclusion:

The narrative account will be followed by a discussion section which relates the identified themes to existing literature. Reflections on the research will be included in the section, as well as comments on implications of the study, its limitations, and ideas for future development.
A Phenomenological Study on

The Lived Experience of Teacher’s Transition to Administrative Posts

Introduction and Background

The demand for people to lead and manage educational institutions is increasing as the need to educate the youth in the Philippines become progressively more important for everyone. Filipinos, especially the start-up families who are moving to newly developed communities, want their children to have access to schools where their children will be educated and prepared for the future.

According to the 2012 Census of Philippine Business and Industry report on Private Education for Establishment, as released by the Philippine Statistics Authority on November 2014, and posted at https://psa.gov.ph/content/2012-census-philippine-business-and-industry-private-education-establishment-all-employment#sthash.EaX70BeE.dpuf, there are 13,921 private educational institutions that are established nationwide, of which 67.4% are schools operating on the basic education level, while 18.4% are offering higher education level, and 14.1% are other education services and educational support. While the report shows that more than half of the total number of private educational institutions are already focused on the basic education level offering pre-school, primary/elementary education, and secondary education, there is still a need to provide more schools in order to house 24 million K-12 students (DepEd’s school enrollment statistics, December 2015). In addition, ICEF Monitor, a dedicated market
intelligence resource for the international education industry, featured in their 2013 report posted at http://monitor.icef.com/2013/08/philippines-creates-opportunities-in-overhaul-of-k-12-education-system/ that the basic educational landscape is expected to expand further as the demand for access in education gets higher. Specifically, the report highlighted the Philippine Government’s 10 point education agenda where 2 out of the 10 point agenda focused on building more schools and expanding government assistance to private education in order to address the severe overcrowding in Philippine schools and the shortage of classrooms. In fact, the same report stressed that DepEd’s Public Private Partnership for School Infrastructure Project (PSIP) will give schools the physical space they need and “provide the private sector the business opportunity to invest in the design, construction and maintenance of classrooms.” This strong positive outlook in the private education industry - to grow and expand by establishing educational institutions across the nation - presents a challenge in recruiting and staffing, not only its faculty members, but more so, its administrative team who will administer and manage the newly established schools in its day-to-day operations.

There are a number of source areas where to recruit qualified candidates for a teaching position, and they can easily be accessed. However, finding qualified school administrators is becoming increasingly difficult (Clifford, 2012; Palm, 2006). There are several reasons for the increasing difficulties to source and place qualified school administrators to administer and manage the schools, but undeniably one effective source of school administrator-talents are the school teachers who are willing to be moved out of the academic department, and assume a post in the school administration office. With this recruitment and placement strategy at hand, the school’s challenge now shifts from sourcing school administrator-talents elsewhere to
transitional the willingly teachers to the school administrative posts, and let them be part of the team to administer and manage the school operations.

For the purpose of this study, the school administrative posts are identified to be the functional positions in the school operations such as: school superintendent, principal, assistant principal, district school officer, site campus or school director, registrar, institutional (external/internal) affairs officer, marketing officer, human resources officer, and other named positions under the administrative set-up of a school. The position is performed by an incumbent administrator on a full-time administrative capacity for one year or less, and no longer has any teaching load assignments.

Transitioning from a teaching position to an administrative post would mean a discontinuity of the teacher’s life inside the classroom and the beginning of a new life in the administration office. The move will require new skills, behaviors and attitudes as the administrator assumes the functional post in office. This transition point in the work-life of a school administrator is what this researcher intends to examine.

Although, there are no publicly available studies regarding the school administrators who made the direct transition from being a teacher, previous researches, articles, and journals on the topic area of change and transition were considered to provide context and frame of reference to this study.
Literature Review

Ideally, a successful tenured teacher moves up naturally and smoothly to become a school administrator without really going through much transition challenges, primarily because he has the understanding of the issues that impacts the students’ school life. He also has the working knowledge of the factors that will improve the learning environment that is needed by the students to achieve their academic goals, as well as the growth and developmental needs of the teachers (Palm, 2006). In such an ideal world, one where the schools are not seen as a business unit, the teachers transitioning to the school leadership role believes that all they need to progress in their career is to teach well. They also believe that they do not have to leave behind their faculty mindset, that they still are faculty members - they think and behave like faculty members, they present themselves and are accepted by other faculty as colleagues, and they assume that they can easily return to full-time faculty status when the administrative stint has been completed (Palm, 2006; Griffith, 2006). On the other hand, Armstrong (2009) highlighted that the promotion from teaching to a school administrative function represents a significant milestone within the personal and professional landscape of the administrator. And although the move is often seen as the logical career pathway to be at the management level, it carries different meaning for the individuals and their institutions as well:

On the Personal Level. A movement from one position to another is often an exciting period which marks the successful culmination of years of teaching and preparation. Armstrong (2009) emphasized that the career move of the school administrator signals that his aspirations and
ambitions have been accomplished, dreams have been fulfilled, hard work and loyalty have been rewarded, and a promising future is in the horizon.

However, while becoming an educator is one of the most rewarding and challenging experience for those called to the profession, assuming the position of a school administrator can be a heady experience – true for anyone assuming a career advancement (Wilhelm, 2011). The movement from one position to another would mean letting go of the old ways, the old identity of being a teacher, and embracing the new identity of being a school administrator (Bridges, 2003).

**On the Professional Level.** According to Armstrong (2004), the transition from teacher to school administrator signals an elevation within the professional hierarchy. The teacher’s leadership skills have been recognized, increased professional status have been granted, and access to the corridors of power and influence are imminent.

As the teacher makes a conscious decision to make the move out of the faculty room and into the administrative office, he will find himself in the web of transitioning roles from managing a classroom and the number of students in it, to managing a number of classrooms with hundreds of students in it. But Armstrong (2009) highlighted that with the power and influence the administrator has been granted with, he is expected to manage the school operations and make things happen through, and with, the people.
On the Institutional Level. Armstrong (2004) also pointed out that the transition, the career move from teaching to administering and managing, represents the official stamp of approval for the school administrator to gain access in the inner working world of administration.

As part of the administration team, the school administrator will have a “bird’s eye view” of the institution’s operation. He will be exposed with qualified, advance, information which will help him manage the issues and challenges of the school operations. Armed with the business perspective of the school operations, the school administrator is expected to lead and manage the school’s operation to its maximum potential (Armstrong, 2004).

Planned Change

Transitioning from a teaching position to an administrative post would mean a discontinuity of the teacher’s life inside the classroom and the beginning of a new life in the administration office. This move will require new set of skills, behaviors and attitudes as the administrator assumes the functional post in office. More specifically, the administrator will have to change his ways of thinking, communicating, behaving, emoting, and seeing the educational world and his place in it (Armstrong, 2014; Bond & Naughton, 2011; Armstrong, 2009; Griffith, 2006).

Change occurs as a process, which takes place both at the individual level and the organizational level (http://www.change-management.com/tutorial-7-principles-mod8.htm). Change is a common thread in the lives of every individual, and it also runs through all organizations regardless of its industry, size and age. (https://www.mindtools.com/pages/article/newPPM_94.htm). Change is always present. It is inevitable. It is constant. It is dynamic. Our world is changing fast, and so is our lives at work,
in the community, or even at home. Understanding the process of change enables a person to make the necessary transition needed to make a successful change (Harrington & Terry, 2003; Johnson, 2002).

William Bridges (2003), a leading author on change and transition, clearly distinguished change from transition. He defined change as situational and can be planned, like moving to a new site, having a new boss, or assuming a new work role. Whereas, transition is a psychological process of letting go of the past and taking up new set of behaviors and ways of thinking. According to Bridges (2003), Change is external. It can be imposed from the outside. Transition is internal to the individual. It is about the process by which the individual approaches change – how he deals with it, how he responds to it, how he adapts to it. Our responses to change are affected by the situations that is governing our lives – what needs we have or what our experiences have been (Harrington & Terry, 2003). These change triggering situations will always imply the need to alter or modify an individual’s behavior so as to be able to face the challenges needed to make a successful change (Harrington & Terry, 2003, Bridges, 2003, Bond & Naughton, 2011, Johnson, 2003; Lundin, Paul & Christensen, 2000). To this thought, Bridges (2003) emphasized the distinction between change and transition by saying that “unless transition occurs, change will not work”.

The process of change is complex since it involves alteration and modification of behaviors. But Kurt Lewin, a physicist as well as social scientist, explained his theory of planned change using the analogy of changing the shape of a block of ice. His model is one of the cornerstone models for understanding organizational change which was developed back in the 1940s, and
still holds true today. His model, as presented in Figure 1, is known as the Unfreezing – Change – Refreezing, which refers to the three-stage change process he describes.

**Figure 1: Kurt Lewin’s Process of Planned Change**

![Diagram of the Unfreezing - Change - Refreezing process]


Understanding why the change must take place signals the beginning of a successful change process. As Lewin put it, "Motivation for change must be generated before change can occur". The following details each stage of the planned challenge (Harrington & Terry, 2003; [https://www.mindtools.com/pages/article/newPPM_94.htm](https://www.mindtools.com/pages/article/newPPM_94.htm)):

1st Stage: Unfreeze

- This first stage of change involves preparing to accept that change is necessary, which involves break down the existing mindset before building up a new way of operating.
- Key to this is developing a compelling message showing why the existing way of doing things cannot continue. These show that things have to change in a way that everyone can understand.
Unfreezing is necessary because before any change can occur, the people must believe the change is needed.

2nd Stage: Change

- After the uncertainty created in the unfreeze stage, the change stage is where people begin to resolve their uncertainty and look for new ways to do things. People start to believe and act in ways that support the new direction.
- The transition from unfreeze to change does not happen overnight. People take time to embrace the new direction and participate proactively in the change.
- It is during this 2nd stage of change that transition occurs. It is the period where the individual has to let go of the past, accomplishing endings of the previous state, so as to make room in accepting new beginnings.
- As the individual goes through this stage, he will experience many effects. Some may be expected and anticipated by the individual, but some effects may not be expected. Nevertheless, the individual copes with and adapts to change in their own unique ways.

- **Elizabeth Kubler-Ross**, as discussed by John Adams, John Hayes and Barrie Hopson (1976) presented a related change model that focuses on how the individual copes and adapts to the effects of change, and the issues that he faces throughout his personal transition. This model is known as the **Transition Curve**, presented in **Figure 3**, and will be discussed later in this chapter.
3<sup>rd</sup> Stage: Refreeze

- When the changes are taking shape and people have embraced the new ways of working, the organization is ready to refreeze. The outward signs of the refreeze are a stable organization chart, consistent job descriptions, and so on.

- The refreeze stage also needs to help people and the organization internalize or institutionalize the changes. This means making sure that the changes are used all the time; and that they are incorporated into everyday business.

- With a new sense of stability, employees feel confident and comfortable with the new ways of working.

Role Transition

*Role* is referred to as the function assumed by a person in a particular situation (Harrington & Terry, 2003). Each member in an organization occupies a specific position which relates to other positions in the organization. In the organization every person is expected to behave in a particular manner while performing a specific role. A *role* is a set of connected behaviors, rights, obligations, beliefs, and standards as conceptualized by actors in the organization (Kumar, Kaur, & Kalra, 2013). A person is said to have grown and developed into the role soon as he learns to adapt to the expectations of the job. Particularly, if he performs his functions more than what he is expected to deliver; he has displayed the knowledge and expertise required of the job; and if he displays the behaviors that are inherent to the role he is performing. With all the displayed Knowledge, Skills, Attitudes and Habits (KASH) on the job, the individual is said to have developed his competence needed to effectively function the specific role he has been assigned with (Harrington & Terry, 2003; Kumar, Kaur, & Kalra, 2013).
When organizations change in response to the business needs called for by its operations, it becomes inevitable that the role of people in the organization are also called for to change.

*Role Change* consists of adding up functions into the current role, expanding the scope of the role, dropping an old role, or modifying the behaviors associated with the role. (Harrington & Terry, 2003). On the other hand, a transition of roles may also be called for. According to Harrington & Terry (2003), *Role Transition* “refers to a passage or a shift from one place to another or from one role to another”. This move indicates a period of change, oftentimes it is triggered by a major change in the organization leading to the need to let go of some skill sets and abilities, and then acquire a new set of KASH – new way of thinking, behaving, emoting, and communicating.

**The Roles of the Teacher vis-à-vis the Roles of the School Administrator**

Many journal articles and studies have focused on the role transition of the teacher to a school administrator: Griffith (2006); Palm (2006); Armstrong (2009), Borba (2009); Smith, Rollins & Smith (2011); Bond & Naughton (2011); White (2012); Armstrong (2014). Most of these articles and studies have examined the teachers’ motivation to move from one job role to another; the administrator’s passages and processes or phases that they go through when they move to a new role; the strategies needed to be successful on the job; the coaching needed in managing transitions; and the support and development needed to make the incumbent effective on the job. In all of these articles and studies, the underlying premise that was magnified is that a good teacher will make a good school administrator (Palm, 2006; Borba, 2009; Armstrong, 2014). However, it can also be gleaned from these articles and studies that the roles and responsibilities of the teacher are very different from the roles and responsibilities of a school
TEACHERS’ TRANSITION TO ADMINISTRATIVE POSTS

administrator and therefore, the practice of their new role will bring all sorts of new revelations and change perspectives which they are unprepared for (Palm, 2006).

According to Armstrong (2009), the school administrator who come from the structured teaching environment, oriented with defined tasks, work relationships, and the predictability of a prescribed work hours are generally unprepared for the amorphous nature of their administrative role and the variety of conflicting expectations and tasks that surrounds it. Table 1 details the roles and responsibilities of the teacher vis-à-vis that of the school administrator as posted in the job profile sites.

Table 1. Roles and Responsibilities of Teacher vs. School Administrator

<table>
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<th><strong>TEACHER</strong></th>
<th><strong>SCHOOL DIRECTOR</strong></th>
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<td>(<a href="http://work.chron.com/role-teachers-education-8807.html">http://work.chron.com/role-teachers-education-8807.html</a>)</td>
<td>(<a href="http://learn.org/articles/What_are_the_Job_Duties_of_School_Administrators.html">http://learn.org/articles/What_are_the_Job_Duties_of_School_Administrators.html</a>)</td>
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**Planning**

- Also a learner, constantly taking classes and attending professional development sessions to learn the latest best practices and strategies for effective teaching.
- Collaborates with other teachers to gain new ideas for teaching, planning grade-level instruction and

**Set School Budgets**

- Responsible for overseeing their school's budget. Need to make sure that each department receives adequate funding without spending more money than the school can afford.
combining subjects to enhance the learning experience.

- Analyzes test results and other data to help determine the course of their instruction and make changes in their classrooms.
- Designs lesson plans to teach the standards and provide engaging activities, while taking into account each student's interests and instructional needs.

**Instructions**

- Instead of just lecturing in the classroom, teachers are facilitators of learning, providing students with the information and tools they need to master a subject.
- Like tutors, working with small groups of students or individual students within the classroom or after class.

<table>
<thead>
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<th>Coordinate Class Curricula</th>
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<tr>
<td>- Help teachers structure the curricula for their classes and align their lesson plans.</td>
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**Assist with Student Behavior Management**

- Responsible for meeting with teachers and parents to help keep students' behavior under control.
- Make rules and procedures that cover the entire school as well as behavior plans for individual students who regularly cause trouble.
- Help design programs to keeps schools safe and free of drugs and alcohol.

**Other Responsibilities**

- Works with school committees, including academic boards, governing bodies and task groups;
- Assists with recruitment, public or alumni relations and marketing activities;
• Play the role of evaluators, constantly assessing students' abilities through formal and informal assessments, providing suggestions for improvement and assigning grades.

**Student Interaction**

- Interacts with students.
- Leaders in the classroom and in the school, earning the respect of students and setting a positive example.
- Disciplinarians, doling out fair and consistent punishments to students who break the rules.
- Shows concern for students.
- Has the power to build up or tear down a student's self-esteem and make a student's day or ruin it in an instant.
- Fills in the role of a counselor, a surrogate parent, a nutritionist and

• Administers the 'student lifecycle' from registration or admission to graduation or leaving;
• Provides administrative support to an academic team of lecturers, tutors or teachers;
• Drafts and interprets regulations and deals with queries and complaints procedures;
• Coordinates examination and assessment processes;
• Maintains high levels of quality assurance, including course evaluation and course approval procedures;
• Use information systems and prepare reports and statistics for internal and external use;
• participate in the development of future information systems;
• Contribute to policy and planning;
• Manage budgets and ensure financial systems are followed;
• Purchase goods and equipment, and process invoices;
• Supervise other administrative staff;
someone who has the best interests of every child at heart.

**Other Responsibilities**

- Chaperones at school functions and coaches of school sports.
- Monitors at lunch and recess and serve as fundraisers for field trips and school supplies.
- Plays the role of interior designer, making sure their classrooms are set up to support learning and act as artists when they update their bulletin boards and other displays.
- Liaise with other administrative staff, academic colleagues, teachers and students;
- Communicate with partner institutions, other institutions, external agencies, government departments and prospective students;
- Organize and facilitate a variety of educational or social activities.

**The Transition Challenge**

Although the transition from teacher to school leader would seem to be just a straightforward change in roles and responsibilities, Watkins (2014) and Armstrong (2009) discussed that the transition is more than a change in the physical location of office or work place, nor is it just a change in the position title. They noted that role transitions are demanding as it requires new ways of thinking, communicating, behaving, emoting, and seeing the educational world and one’s place in it.
Kane and Barbaro (2015); Watkins (2014); and Wilhelm (2011) pronounced in their writings that although it may seem logical for a faculty member to move out of the faculty room and become a school administrator, the transition to the administrative post may not always be a smooth and easy ride as it takes a lot of time and energy from the school administrator to make the shift in roles than they are expected to. In fact, the studies of Bond and Naughton (2011), as published in the *International Coaching Psychology Review*, stressed that transition into a new role, specifically the change from a technical functional role to an administrative or a management role, which involves moving away from a role that emphasizes functional competence and moving to one that requires a broader mix of technical, interpersonal, and political skills and activities, can be extremely challenging to navigate. As a result, some administrators are at risk of destabilization and derailment, which may involve failure in the transition phase. It may even spell the end of a promising career. In fact, change and transition expert William Bridges (2003) underscored that the high failure rate of change in individuals to a new post may be attributed to the individual members’ inabilities to make the psychological adjustments. The same was highlighted by Kane and Barbaro (2015) as they cautioned to note that transitions are major events affecting every member of the school community, such that a poorly handled transition may greatly affect both the school community’s morale, as well as the individual’s personal motivation.

The school administrator is expected to advance into the administrative function and be effective on the job the moment he has been appointed, or he has voluntarily accepted the assignment of the administrative post. Everyone in the school organization – the school board, the peers, the school faculty and staff – expects the school administrator to make an impact on
the job within the first few months into the new role. Kane and Barbaro (2015) suggests that the transition process of the school administrator is to be within the first quarter of being in the position. Bond and Naughton (2011) underscored on their studies they have conducted on managing transitions, which was anchored on DDI’s (Development Dimensions International) Selection Forecast 20004-2005, suggested the timeframe of an individual to become fully functional in their new jobs is within 3 to 4 months. In addition, Watkins (2003) highlighted that an individual in a new job position needs 90 days to transition into the a new role. Although, the three-month time frame is not written in stone, the period should be a guide for the administrators to mark the important milestone they are expected to achieve while they are in transition. As they advance into the administrative role, the school administrator is expected to gain traction on his new job function (Watkins, 2003).

Phases of Transition

*Role Transition* happens when an individual moves or shifts from one role to another which entails a conscious ability to change the way one thinks and acts (Harrington & Terry, 2003). According to Bridges (2003), change is different from transition. He defines *change* as a “situational shift”, like moving to a new site, having a new boss, joining a new team, having a new role to perform. But he describes *transition* as “the process of letting go”. It is the process of ending the current reality, the previous identity, the old situation that the individual has before the change. Transition therefore, based on the context presented by Bridges (2003), acts as the link between the current and the desired state of the individual’s being. Transition is the way individuals come to terms with change.
The transition process was described in three phases by Bridges (2003), and is presented in Figure 2.

**Figure 2: William Bridges’ Phases of Transition**

![Diagram of William Bridges’ Phases of Transition](source: Bridges (2003), Managing Transitions, Making the Most of Change)

**Phase 1: Ending, Losing, Letting Go**

The first phase of transition involves an ending where the individual faces the fact that he will have to leave behind his current state of being. This conscious decision to let go of the old situation will enable him to move and pick up the new situation.

Harrington & Terry (2003), expounded on Bridges’ ending phase of the transition highlighting four aspects of endings:

a. **Disengagement** – This aspect of the ending phase involves the separation of the individual from the familiar place within the social order. At this phase, the
individual is voluntarily or involuntarily disengaged from the activities, relationships, places, or roles that have been familiar and important to him.

b. **Disidentification** – This aspect highlights the individual’s loss of self-definition. This aspect is best described as the person goes through the process of finding out who he is now. The old identity overpowers the transition of the individual to the new identity as a result of having difficulty to let go of what he was before.

c. **Disenchantment** – This is the aspect where the individual realizes that his views and beliefs of the past are no longer real. The individual already recognizes that his old views of his situation may be sufficient in its time but may not be the case now.

d. **Disorientation** – This aspect of the ending underscores the lost and confused feeling that a person experiences when in transition. The individual feels that there is no reality in the events that are happening to him. He may feel that nothing feels right or the same as they used to.

**Phase 2: The Neutral Zone**

During this second phase, the individual feels that he is “in limbo”, a temporary state of emptiness or even a loss in-between his state of affairs. This is best described like how a trapeze artist who has to let go of her first swing, but not yet caught his second. He exist in a momentary suspension, in midair, between the past and the future (Harrington & Terry, 2003). At this period, where the past is gone but the predicted future has not yet arrived to replace it, is where the individual appears to be in a void but is actually contemplating important inner thoughts (Harrington & Terry, 2003).
Although the neutral zone may feel and seem to be a risky place to be in, a lot of opportunity may come into play because of the space that is left open for creativity and innovation that the individual can engage himself with. It is this in-between state where critical psychological realignment may take place in the individual’s innermost self.

Bridges (2003) presented the three functions of these phase and are expounded by Harrington & Terry, (2003):

1st Function – The individual gives in to the emptiness and does not try to escape it. He surrenders.

2nd Function – This phase gives opportunity for the individual to renew and recharge, and possibly redirect himself towards working out, in new creative ways, the acceptance and adaption of the mandated change.

3rd Function – Change in perspective. While it may seem that the neutral zone is a chaotic phase, the individual realizes that this is a temporary state. Just as the trapeze artist’s preparation and training tells him that the next swing will be a mere pause and a reach away, so as the learned skills and experience of the individual can help him accept that what comes next to all these seemingly chaotic and confusing events will come sooner or later. Understanding this function will provide reassurance to the individual that the neutral zone will end and that the change will take place.
Phase 3: Beginnings

The final phase of Bridges’ model for transition is called Beginnings. Bridges (2003) referred this phase as a psychological phenomenon. This phase takes place when the individual accepts the reality of change – he is ready to make a commitment to do things the new way and see himself as a new person.

Bridges (2003) differentiated start from beginning. He said that Start involve new situation. It takes place on a schedule as a result of a decision. Beginnings, on the other hand, involves new understanding, new values, new attitudes and new identities. It is the final phase of the transition process, but the timing of a beginning does not follow the implementation date of any decision. “Beginning follow the timing of the mind and the heart” of the individual who is going to start the change.

At this phase, individuals may feel relieved to have finished what had been a confusing or disturbing neutral zone, and they are just eager to settle into the new routine that change can provide. However, there is no clear path as to the time that can be pointed at to say that the new beginning is at hand. Instead, it happens when the transition process allows them to happen naturally. Transition is not subjected to anyone’s will (Bridges, 2003; Harrington & Terry, 2003). This is the reason why it is important to understand the transition process and where the people are, as they go through the journey, over time.
The Transition Curve

In the book *Transition: Understanding and Managing Personal Change* by John Adams, John Hayes and Barrie Hopson (1976), the authors highlighted that as people go through the transition phases, they experience a variety of emotional states. Transitions typically pass through the cycle of reasonably predictable stages, described in Figure 3. In each case, it is suggested that it will be necessary for the individual to work through all of the stages if the transition is to be successfully completed.

This change model, known as the Transition Curve developed by Elisabeth Kubler-Ross in 1969 (see Figure 3), and detailed by John Hayes and Peter Hyde, reflects the variations in the degree to which an individual feels as he goes through his transition process – coping and adapting to the change situation.

**Figure 3: The Transition Curve**

![The Transition Curve diagram](source-image)

**Source:** Barrie Hopson and John Adams (1976), *Towards an Understanding of Transition*
Immobilization

The initial phase of a transition is experienced by many people as a state of shock: of being overwhelmed, frozen, paralyzed, unable to reason, plan or act. There may be an initial expression of grief, anger or euphoria - hence the mood curve may go up or down. The intensity of this phase will be influenced by the degree of preparedness and the desirability of the transition - it will be greater for an unexpected, undesirable change.

Denial of Change

This phase is characterized by a retreat from the reality of the change. Negative changes may be denied or trivialized and attention may be displaced onto other more immediate but less important matters. Energy and activity are devoted to the known and the familiar. Positive changes may induce euphoria and an unwillingness to consider any possible negative consequences. Denial may be highly functional if it provides time to retreat from the reality of a crisis and allow our internal forces to regroup to later face the challenge. However, if maintained for long, denial inhibits the ability to deal with the reality of a change.

Incompetence

Eventually the reality of the change becomes apparent and this often provokes a feeling of frustration, and even depression. This is associated with feeling that the situation is beyond one’s control. The phase may be characterized by anger, sadness, withdrawal and confusion. This drop in mood occurs even in changes which were initially embraced enthusiastically when the practical difficulties are faced. It is in the depression phase therefore that the change really starts
to be experienced as stressful. If the change was a voluntary one, this may be the point at which the person gives up. In involuntary changes, the person may seek to leave the situation.

**Acceptance of Reality**

This phase involves accepting reality for what it is. It implies a clear “Letting Go” of the present or past. This may be experienced as a “little death” and often entails a process of mourning. It can help at this point to remember that the lowest ebb is the turn of the tide.

**Testing**

A more active, creative, experimental involvement in the new situation starts to take place. New ways of behaving and being are tried out. More energy is available but anger and irritability may be easily aroused if the new behavior is not successful. This phase may involve trial-and-error behavior or a more active cycle of experience-review-conclude-plan may be employed. As some patterns are found which seem to work, this phase gradually gives way to the next.

**Search for Meaning**

Out of the testing process come some new ways of being and behaving which are gradually adopted as new norms. At this stage, internalization occurs. The transition is complete when the changed behavior is now normal and unthinking and is the new natural order of things. Ideally the past has been left behind to an appropriate extent and NO “unfinished business” remains.
Integration

This is a more cognitive process involving reflecting on what all the activity and emotion has really meant. It is at this point that learning and personal growth from change may become apparent, which may benefit future transitions.

Conceptual Framework

According to Dai Williams, a chartered occupational psychologist, transition theory originated from the need to understand how people go through bereavement, family crisis, stress and depression. These theories were promoted by authors like Colin Parkes, Thomas Holmes and Richard Rahe, Elisabeth Kübler-Ross and others. By 1970 the US Peace Corps was using it for culture shock briefings to volunteers. Thereafter, Hopson & Adams (1976) recognized transition as a primary cause of stress. Schlossberg, Waters and Goodman (1995) developed its application to counselling. Bridges (1995) and others applied the concept of transition to organization change settings, with shorter stage models but describing essentially the same process.

With all these theories and models of transition that were presented by the different authors, one thing is apparent - transition is a journey that people go through, faced with challenges that they need to overcome, over a period of time. According to the journal articles and transition & change management authors, it is only when the people within the organization have made their own personal transitions can an organization truly reap the benefits of change (Bridges, 2003; Harrington & Terry, 2003; Johnso, 2002).
The primary focus of many organizations (including school organizations) today is to rethink business priorities, determine new approaches, implement process, move resources—especially human resources. However, despite the energy and the effort these organizations expend to determine how it can best achieve change, seldom do they consider the impact that the change has on the individual. Specifically, they fail to consider how their people (their most valuable resource in the organization) approach and adapt to change and how their acceptance and adaptation to change will create an impact on the organizational level (Harrington & Terry, 2003).

The concept of transition may be useful in capturing the journey—how the teacher approach and adapt to the challenges and issues that he goes through as he leave his old identity of being a teacher behind, and he then accepts his new identity as an administrator. Becoming aware of the individual’s concerns and issues during the period of transition may help the school management to propel change forward.

Figure 4 below presents the conceptual framework that this study will employ in gaining a deeper understanding of the transition journey that the administrator goes through, and what does the transition experience mean to him.
The Research Gap

A number of management books have been published highlighting and stressing on managing transition and change, and how it impacts the individual and the organization. Different transition theories have been formed to capture and describe how individuals go through their transition journey since these are associated with significant life events such as changes on the individual’s role or environment that require radical restructuring of the individual’s view of himself, and of his world.

On the other hand, there are a number of studies that focused on the transition of teachers to school administrator role. Most of these studies highlighted on their personal and professional perspectives of the transition; the impact of their transition to the school organization; the impact
of their transition out of the faculty; their school leadership identity; and the support and development needed for an effective transition. Despite all of these studies, there has been no study conducted on the lived experience of teachers’ transition to school administrative posts. It is the attempt of this study to fill in the gap and provide a better understanding of how teachers can transition successfully into the school administrative function.

**Problem Statement**

Given the need to field effective and efficient school administrators to manage and administer the operations of the schools that the education industry intends to aggressively establish, and that the best source of school administrator-talents are the incumbent faculty members, the ability of the teachers to successfully transition to the administrative post is becoming a concern of school management. In order to address this concern, there is a need to surface how the administrators lived through their experience of the transition from teaching to administering and managing the operations of the school, and then be able to make sense of the administrators’ lived experience through an interpretative account of what it means for the school administrators to go through the transition experience, in their particular and unique transition contexts. The context of the transition is of critical interest to this researcher in her quest to discover how school administrators can assume the position they have been moved into, so as to be able to advance the school’s operations at an optimal level. As such, the study hopes to determine the answers to its main question: *What is the essence of the transition experience of school administrators moving-in from teaching?*
Purpose of the Study

The purpose of this study is to capture a deeper understanding of the phenomenon, the lived experience of the school administrators, as they go through their personal transition experience within the first year of being assigned to the position. By gaining a better understanding of the school administrators’ process of transition, both the school management and the incumbent school administrator will be able to do a better plan and execute a successful transition process.

Significance of the Study

By gaining insights from the shared stories of the school administrators on their lived experiences, the study hopes to shed light for the school board and its management team to understand how the school administrators could successfully and completely transition into their administrative function, so as to be able to advance the school’s operations at an optimal level. In addition, this study hopes to contribute to the educational leadership and management studies by adding discussions and increasing the level of awareness of school organizations in managing and leading its most valuable resource - its people.
Methodology

Research Design

The study employs an Interpretative Phenomenological Analysis (IPA) to reveal the lived experience of the teachers transitioning to administrative posts. IPA’s primary goal is to investigate how participants make sense of their personal and social world. It draws upon the fundamental principles of *phenomenology, hermeneutics and idiography* (Pietkiewicz & Smith, 2012).

According to Smith and Osborn (2007), the approach is *phenomenological* in that it involves detailed examination of the participant’s life-world. It attempts to explore personal experience and is concerned with an individual’s personal perception or account of an object or event, as opposed to produce an objective statement of the object or event itself. Furthermore, Smith and Osborn (2007) emphasized that the research exercise is a dynamic process with having the researcher play an active role in the process as he tries to get close to the participant’s world to get an ‘insider’s view’ of the experience. But the authors also pointed out that one cannot directly and completely do this process since access to the participant’s world depends on, and is complicated by, the researcher’s own conceptions. However, through interpretative activity, the researchers will make sense of the participant’s world.

Phenomenology, developed by Edmund Husserl, is concerned with attending to the way things appear to the individuals through their experience and IPA aims to, according to Pietkiewicz & Smith (2012), identify the essential components of the phenomena or experiences which make them unique or distinguishable from others. By the use of eidetic reduction, the
researcher tries to recognize what essential components make a given phenomenon special or unique.

Pietkiewicz & Smith (2012) said that the analytical process in IPA is often described in terms of a *double hermeneutic* or dual interpretation process. This is because firstly, the participants make meaning of their world and secondly, the researcher tries to decode that meaning – make sense of the participants’ meaning making. This two-stage interpretation process directly connects to hermeneutics and the theories of interpretation (Smith and Osborn, 2007; Pietkiewicz & Smith, 2012). In other words, IPA is concerned with trying to understand what it is like to experience the phenomenon from point of view of the participants.

IPA relies upon *idiography*. Pietkiewicz & Smith (2012) defines idiography as “an in-depth analysis of single cases and examining individual perspectives of study participants, in their unique contexts”. They also highlighted that the fundamental principle behind the idiographic approach is to explore every single case, before producing any general statements. Detailing further on how IPA relies on idiography, Pietkiewicz & Smith (2012) offered the following points:

a. The researcher focuses on the particular rather than the universal.

b. The researcher can make specific statements about the study participants because the analysis is based upon a detailed case exploration.

c. The researcher will start with examining an individual and producing a case study or will move to an equally attentive exploration of the second case, and so on.

d. The researcher will move between important themes generated in the analysis and exemplify them with individual narratives (how particular individuals told their stories), comparing and contrasting them (i.e. showing similarities and differences).
Participants

Pietkiewicz & Smith (2012) stressed that the main concern of IPA is to give full appreciation to each of the participant’s account. For this reason, the IPA studies are strongly suggested to be conducted with small sample size participants. This will enable the researcher to spend time in each case, and be as detailed as possible in his case-by-case analysis. However, there were IPA studies that have been published with one, four, nine, fifteen participants. Larger sample size were noted as possible, but are not common. Nevertheless, IPA researchers are advised to rely on small sample size participants rather than a single individual case since having a small sample size gives opportunity for the researcher to examine similarities and differences between individuals. At the same time, the amount of data gathering is not overwhelming.

Pietkiewicz & Smith (2012) also cautioned the IPA researcher to concentrate more on the depth, rather than the breadth of the study, as a detailed analysis of a single case may be well justified if rich and meaningful data has been collected, which allows the researcher to present original problems, mechanism, or experiences. This will offer an opportunity to learn more about the individual, his responses to a specific situation, and consider connections between different aspects of the person’s account.

Although there is no rule as to how many participants should be included in the study, Pietkiewicz & Smith (2012) said that it generally depends on the following:

1. The depth of the analysis of a single case study; the degree of commitment to the case study level of analysis and reporting.
2. The richness of the individual cases

3. How the researcher wants to compare or contrast single cases

4. The pragmatic restrictions one is working under, which included time constraints and access to participants.

Furthermore, IPA researchers typically aim for a fairly homogeneous sample, this is so as to be able to analyze the similarities and differences of the participants that has been defined according to important variables. Therefore, with few participants targeted for the study, it is strongly suggested that they be selected purposively. This allows the researcher to find a defined group for whom the research problem has relevance and personal significance. (Pietkiewicz & Smith, 2012).

For the purpose of this study, the homogeneous group of 5 administrators coming from 5 different schools in the metropolis will be purposively selected based on the following conditions:

1. They have been directly moved out of the academic department, the teaching position.
2. They have no prior experience in any administrative job.
3. They now hold a post in the administrative office under a full-time capacity.
4. They have been performing the administrative function for at least 1 month to 1 year.
5. They no longer have any academic assignments to perform.
Instruments

IPA data may be obtained in different ways like personal account history, diaries, focus groups, letters or chat dialogues. But Smith & Osborn (2007) suggests that the best way to collect data for an IPA study (and the way most IPA studies have been conducted) is through the semi-structured, in-depth, one-on-one interviews. This form of interviewing allows the researcher and participant to engage in a dialogue where initial questions may be modified in the light of the participants’ responses, and the researcher is able to probe interesting and important areas which may arise in the course of the exchange by further questions.

With this flexible data collection instrument, the researcher will be able to generate rich, detailed, and first-hand descriptions of how individuals are experiencing transition as the phenomenon. This data collection instrument will enable the researcher to conduct an in-depth exploration of the lived experiences of the participants, and acquire the participants’ accurate account of how they make sense of their experience, in real time (Smith & Osborn, 2007).

Data Collection Methods

Smith & Osborn (2007) recommends that the researcher works up an interview schedule in advance in order to explicitly think about what the interview may cover. With an interview schedule at hand, the researcher will be able to think of difficulties that he may encounter in the course of the interaction he will have with the participant during the interview. Difficulties, as an example, may be in terms of word use, semantics, and sensitive topic areas. Having a schedule will allow the researcher to think through the probable difficulties in advance, and be able to find
ways on how to handle them. Also, having thought through in advance about how the interview process may proceed will allow the researcher to confidently face the participant and conduct the interview process with utmost attention, focus and concentration. Pietkiewicz & Smith (2012) offers the following guidelines for conducting the interview:

**The Researcher as the Investigator and Interviewer**

1. Must have developed good interviewing and listening skills, with the ability to ask open-ended questions free from hidden presumptions.

2. Should be able to build rapport and gain trust of the participants. A kind of “warm-up” discussion maybe necessary to reduce the participant’s tension and get him/her ready to discuss more sensitive and personal issues.

3. Prepare an interview schedule/plan in advance. This will be just a guide to facilitate a natural flow of conversation.

4. Should feel comfortable with moments of silence to allow both oneself and the participant to reflect on issues being discussed.

5. Must be sensitive to and tries to be aware of all verbal, non-verbal, and non-behavioral communications.

In addition, Pietkiewicz & Smith (2012) stressed that the duration of most IPA interviews is for at least one hour, but may take longer, depending on how the interview is progressing since the semi-structured form of interview allows the researcher to ask questions in a convenient order (which may differ from one interview to another). In IPA, it is necessary to audio record the interviews and produce a verbatim transcript of it.
For the purpose of this study, a detailed interview schedule covering three (3) main topic areas were composed which this researcher intends to use in gaining the participants’ account of their transition experience. See Table 2 for the schedule of research questions that will reflect on the three topic areas: *Description of the Transition; Effects on the Self/Identity, and Reactions to Transition.*

On formulating specific questions, Pietkiewicz & Smith (2012) suggested that questions suited for IPA study may concentrate on exploring the sensory perceptions, mental phenomena (thought, memories, associations, fantasies), and specifically individual interpretations. Also, that apart from open and expansive questions which encourage participants to talk at length, it may be also be convenient to have prompt questions which will be helpful for the participants who may find the questions to general or abstract.

**Table 2: Schedule of the Research Questions**

**MAIN RESEARCH QUESTION:**
*What is the essence of the transition experience of school administrators moving-in from teaching?*

**SPECIFIC RESEARCH INTERVIEW QUESTIONS**

<table>
<thead>
<tr>
<th>TOPIC AREAS</th>
<th>QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. INTRODUCTION</strong></td>
<td>1. Could you please tell me what do you do in your job?</td>
</tr>
<tr>
<td></td>
<td>2. How did you come to get this job?</td>
</tr>
<tr>
<td></td>
<td>3. Please tell me what administration means to you?</td>
</tr>
</tbody>
</table>
### B. DESCRIPTION OF THE TRANSITION

4. Please describe to me how you were when you were informed of your move from teaching to administration.
   - How did you feel?
   - What was going on in your mind?
   - What did you do?

5. Can you tell me about your experience when you moved out from the faculty room and in to the admin office?
   - What happened?
   - How did you feel?
   - What did you do?

6. Please describe to me what was your first day like in the administration office?
   - What was going in your mind?
   - How did you feel at that moment?

7. Can you picture to me what was your last day in the faculty room or the classroom like?
   - What was going in your mind during this period
   - Why is that so?
   - What did you do?

### C. EXPERIENCE OF THE TRANSITION

8. While you were being oriented of your role in administration, what were your reactions?
   - What was your first and subsequent reactions?
   - Why is that so?

9. How did you decide to go on with your days in the office?

10. How does your workdays spell-out now as compared to when you were teaching?

11. What are the main difference between your work days in teaching and your workdays in the administration office?

### D. HOW TRANSITION FITS IN WITH THE PARTICIPANT’S LIFE

12. How have you been since your move to the administration office?
   - How would you describe yourself as an administrator?

13. Can you please describe for me what a good day at work is like at the office?
   - What about a bad day at work, what is it like?
   - What do you do about it?

14. What do you think your boss thinks about how you do your job?

15. How do you think your life would be if you worked somewhere else?
Data Analysis Methods

IPA aims to give evidence to the participants’ making sense of the phenomenon being investigated, and at the same time document the researcher’s sense making (Pietkiewicz & Smith, 2012). In general, IPA offers a set of flexible guidelines in a form of analytic stages, which I intend to adapt, in order to unfold my analysis of the study. Forewarned by the literatures about the complex and time-consuming activity that the data analysis method of the IPA framework may bring, I have also been made aware by the same readings that the data analysis methods can be an inspiring activity as I immerse myself, as the researcher, in the data or in other words, try to step into the participants’ shoes as far as possible. Pietkiewicz & Smith (2012) detailed the following stages of analysis:

1st Stage: Multiple Reading and Making Notes

By reading through the transcripts and listening to the audio recording a number of times, the researcher may be able to immerse himself in the data, recall the atmosphere of the interview, and the setting in which it was conducted. Each reading and listening to the recording may provide some new insights. At this stage, the researcher can make notes about his observations and reflections about the interview experience or any other thoughts and comments of potential significance. The researcher’s notes may focus on the following:

1. Content (what is actually being discussed)

2. Context

3. Initial interpretative comments
4. Other comments associated with personal reflexivity (e.g. how might the personal characteristics of the interviewer, such as age, gender, social status, etc. affect the rapport with the participants).

5. Highlight distinctive phrases and emotional responses

2nd Stage: Transforming Notes Into emergent Themes

At this stage, the aim is to transform the notes into emerging themes. The researcher is expected to work more with his note, rather than with his transcript. The researcher tries to formulate a concise phrase at a slightly higher level of abstraction which may refer to a more psychological conceptualization. Nevertheless, this is still grounded in the particular detail of the participant’s account. At this stage, the transcript has been already annotated as a whole.

3rd Stage: Seeking Relationships and Clustering Themes

This stage involves looking for connections between emerging themes, grouping them together according to conceptual similarities, and providing each cluster with a descriptive label. In practice, the following steps are undertaken:

1. Compiling themes for the whole transcript
2. Looking for connections and clusters.
3. Some of the themes may be dropped at this stage, if they do not fit well with the emerging structure or because they have a weak evident base.
4. Development of a table or a final list of clustered themes which may comprise of numerous superordinate themes and subthemes.
4th Stage: Writing Up an IPA Study

This narrative account of the study usually involves taking the themes identified in the final table and writing them up one by one. Specifically, the following points will be undertaken in order to produce a full account of the study:

1. Each of the themes need to be described and exemplified with extracts from interviews, followed by analytic comments from authors.

2. The table of themes opens up into a persuasive account that explains to the reader the important experiential things that have been found during the process of analysis.

3. The final paper will include both the participant’s account of his experience in his own words, and the interpretative commentary of the researcher.

4. The narrative account may engage several levels of interpretation, from low-level interpretation of data to a highly detailed, interpretative and theoretical level, which may generate new insights.

5. The narrative account will then be followed by a discussion section which relates the identified themes to existing literature.

The Conclusion:

The narrative account will be followed by a discussion section which relates the identified themes to existing literature. Reflections on the research will be included in the section, as well as comments on implications of the study, its limitations, and ideas for future development.
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COOPERATIVE LEARNING: KNOWLEDGE AND PERCEPTIONS OF URBAN
PRIMARY AND SECONDARY MATHEMATICS TEACHERS

by

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A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Philosophy

Capella University
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Abstract

The main focus of this quantitative research study was to determine if differences exist between urban primary and secondary teachers’ knowledge and perceptions of cooperative learning. Cooperative learning is a researched based instructional strategy used in classrooms to improve student achievement in various subject areas. Studies support the utilization of cooperative learning in classrooms. However, additional research was needed to continue to improve achievement in mathematics for all students, including those attending schools in urban settings. An experimental research design was used to determine if differences exist between primary and secondary teachers’ knowledge and perceptions of cooperative learning. Conducting research on urban primary and secondary teachers will provide valuable information used to improve student achievement in mathematics by planning college courses for pre-service teachers as well as prepare workshops and in-service training sessions for practicing teachers to enhance teaching and learning in mathematics.

Data collection involved mathematics teachers completing an online survey. Data was divided into the following three sections: Demographic data on participants, the use of cooperative learning in classrooms, as well as teachers’ knowledge and perceptions of cooperative learning. A Likert scale was utilized to determine if differences exist between urban primary and secondary teachers’ levels of agreement/disagreement with cooperative learning statements.
Dedication

My journey has been and interesting and rewarding experience. The level of success I have experienced is due to the unconditional love and support of several exceptional individuals in my life. As with all of the blessings and accomplishments in my life, I would like to give God the glory, the honor and the praise. His hands have sheltered and kept me. This work would not have been possible without Him. My Husband, Ronnie Pope Sr. has been my rock. I want to thank you for supporting and encouraging me to remain focused during the blood, sweat and tears. You encouraged me to never give up, continue to pray, and let God do His work. I would like to thank my mother, JoAnn McCollough, who put her wants and needs aside to make sure my sisters and I had everything we needed to become self-sufficient women capable and prepared to do whatever our hearts desired. I would like to thank my father, Johnny Guy Staples, who signed financial aid papers so I could pursue my first college degree. Thanks for encouraging me to be all I could be. My children, Shynea, Dynia, Veronica and Ronnie Jr. have been present for every aspect of my educational journey. Thank you all for supporting and encouraging me to lead by example by remaining focused and finishing what I started no manner how long or challenging the journey. I love you all. Thanks to my extended family for supporting and encouraging me to finish what I started some eight years ago. I love you all. I would like to dedicate this dissertation to my grandchildren Jaden Michael and Kerrington Alexus. It is my desire that this work affect the field of education by enhancing teaching and learning. It is my quest to contribute to the knowledge and understanding teachers receive in order to influence the way they
teach, in order to meet the diverse educational needs of all children. “I can do all things through Christ who strengthens me”. –Philippians 4:13
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CHAPTER 1. INTRODUCTION

Introduction to the Problem

The responsibility of educating students to their fullest potential is a daunting task for educators across the United States and abroad. Teachers must provide meaningful instruction that meets the diverse needs of students to equip them with the knowledge and skills necessary to become productive citizens, prepared to meet the challenges of the greater society and global world. James Schul (2011) states that teachers have at their disposal a plethora of instructional strategies that serve various purposes. Teachers utilize numerous instructional strategies in the classroom and are looking for additional research-based best practices that have been proven to meet the diverse needs of students. Studies were conducted to identify instructional strategies that have the greatest rate of success with increasing student achievement. One instructional strategy, if employed sensibly, holds much promise for meeting the diverse needs of students and increasing academic achievement is cooperative learning. Cooperative learning is one of the greatest success stories in the history of instructional innovation (Slavin, 1999).

The purpose of cooperative learning is to facilitate small groups of heterogeneous students working together to accomplish goals, solve problems or complete tasks and ultimately to perform alone (Kirk, 2001). Each member of a cooperative learning group is assigned a task and must share personal accountability and responsibility for the group’s success in order to make a group truly cooperative.
More than 1,200 cooperative learning studies have been conducted over the past 11 decades that support the claim that cooperative learning promotes achievement as well as other positive affective outcomes (Whicker, 1997). Few studies have focused on examining the differences between urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning. Since cooperative learning is widely used in mathematics classrooms, there is a need to examine how it is utilized in classrooms in order to help teachers develop a clear understanding of how to effectively implement it into their lessons to improve student achievement in mathematics. This study was necessary because the existing body of research on cooperative learning has not determined if possible differences between urban primary and secondary mathematics teacher’s knowledge and perceptions of cooperative learning influence the levels of implementation in classrooms, which may adversely impact student achievement. Many teachers have heard of cooperative learning but may not have knowledge and a clear understanding of how to employ it in the classroom. Schul (2011) states that cooperative learning is often misunderstood by some teachers as just another form of collaborative group work. Cooperative learning differs from collaborative group work because it focuses on the key elements of responsibility and accountability to self and group members. Teachers must have a thorough understanding of cooperative learning in order to enhance student achievement in mathematics. Sutton and Krueger (2002) states that the most direct route to improve mathematics achievement for all students is through better teaching.

Few if any studies have been conducted to examine the differences that may exist between urban primary and secondary mathematics teachers’ knowledge and perceptions
of cooperative learning. In order to examine the differences, urban mathematics teachers were surveyed. This study was different from other cooperative learning studies because the focus was specifically on the knowledge and perceptions of urban mathematics teachers. Results obtained from this study filled a gap in existing research by providing insight for teacher instruction and professional development opportunities to aid colleges and universities with preparing courses for pre-service teachers. In addition, school districts will utilize the results to prepare workshops and in-services trainings for practicing teachers in order to align best practices related to cooperative learning at all grade levels to me the diverse needs of students.

**Background, Context, and Theoretical Framework**

Since cooperative learning is widely used in mathematics, a growing need exists to study how teachers utilize cooperative learning in classrooms. The study of this instructional strategy was imperative in mathematics because of its benefits to teaching and learning and the amount of pressure placed on teachers by the public for the academic performance of students. According to the Program for International Student Assessment (PISA), the United States ranks below average in mathematics among the world’s most developed countries. This ranking has made educational accountability a state and national concern, as well as a mantra of public education (Vogler, 2010). States are mandating testing to ensure high standards and accountability for the academic performance of public school students.

The National Council for Teachers of Mathematics (NCTM) created grade specific standards that are used across the United States to provide direction to help teachers to distinguish what concepts and skills students should learn while fulfilling
societal demands for teaching and learning mathematics. These demands and accountability measures place pressure on teachers to teach mathematics in a manner that encourages students to develop a deep understanding of concepts as well as be able to utilize mathematics in everyday life and in the workplace. Despite providing these clear and focused standards for mathematics, a majority of classrooms continue to fall short in implementation and direction especially in urban high poverty schools (McKinney, 2008). McKinney’s words support the notion that urban mathematics teachers might not fully understand how to effectively teach mathematics by utilizing instructional strategies proven to increase student achievement such as cooperative learning. Cooperative learning is a proven instructional strategy that can be utilized in classrooms to enhance student learning and achievement in mathematics.

The theoretical framework for this cooperative learning study was constructivism. The practice of constructivism requires individuals to connect prior and new knowledge as well as engage in classroom dialogue that is necessary for internalization and deep understanding (Vermette, 2001). Jean Piaget (1953), a constructivist supporter, believed that learning occurs when new ideas are connected to old ideas. Students construct knowledge and meaning from interactions between their experiences and their ideas. According to Lopata, Miller and Miller (2003), constructivist practices and interactive learning are conditions that facilitate effective cooperative learning implementation. Constructivism has become the underlying theme for many education reform movements, including utilizing cooperative learning as an instructional practice to enhance student achievement.
Statement of the Problem

It was not known how and to what degree the differences between urban primary and urban secondary teachers’ knowledge and perceptions of cooperative learning influence how it is utilized in mathematics classrooms. The differences between primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning can adversely impact how it is implemented in classrooms and student achievement in mathematics. Cooperative learning has been identified as a research based instructional strategy that is considered to have a high probability of enhancing student achievement for all students in all subject areas and at all grade levels (Marzano, 2001). Developers of cooperative learning include Robert Slavin (1988), David and Robert Johnson (2000), as well as Spencer Kagan (1989). These developers have unique methods for the implementation of cooperative learning and have conducted extensive research to examine its impact on student achievement. However, the existing body of knowledge has not determined if possible differences between urban primary (educating students 5-13 years of age) and urban secondary (educating students 14-18 years of age) mathematics teachers’ knowledge and perceptions of cooperative learning influence levels of implementation in classrooms as well as teaching and learning.

Purpose of the Study

Few if any studies have focused on identifying differences in urban mathematics teachers’ knowledge and perceptions of cooperative learning. The purpose of this study was to help pinpoint possible gaps in teachers’ knowledge and understanding of cooperative learning as well as identify perceptions held by teachers in order to create opportunities for them to recognize the benefits of utilizing cooperative learning as an
instructional strategy to enhance student learning in mathematics. A survey was conducted to identify differences in urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning. By analyzing, what teachers think and know about cooperative learning, college courses for pre-service teachers as well as workshops and in-service training sessions can be planned for practicing teachers to enhance teaching and learning in mathematics. Researchers have concluded that the cooperative learning model was ranked first in teaching approaches that promote higher order thinking, problem solving, and achievement (Lin, 2006).

**Research Questions and Hypotheses**

The following research question led to the overall research and data collection for this cooperative learning study: What are the differences in the knowledge and perceptions of cooperative learning between urban primary mathematics teachers and urban secondary mathematics teachers? Secondary quantitative research questions are:

R1: What are the differences in the knowledge of the principles of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers?

Null Hypothesis: There will be no differences in the knowledge of the principles of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers?

Alternative Hypothesis: It is reasonable to conclude differences in the knowledge of the principles of cooperative learning exist between urban primary mathematics teachers and urban secondary mathematics teachers?
R2: What are the differences in knowledge of the role that teachers play in the utilization of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers?

Null Hypothesis: There will be no differences in knowledge of the role that teachers play in the utilization of cooperative learning exist between urban primary mathematics teachers and urban secondary mathematics teachers?

Alternative Hypothesis: It is reasonable to conclude differences in knowledge of the role that teachers play in the utilization of cooperative learning exist between urban primary mathematics teachers and urban secondary mathematics teachers?

R3: What are the differences in perceptions regarding use cooperative learning as an instructional strategy in classrooms with students that exist between urban primary mathematics teachers and urban secondary mathematics teachers?

Null Hypothesis: There will be no differences in perceptions regarding use cooperative learning as an instructional strategy in classrooms with students between urban primary mathematics teachers and urban secondary mathematics teachers?

Alternative Hypothesis: It is reasonable to conclude differences in perceptions regarding use cooperative learning as an instructional strategy in classrooms with students between urban primary mathematics teachers and urban secondary mathematics teachers?
R4: What are the differences in regards to the perceptions of the impact cooperative learning has on student achievement in classrooms that exist between urban primary mathematics teachers and urban secondary mathematics teachers?

Null Hypothesis: There will be no differences in regards to the perceptions of the impact cooperative learning has on student achievement in classrooms between urban primary mathematics teachers and urban secondary mathematics teachers?

Alternative Hypothesis: It is reasonable to conclude differences in regards to the perceptions of the impact cooperative learning has on student achievement in classrooms between urban primary mathematics teachers and urban secondary mathematics teachers?

Rationale, Relevance, and Significance

Rationale

The rationale, relevance and significance of this cooperative learning study is discussed in this section. Research methods used for conducting the study, the need for the study, as well as how the research will contribute to the body of knowledge related to cooperative learning will be discussed.

This dissertation contributes to the body of knowledge related to the utilization of cooperative learning by enhancing teaching and learning, while promoting higher levels of student proficiency in mathematics. Researchers agree that cooperative learning has positive effects of on student achievement. Additionally, a rapidly growing numbers of educators are utilizing cooperative learning in classrooms (Slavin, 1996). The results from this study can be used to ease the confusion and disagreement as it relates to how teachers’ knowledge and perceptions of cooperative learning impact student achievement.
in mathematics. It was predicted that there are differences in knowledge and perceptions of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers. These differences can adversely impact teaching, learning and student achievement in mathematics.

Relevance

This study of cooperative learning is relevant to curriculum and instruction because its focus is on how students learn, the best way to educate students, and increasing student achievement in mathematics. The results from this study will enhance teachers’ knowledge base and implementation of cooperative learning in classrooms. When teachers have a clear understanding of how to utilize cooperative learning in the classroom, student achievement in mathematics will improve. In addition, school leaders and instructional specialist will have quantitative evidence of the effectiveness of cooperative learning as an instructional strategy that can be utilized to engage students in meaningful mathematics that can be used in and outside of classrooms. Furthermore, when teachers realize and are aware of the benefits of cooperative learning, perceptions may change toward its impact on student learning. Cooperative learning is considered to have a high probability of enhancing achievement for all students and is now utilized in schools and universities throughout the world in every subject area from preschool through graduate school and adult training programs (Marzano, 2001).

Significance

Robert Slavin (1996) conducted research on cooperative learning that focused on student team learning methods in middle school classrooms and secondary classrooms with an emphasis on student rewards for groups based on performance results. David and
Robert Johnson (2000) focused their research on cooperative learning, which highlights students working together as well as students working alone to discover its impact on student achievement. Spencer Kagan (1995) conducted research on cooperative learning structures that stress positive personal peer interactions that effect student learning. Few if any studies have focused on urban teachers’ knowledge and perceptions of cooperative learning. This study was conducted to support the enhancement of teaching and learning of mathematics in urban educational settings. Cooperative learning holds much promise for meeting the diverse needs of students, while increasing achievement in mathematics if thoroughly understood and implemented sensibly by teachers.

**Nature of the Study**

Extensive research has been conducted to examine how cooperative learning impacts student achievement at all grade levels and in all subject matter. However, there is an inadequate amount of research that focuses specifically on urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning and its impact student achievement. A non-experimental, causal-comparative research design was utilized to examine this phenomenon. A survey was the primary collection tool used for this study in order for the researcher to examine the differences between primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning and to analyze how the differences in knowledge and perceptions impact teaching and learning in mathematics. Conducting causal-comparative research seeks to explain differences between groups by examining differences in the experiences of group members (Lodico, 2010). This type of design is appropriate because it involves no direct manipulation of the independent variable and no treatment was provided for participants.
Additionally, the research design does not run into the same types of threats to internal and external validity as experimental designs. However, the lack of control over inessential variables could possibly sway participants’ responses.

**Definition of Terms**

There are terms, which are important to this study of cooperative learning. As such, the following terms are defined:

*Cooperative Learning*- A teaching strategy in which small groups or teams, comprised of students of different levels of ability, work together to accomplish shared goals and to maximize their own and each other’s learning (Sawyer, 2005).

*Knowledge*- understanding of subject matter (Kleickmann et. al, 2013)

*Perception*- the procedure or outcome of becoming conscious of items, unions, and events by way of the senses, that comprises activities like acknowledging, viewing, and discriminating (Goldstein, 2013).

*Urban School*- Generally large, high-density schools in metropolitan areas that serve a population subject to social, economic, and political disparities because of population mobility, diverse ethnic/cultural identity, low socioeconomic status, and/or limited language proficiency (Sachs, 2004).

*Mathematics*- A static discipline based on formulas taught in the school subjects of arithmetic, geometry, algebra, and calculus (Steen, 1991).

**Assumptions, Limitations, and Delimitations**

The assumptions, limitations and delimitations for this cooperative learning study are identified in this section.

**Assumptions**
The following assumptions were present with this study:

1. The participants will answer the questions truthfully.
2. The participants have varying levels of exposure to cooperative learning.
3. The participants have utilized cooperative learning in mathematics.
4. The participants have knowledge and understanding of cooperative learning.

**Limitations**

The following limitations are present for this study:

1. The number of individuals chosen to participate in the study was determined by the number of regular primary and secondary education mathematics teachers employed by the district which will limit generalizability since the number is not large considering larger urban school districts do exist, which could have yielded valuable data for the study.
2. The data collect from this study will be of benefit to teachers, principals, curriculum directors as well as colleges and universities. However, the data collected from this study will be somewhat limited because only one urban public school district was involved in the study. The limitation will limit generalizability because the results are not comparable to larger or smaller urban school districts.

**Delimitations**

The following delimitations are present for this study:

1. This study is confined to utilizing a survey to gather data on cooperative learning.
2. The sample group for this study will be drawn from, and limited to urban primary and secondary mathematics teachers.
3. The study is limited to one urban public school district in Ohio.
Organization of the Remainder of the Study

The remaining chapters for this study are organized as follows: Chapter 2 will begin with the researcher presenting, exploring, synthesizing and evaluating literature related to cooperative learning. The theoretical framework for the study will also be explained in this section. Chapter 3 presents the methodology used in the study, which will include the design of the study, description of the targeted population, instrumentation, the data collection process, as well as ethical concerns related to the study. Chapter 4 focuses on analyzing the data and objectively reporting the findings. Chapter five presents a summary of the findings including the conclusions drawn from the data presented in the previous chapter, discussion of the results as it relates to the literature, limitations, implication of the results for practice and recommendations for further research.
CHAPTER 2. LITERATURE REVIEW

Introduction to the Literature Review

In this section, pertinent literature related to cooperative learning and its impact on teaching and learning will be presented. A review of literature will also provide the rationale and support for utilizing cooperative learning in classrooms to improve student achievement in mathematics. The following topics will be examined in order to determine teachers’ knowledge and perceptions of cooperative learning and how their knowledge and perceptions impact teaching and learning: background on cooperative learning, constructivism, and how it supports cooperative learning, supporters of constructivism, constructivist learning in the classroom, researchers of cooperative learning, cooperative learning methods, elements of cooperative learning, benefits of cooperative learning, cooperative learning in mathematics as well as teacher knowledge, perceptions and understanding of cooperative learning.

The search for related literature was conducted through multiple sources from the Capella University Library databases, which include Sage, Academic Search Premier, ERIC, ProQuest Education Journals, PsycINFO, as well as Education Research Complete. Dissertations from ProQuest and ebooks from the ebrary were read and utilized as sources of information. Books related to particular theories, approaches and techniques will read and analyzed. The researcher also utilized Google Scholar to
identify books, journals and websites. All sources are correctly cited and referenced according to APA guidelines.

The objective of this research was to present research related to cooperative learning that can be used to alter teachers’ perceptions as well as improve their knowledge and understanding of cooperative learning. If it is determined that there are differences that exist between urban primary and urban secondary mathematics teachers’ knowledge and perceptions and understanding of cooperative learning that influence levels of implementation in classrooms as well as teaching and learning.

**Theoretical Framework**

The theoretical framework for this cooperative learning study constructivism. According to Brooks (1999), constructivism now has a face and name in the field of education which describes the central role that learners’ ever-transforming mental schemes play in their cognitive growth, constructivism powerfully informs educational practice. The following facets of constructivism will be discussed in this section of chapter two: theory of constructivism, cognitive constructivism, social constructivism, constructivist learning in the classroom.

**Constructivism**

Constructivism is a powerful model for explaining how knowledge is shaped and how pupils learn and is currently a topic of discussion in many schools as the best method for teaching and learning (Powell, 2009). This theory of learning has origins in philosophy and psychology. The research of Dewey and Vygotsky combined with Piaget’s work in developmental psychology led to the expansive approach of constructivism. The constructivist approach to teaching and learning involves putting
students at the center of learning by using their prior knowledge, to pose problems or situations that encourage critical thinking and understanding of big ideas and concepts, which will in turn refine one’s prior knowledge base. Constructivism is based on the assumption that children construct their realisms on how the world works from their experiences and mental development. Constructivist supporters Henderson & Gornik (2007) and Darling-Hammond & Bransford (2007) agree that learning is best accomplished by utilizing hands-on approaches, investigation, testing, and not being told what will transpire, but left to make own interpretations, findings and draw conclusions. According to Iran (1995), constructivism has become an attractive alternative to tradition educational practices because it holds promise to deliver higher levels of literacy, multiple forms of literacy, self-reliance, cooperation, problem-solving skills and satisfaction with school. Development of these skills can assist students in preparation for real-world challenges and experiences. Teachers and administrators seem to be pleased when they see students engaged and interested in learning. In order to help students to remain engaged in learning to improve intellectually, teachers have to know where students are in their current stage of knowledge of content so that learning opportunities are structured in order to allow students to create personal meaning when new information is presented to them.

Philosopher D.C. Phillips (1995) has identified the following three distinct roles related to constructivism that promote student learning:

1. The active learners: knowledge and understanding are actively attained.
2. The social learners: knowledge and understanding involves social construction.
3. The creative learners: knowledge and understanding is created or recreated.
Teachers can create learning opportunities that include each distinct role related to constructivism to cast learners in active roles to maximize their learning. Supporters of constructivism are searching for better ways to promote teaching and learning that encourages and supports active learning to impact student achievement. In reality, educators have control over what is taught but less control over what students learn because ultimately students control their own learning. This simple reality lies at the heart of the constructivist approach to education (Brooks, 1999). Therefore, educators have the important task of customizing their instruction to meet the diverse needs of students. In order to customize instruction, educators must have knowledge and understanding of the role they play to support student learning.

Two major forms of constructivism are utilized in the classroom: the first form is known as cognitive or individual constructivism that is contingent on Piaget’s theory. The second form is social constructivism, which is contingent on Vygotsky’s theory (Powell, 2009). These theories of learning are similar because they embrace inquiry-teaching approaches and support students in creating concepts based on building their existing knowledge. In order to effectively utilize constructivism, teachers need to understand these theories and become familiar with how to integrate constructivist instructional strategies and practices to improve teaching and learning.

**Cognitive Constructivism**

Cognitive constructivism is based on the work of developmental psychologist Jean Piaget. Piaget’s theory provides valuable insight into children’s interest, and what they are able to achieve during various stages of their development, and is based on discovery learning where students are able to construct knowledge that is meaningful
within an educational setting that supports the varying ways students learn. Cognitive constructivism provides a framework by which teachers can determine students’ current level of learning, then create an engaging learning environment in which children can construct their own knowledge and understanding of subject matter. Brooks (1999) states that engagement in meaningful work, initiated and mediated by skillful teachers, is the only high road to real thinking and learning. Teachers who have clear and thorough understanding of cognitive constructivism are aware of how students learn and can enhance their learning experiences. According to Orlich (2007), for intellectual growth to occur, teachers must provide students with key experiences or activities.

Social Constructivism

Social constructivism is a highly effective way of teaching that all students can profit from, since cooperation and social interaction are integrated (Powell, 2009). Social constructivism defines learning as socially shared cognition that is “co-constructed” within a community of participants (Green, 2002). Students are able to work cooperatively to share their knowledge and understanding of subject matter, which enhances student learning. Lev Vygotsky, the founding father of social constructivism believed that social interaction is an integral component of learning. He also believed that knowledge and development is a joint activity that allows children develop cognitive abilities in the context of socialization and education (Eren, 2013). This theory is based on the social interactions that students participate in inside the classroom to enhance the development of critical thinking skills. It is imperative for teachers to understand social constructivism and become familiar with how to incorporate it into practices in the classroom to promote social interaction in order to enhance student learning.
Constructivist Learning in the Classroom

In a constructivist classroom, teachers are aware of students’ understandings of concepts and are able to structure learning opportunities for students to enhance their understandings by providing information, posing questions, allowing students to conduct research and engaging students in inquiry learning opportunities designed to challenge the current views, beliefs and understanding they have. Brooks (1999) have identified five overarching principles apparent in constructivist classrooms.

1. Teachers seek and value their students’ point of view. When teachers seek to understand students’ thinking, they are able to create learning experiences that support the manner in which their students think and the pace that their students learn.

2. Classroom activities challenge students’ suppositions. Teachers can provide learning opportunities that either lead student to presume certain truths from their prior experiences or contradict with what they believe.

3. Teachers pose problems of emerging relevance. Constructivist teachers create opportunities for students to see the value in what they are learning by relating subject matter to real world experiences so that students have to opportunity to develop personal meaning.

4. Teachers build lessons around primary concepts and “big ideas”. Teachers present curriculum that allow students to grapple with the big ideas and determine for themselves information that requires further exploration.
5. Teachers assess student learning in the context of daily teaching. Constructivist teachers are able to assess student learning during instruction instead of view it as a separate from instruction.

These principles help teachers to think about teaching and learning in a way that is student-centered and encourages students to be active learners. To understand constructivism, educators must focus their attention on the learner (Brooks, 1999). No two students learn in the same manner. Therefore, teachers must be willing to provide quality instruction that meets the diverse needs of all students. Teachers should consider developing constructive habits of mind that moves constructivism toward becoming a part of daily instruction as well as a part of the culture of the classroom. The Constructivist Learning Theory underscores how current mental schemata are reshaped, expanded, and deepened on the basis of interactions with new learning. It calls for a pedagogy that is student-centered and engages learners actively in meaning-making activities that give form and shape to understandings and skills (Lee, 2003).

A constructivist framework challenges teachers to create environments in which they and their students are encouraged to think and explore (Brooks, 1999). The constructivist theory of learning has had widespread impact on various learning theories and instructional techniques utilized in classrooms, including cooperative learning. Cooperative learning is an instructional method that is student-centered and encourages active learning in order for students to construct understanding and meaning. Cooperative learning like constructivism also holds promise to improve student achievement in classrooms by encouraging cooperation and enhancing critical thinking skills through problem solving.
Constructivist Theorists

Constructivism is supported by literature and research conducted by philosophers, researchers, and theorists. The following individuals have influenced our thinking and practices related to teaching and learning as well as the manner in which constructivism is implemented and utilized in classrooms.

**John Dewey (1859-1952).** John Dewey was a philosopher, psychologist and educational reformer whose thoughts influenced the field of education as well as social reform. He believed that previous knowledge and experiences play a central role in the development of new understanding. He also believed that education should be based on the standard of learning through doing. Dewey is also known for starting a Laboratory School (Dewey School) in 1886, which assist him in trying out some of his ideas pertaining to learning and to focus on the development of pragmatism. Pragmatism consists of developing curriculum that is based on lessons that are combined with real-world experiences. Dewey desired for students to learn from hands-on experiences. His position on learning aligns with that of constructivism because learning is perceived as an active process, where knowledge is constructed, not acquired.

**Jean Piaget (1896-1980).** Jean Piaget, a Swiss developmental psychologist is known for his work pertaining to cognitive development, learning theories and genetic epistemology. His theory of constructivism is based on his belief that children gain knowledge and formulate meaning based on their experiences. Piaget believed that the most significant source of cognition is the children themselves. He also believed that two key components must exist for human beings to construct new knowledge. These components are assimilation and accommodation. Assimilation involves one
incorporating new experiences with old experiences, which causes the individual to develop new viewpoints, reconsider prior misconceptions, and assess prior thinking in order to modify previous perceptions. Accommodation requires one to restructure new experiences into the mental capacity that currently exist. Children must be willing to change their views or beliefs when new experiences do not align with their prior knowledge and understanding as well as modify and restructure their beliefs with the outcomes.

Piaget’s developmental stages theory assumes that humans develop intelligently in various overlapping stages. Piaget (1953) also identified four developmental stages that children transition through in order to construct knowledge and understanding: (1) Sensorimotor (zero to two years of age), at this stage, children begin to discover their environment through their senses, physical actions and language. (2) Pre-operational (two to seven) at this stage, children develop their own language but lack grasping thoughts of others. (3) Concrete-operational (seven to eleven), at this stage, a key growth point takes place in the brain where children move into logical development and begin to exchange intuitive thought with logical reasoning. (4) Formal-operational (eleven years of age to adulthood) at this stage, individuals will begin to use higher levels of thinking in order to solve problems. These well-known stages are recognized as a source for showing the progression and logical thinking of children (Powell, 2009). These stages allow educators to understand how children progressively move from the world of concrete objects to representational objects within their world.

**Lev Vygotsky (1896-1934).** Lev Vygotsky, a Russian psychologist is known for his study of sociocultural theory. Many instructional practices utilized in classrooms are
grounded in the Vygotskian theory. Vygotsky viewed learning as taking place through social interaction. Learning also plays a pivotal role in the development of cognition, which led him to develop his model of intellectual growth centered on the zone of proximal development and on patterns of social interaction (Vygotsky, 1962). The zone of proximal development is the difference between the intellectual level a child can reach on his or her own and the level he or she can potentially reach if aided by an expert peer or adult (Orlich, 2007). Zone of proximal development constitutes an area within which a child’s functions are in a state of development. Tomlinson (2000) states the educator’s job is to push the student into his or her zone of proximal development, coach for success with a task more complex than the student can manage alone, and thus push forward the area of independence. Vygotsky believed the state of development cannot be displayed independently by children because they have not yet been formed. However, if a child receives assistance from an adult or a peer that is more knowledgeable, then the functions can be exhibited because of the interaction with others. Vygotsky also believed that social interaction is the key to learning because as children are engaged in meaningful dialogue, they can think for themselves and internalize their ideas (Orlich, 2007).

Cooperative learning supports Vygotsky’s theory of social interaction because it encourages students to communicate and interact with one another to enhance their levels of comprehension, reasoning, and critical thinking that is needed for internalizing information. Research indicates that humans learn best when they collaborate with others and can actively process personally meaningful information (Lin, 2006).

**Jerome Bruner (1915- ).** Jerome Bruner is known as an influential educational scholar as well as one of the founding fathers of the constructivist theory. Bruner was
mainly interested in the cognitive development of children and identifying appropriate methods of education that would meet the diverse needs of students. In his book *The Process of Education* (1960), Bruner discussed his view pertaining to constructivism revealing he believes that learners actively construct their own knowledge based on the things they know presently and have known previously. He is an advocate of inquiry learning and teachers facilitating and guiding the learning of students in order to enhance their critical thinking skills. Bruner also stressed the importance of scaffolding basic ideas until students have developed a thorough understanding of the subject matter.

Bruner’s views on teaching and learning were heavily influenced by Piaget and Vyostsky and support the utilization of cooperative learning in classrooms because it too incorporates inquiry learning to enhance student achievement.

**Albert Bandura (1925- ).** Bandura is a psychologist known for his contribution to social cognitive theory and for orchestrating the transition between behaviorism and cognitive psychology. He is known as the father of social learning theory. Social learning theory is how people learning by observing others. Bandura stated, “Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do” (1977). Through his research on social learning, Bandura discovered behavior could be developed through direct experience or by witnessing the behavior of others. Models are an essential source for learning new behaviors and for attaining behavioral transformation in educational settings. Cooperative learning allows students to work cooperatively to teach each other as well as learn from each other in essence, modeling for each other to enhance learning.

**Review of the Research Literature and Methodological Literature**
The review of literature includes a comprehensive overview of literature published on cooperative learning. Topics incorporated in this chapter include a review of various learning style inventories utilized to identify preferred styles of learning of students, culturally responsive pedagogy to understand how the culture impact student learning, a review of instructional methods used in classrooms, including all facets of cooperative learning.

Cooperative learning is one of the most thoroughly researched of all instructional methods (Slavin, 1990). Other methods of instruction have also contributed to the enhancement of teaching and learning. In this section, these methods will be reviewed as well as factors that affect student learning.

**Review of Research on Cooperative Learning: Knowledge and Perceptions of Urban Primary and Secondary Mathematics Teachers.** A plethora of research has been conducted on cooperative learning and its impact on student achievement. Whicker (1997) states: more than 1200 studies have been conducted over the past 11 decades that support the claim that cooperative learning promotes student achievement as well as other positive affective outcomes. Despite the amount of research conducted, literature related to urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning are lacking.

**Learning Styles.** This section on learning styles a review of literature which include learning style inventories created by Dunn et. at ((1995), as well as Kolb (1995), and culturally responsive pedagogy.

A Learning style or preference is usually defined as the cognitive, affective, and physiological traits that students exhibit as they interact in the classroom environment.
Youngsters have established rules and techniques for attaining knowledge and demonstrating their abilities by the time they begin their formal educational career at the age of five. Gay (2000) believes students learn these cognitive processes via cultural socialization. However, these processes may be enhanced and become elaborate over time. Styles frequently differ with age, level of achievement, beliefs, global verses analytic processing choice, and gender (Shaughnessy, 1998). Gay (2000) believes ethnicity of students also plays an important role in their style of learning and has identified preferences for the following ethnic groups: African-American students will display a strong preference for learning in a group setting because of the values their culture places on communalism, working collaboratively to complete task, and social interaction with others. European-Americans prefer to work independently since their culture values competitiveness, individuality, and upward movement. Chinese as well as Japanese-American students’ cultures place value on family commitments and harmonious relations and prefer collectiveness as well as group-ness. They are also focused on individualism and very deductive in actual performance delivery. Cultural values of students may be a variable that can be used to justify why students process information differently and tend to solve problems in various ways. The learning styles model has aided to change the underachievement among special education and other poorly performing American students who attend urban, suburban, and rural schools (Burke, 2002). Consultants throughout the United States have reported statistically higher test scores or grade point averages for students whose teachers changed from traditional teaching to learning-style teaching at all levels and the U.S. Department of Education’s four-year investigation revealed that attending to students learning style was
one of the few strategies that had a positive impact on student achievement (Shaughnessy, 1998). Teachers can identify students’ learning styles by observing students in and outside of the classroom, but some characteristics are not noticeable, even to the most seasoned teacher. In order to receive precise information that is reliable and valid, an instrument that is also comprehensive and can diagnose the many traits related to learning styles, which can be used to impact student achievement. Numerous learning style instruments exist. However, the following comprehensive learning style instruments will be discussed in order to assist teachers with identifying learning style preferences of students: Dunn, Dunn and Price Learning Style Inventory (LSI), and Kolb Learning Style Model.

Dunn, Dunn and Price Learning Style Inventory. Dunn et al. (1995) define learning style as the way in which individuals begin to concentrate on, process, internalize, and retain new and difficult academic information. The Dunns’ further describe learning style as the manner in which twenty-one varying elements impact a person’s ability to master new and rigorous academic information and skills. No person possesses all twenty-one elements, but the elements that an individual does possess either obstruct or motivate that person’s level of achievement (Burke, 2002). The learning style inventory was developed through content and factors analysis and is use for identifying individual preferences for instruction, environments, methods, and resources for students in grades 3-12 (Dunn, 2009). This learning style model is based on the following theoretical assumptions:
• Learning style is a biological and developmental set of individual traits that makes providing the same instructional settings, approaches and resources effective for some students and ineffective for others.

• Most individuals have preferences for style of learning that differ drastically from those of other individuals.

• Individual preferences of instruction occur and the effect of accommodating these preferences can be measured.

• The stronger the individual’s preference, the more vital it is to offer well-matched instructional approaches.

• Acknowledging and tending to individual preferences in learning-style through well-matched instruction results in increased academic achievement and improvement in student attitudes toward learning.

• Students accomplish higher achievement levels when provided with responsive environments, resources, and instructional approaches.

• Most teachers can learn to utilize learning styles as the focal point of their instruction.

• Most students can learn to exploit their strongest learning style when approached with new or challenging subject matter.

• It is important for teachers to accommodate the learning style preferences of students who struggle academically (Dunn, 1995).

The learning style inventory focuses on identifying various grade-level procedures that allow analysis of particular conditions under which students prefer to learn. The Dunn instrument is easy to administer and teachers can easily interpret the
data, which is rated using a Likert scale and can be completed in a little more than 30 minutes.

**Kolb Learning Style Inventory.** The Kolb learning Style Inventory (LSI) is used assist individuals with identifying the way they learn based on experiences (Kolb & Kolb, 2005). This learning style inventory was created to fulfill the following purposes:

- To be utilized as an educational instrument to assist individuals’ wit understanding how they learn due to their experiences and their distinctive style of learning.
- To provide a research instrument for examining experiential learning theory and the traits of individual learning styles.

Kolb & Kolb (2005) also presents a cycle of four learning modes that include diverging, assimilating, converging and accommodating. The type of question that relates to each classification distinguishes these learning modes are “Why?” “What” “How” and “What if?”

**Diverging**- Individuals with this style of learning revel in viewing concrete situations from various standpoints and tend to enjoy collecting information. They are also interested in people and enjoy working in groups as well as examining various points of view of others (Kolb & Kolb, 2005).

**Assimilating**- Individuals with this style of learning can process a wide range of information and are more focused on abstract concepts and ideas. These individuals tend to explore careers in information and science as well as enjoy reading and lectures (Kolb & Kolb, 2005).
Converging- Individuals with this style of learning are great at discovering practical uses for theories and ideas. They are able to solve problems and make decisions by seeking suitable answers to questions or problems. These individuals tend to select careers in technology (Kolb & Kolb, 2005).

Accommodating- Individuals with this style of learning relish learning from “hands-on” as well as challenging experiences. They seek careers in marketing and sales and enjoy working with others, setting goals and utilizing unique methods for completing projects (Kolb & Kolb, 2005).

The Kolb model allows educators to teach students via the learning cycle to make certain all styles of learning are implemented and all questions have been answered for learners (Montgomery, 1998). When teachers are able to implement various styles of learning to meet the diverse needs of students, the opportunity to enhance student achievement may increase.

Culturally Responsive Pedagogy. Today’s classrooms are comprised of students varying in culture, language, as well as level of ability, which poses a challenge for teachers. In order to meet this challenge, teachers must employ not only theoretically sound but also culturally responsive pedagogy (Richards, 2007). To increase student achievement, teachers must construct a classroom environment where all students are received, supported, and provided the best opportunities to learn regardless of background. Culturally responsive teaching is defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively (Gay, 2002). Culturally relevant teaching entails teachers possessing a thorough knowledge content and employing various representations
of knowledge that use students’ lived experiences to link new knowledge to home, community, and global settings (Jordan-Irvine, 2010). Effective teaching and learning that is student-centered is the focus in a culturally responsive classroom, where the gifts and talents of students are utilized to enhance student achievement. Culturally responsive pedagogy consists of three dimensions (Richards, 2007): (1) Institutional pertains to the leadership and its guidelines and standards. School leadership must make certain resources are allocated to promote culturally responsive teaching to meet the diverse needs of students. (2) Personal pertains to the cognitive and emotional practices teachers must engage in to become culturally responsive to students. Teachers must be willing to self-reflect to examine their attitudes and beliefs toward any cultural, language, or racial group in order to identify any biases that influence their value system that can impact methods of instruction utilized in the classroom. When teachers are impartial in their teaching and well informed about themselves and the students they serve, they can better respond to the needs of all their students (Richards, 2007). (3) Instructional includes lessons, approaches and materials that guide instruction by utilizing students’ language and culture to maximize student learning. According to Jordan-Irvine, culture is an important survival tactic that is transferred from generation to generation through enculturization and socialization, a type of road map that guides and shapes behavior (2010). Research indicates that student achievement will improve when students are taught through their own cultural and experiential filters (Gay, 2002).

Various instructional methods are used to enhance teaching and learning in classrooms. These instructional methods may be combined with cooperative learning to meet the diverse academic needs and interest of students. Differentiated instruction,
multiple intelligences, project-based learning, as well as all components of cooperative learning are included in this section.

**Differentiated Instruction.** Differentiated Instruction has received a lot of attention in teacher preparation programs, professional development sessions as well as educational conferences (Parsons, 2013). Differentiated instruction is a framework for teaching and learning in which the focus is on meeting the individual needs of students using effective instructional practices. Its primary goal is ensuring that teachers focus on processes and procedures that ensure effective learning for varied individuals (Tomlinson & Tighe, 2006). Differentiation is simply a teacher attending to the learning needs of a particular student or small group of students, rather than teaching a class as though all individuals in it were alike (Tomlinson, 2000). A growing body of research indicates positive results for full application of differentiated instruction in mixed-ability classrooms (Huebner, 2010).

**Focus of Differentiated Instruction.** Differentiated instruction centers on whom we teach, where we teach, and how we teach (Tomlinson & Tighe, 2006). This instructional model encourages teachers to focus on processes and procedures that support the various learning styles of students. Differentiated instruction focuses on instructional planning that is varied in nature and is designed to meet the diverse needs of learners.

The nucleus of differentiated instruction is flexibility in content, process, and product based on student strengths, needs, and learning styles (Levy, 2008). Therefore, it is imperative for teachers to have a deep understanding of the key curriculum elements in order to apply them in a manner that supports student learning.
**Content.** Content is what we teach to students. Authors Tomlinson and Allan state that “content consist of facts, concepts, generalizations or principles, attitudes, and skills related to subject, as well as materials that represent those elements” (p.7, 2000). Teachers are expected to teach students the same contents but may vary in the materials and means through which contents is taught. This is important because of the varying ability levels of students. Tomlinson suggest that differentiating content can be thought of two ways: teachers adapting what is taught students, and adapting or adjusting how students are given access to what they are expected to learn (2000). Therefore, teachers must be open minded and creative when designing instruction for student learning. For example, some students are working above grade level in mathematics and have mastered the state standard or his or her grade level. These students could be assigned a project that is somewhat rigorous. Differentiation in instruction that is more challenging is required for these students’ academic progress to move forward. Some students are working below grade level. These students may be successful in mathematics by working with manipulatives in order to move from concrete representations to abstract representations. Differentiated instruction allows for variation in content without losing sight of the curriculum to which all students are entitled (Levy, 2008, p. 161).

**Process.** Process focuses on how teaching occurs and how student learn. Process is the manner in which the student comes to understand or make sense of key facts concepts, generalizations, and skills related to the subject matter (Tomlinson, 2000). Teachers must select activities that accommodate the learning styles, interests and ability levels of students. Activities may include grouping students according to their interests, styles of learning or ability level to complete and assigned task. An additional example
of accommodating student learning may include the use of multiple intelligences, which allows students to complete tasks according to their specific mode of learning. Teachers can offer students choices about how they would like to demonstrate what they have learned. Assessing what student know and do not know helps to drive instruction. Assessment is continuous and closely linked to instruction (Tomlinson, 2000).

Product. The product is the way students show what they have learned. Teachers can assess students learning in a variety of ways. The key is making certain sound products are available to evaluate student learning according to goals of learning. For example, teachers can review a portfolio of student work that shows student progression of subject matter. Students can also give oral presentations; create posters, write a poem or a summary of what was learned. Whatever method chosen must match the learning style and ability level of students. A good product encourages students to reflect on their learning, apply what they have learned, expand on their understanding, and enhance their critical and creative thinking (Tomlinson, 2000).

Acknowledging Student Readiness, Interest and Learning Profiles. Students differ in three ways: readiness, interest and learning profile. These differences allow teachers to adjust instruction to support student leaning.

Readiness. Readiness is a student entry point relative to a particular understanding or skill (Tomlinson, 1999). To differentiate in accordance to student readiness, teachers must create assignments or opportunities for students to choose according to their ability level. Examples of how teachers can modify for student readiness include:

- Use of manipulatives of mathematical concepts.
• Modifying level of rigor to in order for student to complete the task.
• Modify the assignment according to student and experiences relate to the topic.
• Students who need encouragement to enhance their level of readiness may need the following types of modification can be used to successfully complete assignments:
• Aid in identifying gaps in learning in order to implement a plan to move students forward.
• Create task that are concrete in nature and require few steps to complete.
• Provide re-teaching opportunities to review concepts for deeper understanding.
• The pace of task is appropriate for student level of readiness.

Learning Profile. Learning profile helps to determine how students learn. There are numerous factors that play an important role in how students learn, which include intelligence preferences, gender, culture, or style of learning (Tomlinson, 1999). Teachers can differentiate in response to the learning profile of students in the following ways:

• Provide opportunities for group and independent work.
• Utilize Howard Gardner’s Multiple Intelligences for completion of task or projects.
• Appeal to the needs of students by presenting information through auditory, visual, and hands on methods.

Interest. Interest refers to a student’s enthusiasm or curiosity related to a topic. Teachers can differentiate in reaction to the curiosity of students by aligning key skills
and materials to support learning with curriculum topics. Teachers can modify to student interest in the following ways:

- Provide students with a variety of ways to research a topic.
- Provide students with choices to show what they know.
- Allow students to utilize many resources, materials and technology.

**Instructional Strategies that Support Differentiated Instruction.** Tomlinson and McTighe (2006) imply that “in effective classrooms, teachers consistently attend to at least four elements; whom they teach (students), where they teach (learning environment), what they teach (content), and how they teach (instruction) (p. 2). These four elements must coincide when planning various learning opportunities and choosing instructional strategies that contribute to student achievement. The following instructional practices can be utilized in the classrooms to differentiate instruction:

- Complex instruction-requires students to work cooperatively in small groups.
- Orbital studies-are independent studies of a topic that are then knowledge and skills are shared with the group.
- Interest center-are designed to encourage student exploration of topics of interest.
- Tiered task and projects-are designed to focus student learning on specific understanding and skills related to a topic while attending to the various ability levels of students.
- Learning contracts-is an agreement between the student and the teacher as it pertains to acquiring the knowledge and skills related to the standards.
- Portfolios-is a collection of student work that allows students to set learning goals and teachers to evaluate student learning.
These types of instructional practices make the implementation of differentiated instruction successful. Teachers must consistently provide high-quality curriculum and instruction to promote student achievement. This requires teachers to know what to differentiate (adjusting the curriculum according to the needs of students), how to differentiate (modification occurs in response to students’ readiness, interest or learning profile), and why is differentiation needed (reason for modifying student learning).

Tieso (2005) conducted a study of 31 mathematics teachers and 645 students and determined that differentiated instruction was effective for keeping high-ability students challenged in heterogeneous classrooms. In effective classrooms, teachers consistently attend to at least four elements: whom we teach, where they teach, what they teach, and how they teach (Tomlinson, 2006). Differentiated instruction aligns with the principles of constructivist learning theory because teachers seek and value their students’ point of view (Brooks, 1999). The points of view of students can be used to monitor student understanding and drive instruction for further teaching and learning. Assessment is also a focal point of the principles of constructivist theory. Teachers assess student learning in the context of daily teaching (Brooks, 1999). Daily assessment of student learning during instruction allows teachers to monitor student understanding and provided opportunities to redirect one’s instruction in order to meet the needs of diverse learners. Cooperative learning incorporates differentiated instruction in a manner that provide teachers with the opportunity to facilitate student learning while assessing student achievement in order to drive instruction. There is no one-size fits all model for differentiated instruction, which is dependent on students’ prior knowledge, ability levels as well as interests (Huebner, 2010). Utilizing the differentiated instruction model with
cooperative learning should include grouping students based on different criteria regarding their specific needs and the short-term goals of the teacher (Levy, 2008).

**Multiple Intelligences (MI).** The chief supporter of the multiple intelligences is Dr. Howard Gardner. Gardner and believed that intelligence is not fixed at birth but through appropriate learning experiences intelligence can be enhanced (Orlich, 2007). Gardner introduced the world to the multiple intelligences in 1983, which include eight distinctive ways that humans may display intelligence. Gardner believes that all human beings possess eight different intelligences that each person has a unique blend of intelligences and no two people have exactly the same profile of strengths and weaknesses with respect to intelligences (Vardin, 2003).

Spencer Kagan (1998) described MI theory as a powerful catalyst in education and can be used to meet the following three specific visions:

1. To match instruction with the ways students learn
2. To encourage students to stretch their abilities and develop all their intelligences to the best of their ability
3. To honor and appreciate how we are alike and how we are different.

Howard Gardner’s multiple intelligences makes its greatest contribution to education by suggesting that teachers expand their repertoire of techniques, tools, and strategies beyond the typical linguistic and logical ones predominantly used in U.S. classrooms (Lotan, 2006). Implication for school restructuring and classroom application include expanded teaching approaches, curricular revisions, and expanded student assessment (Lotan, 2006).
MI requires teachers to adjust their instructional strategies to meet students’ individual needs. The classroom teacher constantly changes methods of instruction that include moving from one intelligence to the next as well as possibly merging intelligences in a creative manner (Lotan, 2006). MI also provides the opportunity for teachers to create learning opportunities that reach past textbooks to promote learning as well as allow students to display evidence of learning.

Howard Gardner (2006) defined the various intelligence areas as follow:

- **Verbal linguistics intelligence** involves the mastery of language and people with this intelligence tend to think in words and have highly developed auditory skills.
- **Logical-Mathematical intelligence** consists of the ability to detect patterns, reason deductively, and to think logically.
- **Visual/Spatial intelligence** gives persons the ability to manipulate and create mental pictures in order to solve problems.
- **Bodily-kinesthetic intelligence** entails the ability to understand the world through movement. These individuals can use their bodies for distinctive purposes.
- **Musical intelligence** individuals utilize sound to its greatest extent. These individuals also have a firm understanding of pitch, rhythm, and tone.
- **Interpersonal intelligence** consists of having the ability to understand and interact with others by understanding one’s moods, feelings, motives as well as how they are smart.
- **Intrapersonal intelligence** consist ability to know and understand one’s own inner workings.
• Naturalist intelligence involves the ability to identify objects and put things into categories.

• Existential intelligence involves displaying the ability to pose or contemplate questions about life, death, and ultimate realities.

Author Thomas Armstrong (2003) emphasizes four points that should be considered regarding MI. First, each person possesses all eight intelligences and have varying ability in all of the intelligences. Second, the way in which the eight intelligences work together is unique to each individual, pending on his or her experiences. Third, most individuals fall somewhere between highly advanced in some intelligences, modestly advanced in others, and relatively weak in the remaining intelligences. Unfortunately, schools across the nation tend to utilize only two of the eight intelligences (Verbal-linguistic and Logical/mathematical). The remaining six intelligences are consciously depressed (discriminated against) by schooling (Orlich, 2007). Individuals who could possibly display their intelligence through other forms are not given the chance to show what they know. How we offer opportunities for students to build on their strengths have far-reaching effects on student achievement in classrooms (McClaskey, 1995). Teachers can incorporate MI with cooperative learning to enhance student learning by providing opportunities for students to understand how they learn and identify their dominant identified multiple intelligence and strengthen other intelligences.

Howard Gardner’s multiple intelligences focuses on identifying students’ area(s) of intelligence that can be utilized by teachers to form multi-intellectual ability cooperative learning groups that are heterogeneous to enhance student learning in mathematics.
**Project-Based Learning.** Project-Based Learning is an inventive method to learning that teaches students a host of approaches essential for student success in the twenty-first century. Students learn to be active-listeners, which allow them to become skilled communicators as well as advanced problem-solvers who work collaboratively with others to generate ideas. This approach to learning is student-driven where teachers supervises the development and approves each choice before the student begins their project (Bell, 2010). Most projects include the content areas of reading, writing, and mathematics. By completing a project, students develop a greater understanding of the content, experience deeper learning, and are motivated to learn.

The following phases occur in problem-based learning:

A. Students begin by utilizing an organizer to identify a probing question.

B. Students brainstorm to pinpoint the best method for their research as well as select materials that they will need in order to conduct their research.

C. Students will select the manner in which they will display what they have learned in the form of a project.

D. Students will identify a targeted audience with whom to share their project (Bell, 2010).

**Meeting the Diverse Needs of Students.** When cooperative learning environments are created with the focus of meeting the diverse needs of students, academic achievement will increase. Cooperative learning has proven to increase the academic achievement of students of all ability levels (Orlich, 2007). This is especially promising for students of color who in some cases perform below grade level. Research indicates that students of color benefit from the being a part of a cooperative learning
environment. African-American, Hispanic and Native-American students are social beings because of family traditions and their rich heritages. Vaughn (2007) suggests that students of color often have values, cognitive styles, and speech patterns that are different from those of their school’s dominant culture (p. 360). Teachers must carefully construct groups from various cultures; students are able to share thoughts, ideas and experiences with members in order to impact learning. Authors Schniedewind & Davidson (2000) states: “Effective heterogeneous cooperative groups allow students to learn to value diversity and the intelligences and perspective of others.” Teachers must use this valuable information to construct learning environments that allow students of color to share their strengths to help all members to excel academically.

**Background on Cooperative Learning.** Groups of individuals have been in existence for as long as the human race has been present on earth, working cooperatively to obtain goals. Celebrations then take place when group goals are successfully completed. These accomplishments support the notion that groups working cooperatively outdo individuals who work independently, especially when group members have different skill sets and areas of expertise that contribute to group accomplishing the goal or assigned task. Johnson and Johnson, experts in cooperative learning believe that it is obvious that groups outperform individuals, especially when performance requires multiple skills, judgments, and experiences (1999). Johnson and Johnson also believe that there is power to working in groups and support cooperative learning as an instructional method that can be utilized in classrooms to enhance teaching and learning. Cooperative learning is the term given to an instructional method that includes over 80 strategies, where students work together in small groups toward a
common goal (Nattiv, 1994). Johnson and Johnson (1994) describe cooperative learning as the instructional use of small groups through which students work together to maximize their own and each other’s learning. Numerous definitions for cooperative learning exist and several authors have defined cooperative learning in their writings. Authors Christopher Lopata, Kathleen Miller and Robert Miller (2003) defines cooperative learning as “an instructional technique designed to promote the academic and social development of students” (p.232). Author Winston Vaughn (2002) defines cooperative learning as “the instructional use of small heterogeneous groups of students who work together to maximize their own learning and each other’s learning” (p.359). The definition and interpretation of cooperative learning influence the manner in which it is implemented by teachers and its effect on student learning. Although researchers define cooperative learning differently, they all tend to agree that the goal and focus of cooperative learning is on student learning. This goal has been the focus of educators since the one room schoolhouse came into existence.

According to Slavin (1991), Small-scale laboratory research on cooperative learning dates back to the 1920s but research conducted in classrooms related to specific applications begin in the early 1970s. Since that time, cooperative learning has been utilized throughout the United States and abroad, and is of great interest to schools and school district because of its positive results related to teaching and learning in every subject area. Cooperative learning has successfully been utilized into classrooms for students of all ages and ability levels, ranging from kindergarten through college level where they complete a variety of task or projects related to an assortment of content areas (Marzano, 2001).
Research over the past two decades have concluded the relative effectiveness of cooperative learning methods promotes student achievement and social relations when compared to more traditional methods of instruction (Johnson et al., 1981). Cooperative learning also encourages the building of supportive relationships, good communication skills, and higher level of thinking abilities (Hilke, 1990). Students will need these essential skills when working with others in the workplace as well as for everyday living. One purpose of cooperative learning is to make each group member a stronger individual in his or her own right (Johnson et al., 1999).

Origins of cooperative learning date back to World War II when social theorist began forming cooperative learning groups after concluding that group work was more effective in value, quantity and overall production when compared to working alone. The cooperative learning movement advanced into the field of education when Joseph Lancaster and Andrew Bell utilized it in England and then brought the instructional method to the United States when the Lancastrian School opened in New York City in 1806. Various philosophers and psychologists from the 1930’s and 1940’s have also influenced how cooperative learning is utilized which, led to the work of David and Robert Johnson as well as other contributors to cooperative learning theory and how it is practiced in classrooms today. Cooperative learning was and continues to be used as a means to decrease competition in American schools while encouraging students to work cooperatively to help one another progress both academically and socially. Johnson, Johnson, & Stanne (2000) stated that cooperative learning strategies are generally utilized because they are based on theory, validated by research, and virtually any teacher can find a way to use cooperative learning methods that align with personal values and
beliefs. This unique instructional approach capitalizes on students’ need to interact with their peers, exercise ownership over their learning, and express their desires to achieve academically as well as socially (Slavin, 1996). Researchers conclude the cooperative learning model ranked first in teaching approaches that promote greater higher order thinking, problem solving, and achievement (Lin, 2006).

**Researchers of Cooperative Learning.** Numerous researchers have conducted extensive studies on cooperative learning. The following individuals have contributed to the development and implementation of this research-based instructional method.

**Morton Deutsch (1920-).** Morton Deutsch, an American social psychologist developed the theory for cooperation in the late 1940s then presented the Social Interdependence theory, which provides a foundation on which cooperative learning is built. Social interdependence theory to education has become one of the most successful and widespread applications of social and educational psychology to practice (Johnsons and Johnson, 2009). Deutsch introduced the social interdependence theory after discovering cooperative environments where individual success was dependent on the success of others resulted in positive communication between group members. These positive communication patterns resulted in higher productivity and the building of peer relationships.

**Robert Slavin.** Robert Slavin, an American psychologist is currently Director of the Center for Research and Reform in Education at John Hopkins University and part-time Professor at the Institute for Effective Education at the University of York in England. Slavin created his Success for All Educational Model after being approached by the Superintendent of Baltimore Schools for assistance with improving impoverished
success for All is a cooperative learning approach utilized to increase student achievement by allowing students to work in small groups to complete lessons structured around effective and active instruction. According to Slavin, used properly, cooperative learning is an exciting way for all kids to learn (2014).

**Shlomo Sharan.** Shlomo Sharan, Professor Emeritus in Education and Organization Psychology at the School of Education, Tel Aviv University (1966-2000). Sharan is known for his work with the cooperative learning method Group Investigation. Group investigation allow students to actively design what and how they will learn by creating cooperative groups according to shared interests in a subject based on a six-stage process. According to Sharan, group investigation is an effective organizational medium for encouraging and guiding students’ involvement in learning by allowing them to actively share in influencing the nature of events in their classroom (1989).

**David and Roger Johnson.** David and Roger Johnson, leading advocates of cooperative learning have conducted extensive research on the subject. The Johnson brothers are co-directors of the Cooperative Learning Center at the University of Minnesota and have held hundreds of workshops demonstrating cooperative learning strategies and in 1994 published five elements essential for effective group learning to improve teaching and learning in classrooms. David is a professor of educational psychology, specializing in social psychology at the University of Minnesota. Roger is professor of curriculum and instruction, specializing in science education, also at the University of Minnesota. According to Roger Johnson (1987), when teachers use cooperative learning they are provided with an assortment of outcomes which impacts achievement of students by developing critical thinking as well as long-term retention
when they are engaged in discussions and explaining their interpretation of subject matter to each other.

**Kagan Spencer.** Spencer Kagan, an American educational psychologist is known for creating the structural approach to cooperative learning, which can be used to teach any subject matter. Kagan has developed nearly 200 classroom “structures” which have various aims such as team building; focus on positive relationships, the sharing of information, enhancing critical thinking skills as well as enhancing communication skills. According to Kagan, each structure has its benefits and limits. To rely solely on any one structure is to limit the variety of experience of students and leave them less equipped for the kind of world they will be living in (1989).

**Principles of Cooperative Learning.** Cooperative learning ultimately entails the coordination of one’s efforts with the effort of others to accomplish a shared goal and complete the task (Kirk, 2001). Students must understand that working cooperatively requires all members to take ownership for helping each person in the group reach their level of academic achievement. Each student in the group must be dedicated to his or her own success as well as to the success of other group members. This commitment is at the heart of cooperative learning (Vaughn, 2002). The successful academic achievement of the entire group is dependent on each member’s willingness to teach and learn. One member cannot truly succeed unless everyone in the group succeeds. Therefore, each member is a valuable resource for the entire group. The group will not achieve academic success if one member fails to reach his or her achievement goals. Author Patricia McCracken (2005), states “group work is not complete until all members have mastered the content and all students are working toward the same goal” (p.11). To experience
success with the implementation of cooperative learning in the classroom and enhance student learning the following principles must be present:

**Positive Interdependence.** Positive interdependence links students together so no single student can succeed unless all group members succeed (Johnson & Johnson, 1994). Students must understand they will “sink or swim together.” In order to swim together, members of the group must be willing to work collaboratively. Additionally, each group member has two essential responsibilities: to learn the assigned material and to ensure that all members of their group learn the assigned material. According to Johnson & Johnson (1994), individual accountability is the key to ensuring that all group members are strengthened by learning cooperatively. When individual tasks are executed, the group will accomplish something beyond individual success.

Teachers must make certain two steps are implemented when forming positive interdependence in learning groups; 1) structure positive goal interdependence, 2) supplement and strengthen positive goal interdependence by adding resource, reward/celebration, role, identity, and other forms of interdependence (Johnson and Johnson, 1999).

Additionally, teachers must thoroughly understand assessing the performance of each member of the group as well as the group as a whole, and providing timely feedback enables the group as its members to recognize and celebrate accomplishments and to identify areas of needed improvement to strengthen the positive interdependence of the group. When positive goal interdependence is structured to occur consistently, the teacher and students will see it as a natural part of any lesson (Johnson & Johnson, 1994).
**Face-to-face Interaction.** Face-to-face interaction encourages members of the group to support and advance each other’s learning. Social support between students is an important component of cooperative learning. “Strong social support is characterized by high expectations, challenging work, strong effort, mutual respect, and assistance in achievement for almost all students” (Kemker, Barron & Harmes p. 308). Each member must feel free express his or her opinion and to pose questions related to their understanding or misunderstanding of subject matter without being mocked or demeaned by other members of the group. This requires the entire group to have respect for each other and to be valuable resources for those members who struggle with subject matter in order to move learning forward. Each member must be an advocate for the group and applaud the progress made toward meeting academic achievement goals of all members. Authors Johnson, Johnson & Holubec agree that members must believe that they all sink together or swim together. If one fails to meet their academic goal, they all fail to meet the group’s academic goal (1988). This principle provides students with opportunities to grow and develop in their understanding and acknowledgement of what it means to “have a sense of community” where we as humans are encouraged to contribute in some manner to make a difference so that we all can move towards accomplishing our goals which is a beneficial real-world experience.

**Individual Accountability.** In order for cooperative learning to be most effective, both group rewards and individual accountability must be present (Slavin, 1988). Group rewards along with individual accountability means that every student is rewarded only when others in his or her group also experiences success, which deters high achievers from taking over the assignment. Students must be accountable for their own learning by
working to their fullest potential. Although task may be somewhat challenging, students are expected to work hard to complete assigned task in a matter that demonstrates that learning has taken place. They must also work with members to help them understand subject matter and complete assign task. Students must reflect on their effort and progress made toward reaching achievement goals and their contributions toward supporting the academic achievement of the group. Cooperative learning promotes a learning community that encourages interdependence with individual accountability (McCracken, 2005).

**Social skills Development.** Building meaningful relationships and developing effective communication skills is associated with cooperative learning. Students regardless of ability level, race or ethnicity, are expected to assist each other by sharing their knowledge and resources, planning and completing task together, and sharing strategies that will promote students internalizing and retaining information. Students come from diverse backgrounds and have unique experiences that can contribute student learning. Researchers have discovered that cooperative learning encourages better relationships among students with special needs and varying races and ethnicities (Lin, 2006). When students are able to work cooperatively, they develop an appreciation for the likes and differences in themselves and others.

**Group Processing.** Group processing is the practice members utilize to make the most of their own and each other’s learning (Strahm, 2007). The purpose of group processing is to explain and enhance the efficiency of the members in contributing to the shared energy needed in order to achieve the goals of the group. According to Johnson (1987), benefits of group processing include:
A. Enables learning groups to focus on maintaining good working relationships among members.

B. Facilitates the learning of cooperative skills.

C. Ensures that members receive feedback on their participation.

D. Ensures that students think on the metacognitive as well as the cognitive level.

E. Provides the means to celebrate the success of the group and reinforce the positive behaviors of group members.

When students are exposed to and learn vital aspects of group processing, members are willing to provide leadership and work together to problem solve and come to consensus on ways to improve group processes when challenges arise within the group. Mills (2009) believes it is essential for teachers and students to pay attention to group dynamics and productivity. Additionally, group processing provides structure for group members to hold each other accountable for being responsible and skillful group members (Johnson, 1987).

In order for cooperative learning to be effective, each principle must be implemented appropriately including group processing. Therefore, Johnson and Johnson (1994) have encouraged teachers to be committed to doing the following:

A. Ensuring that each student and each group receives (and gives) feedback on the effectiveness of task work and teamwork.

B. Ensuring that students and groups analyze and reflect on the feedback they receive.

C. Help individuals and groups set goals for improving their work.

D. Encourage the celebration of member’s hard work and the group’s success.
Teachers must set aside time to allow students to reflect on their commitment to the group in order to identify areas that can strengthen group dynamics. Problems and resolutions of each group can be discussed with the entire class because the same issues may exist in other groups. This sharing opportunity may assist other groups with ways to solve problems. Authors Orlich, Harder, Callahan, Trevisian & Brown, encourage teachers to develop plans for engaging students in problem solving and conflict resolution (2007).

Types of Cooperative Learning Groups. To use cooperative learning effectively, one must know what is and is not a cooperative group (Johnson, Johnson, & Holubec, 1988). Three types of cooperative learning groups contribute to the enhancement of communication skills, tolerance and respect for individual differences, and student learning. They are formal, informal and cooperative based groups.

Formal Cooperative Learning Groups. Formal cooperative learning groups requires teachers to create educational opportunities for small groups of students to work collaboratively to teach particular content and to achieve specific learning goals. The duration of time spent together as a group ranges from one class period to several weeks. During this time, it is expected that students complete assigned task for learning and to make certain all group members thoroughly understand and complete the task as well.

When using formal cooperative learning groups, teachers are encouraged to: specify the objectives of the lesson, explain the task as well as stress the importance of positive interdependence, monitor students’ learning and assess students’ learning as well as aid students with processing how well their group is functioning (Johnson, Johnson & Holubec, 1988).
Informal Cooperative Learning Groups. Informal cooperative learning group (ad-hoc groups) interaction may last for a few minutes or until the end of a class period, depending on the learning activity. During this time, teachers are encouraged to lecture, model or show a video on subject matter being taught. Additionally, this time can be used for the teacher to: help students focus their attention on what is being learned, set the stage for conducive learning, set the expectations for the amount of information covered during a session, make certain students have time to learn and understand the content being taught, and provide closure at the end of an instructional session (Johnson, Johnson & Holubec, 1998). The teacher uses this time as a teachable moment for students because it occurs during instruction. During this time, teacher may review materials, goals and objectives that students are expected to master. Valuable data related to student learning may be collected while groups are working cooperatively. This information may be used to make changes in instruction to meet the needs of students.

Cooperative Based Groups. Cooperative based groups are heterogeneous in nature and membership may last for up to one school year. Members are expected to provide stability, encouragement, assistance and support for each other’s learning. This type of support influences student achievement regardless of content area of focus. Students are able to identify the strengths and weaknesses of group members, which in turn can be used to help each member achieve their academic goals because the strengths of group members are valuable resources that contribute to the achievement of all members.
There are three major purposes for using cooperative learning: to develop students’ social and communication skills, enhance tolerance and acceptance of diversity, and improve the academic achievement of students (Lin, 2006). Teachers must be mindful of the major purposes for using cooperative learning and provide opportunities for students to develop to their fullest potential regardless of the type of cooperative learning structure utilized in classrooms. An additional area of focus that is imperative to the success of cooperative learning in the classroom is the physical arrangement of groups. The physical arrangement gives clear messages about the teachers’ values and expectations for student behavior. Likewise, classroom design has been shown by research to affect student achievement, time on task and acoustics (Jolliffe, 2007).

**Cooperative Learning Structures.** Several structures are available to assist teachers with the utilization of cooperative learning. Teachers may use structures associated with cooperative learning to organize lessons that encourage social interaction between students in the classroom. The following well-known structures have proven successful in classrooms:

**Jigsaw.** Students are assigned to heterogeneous groups based on ability, gender and ethnicity. A project is assigned which requires each group member to become an expert on a specific topic. Students begin by working with members from other teams who are assigned the same topic. After becoming an expert on the topic, students then return to their groups to teach the topic. The group is then assessed on the topic for knowledge and understanding. Students may be assessed individually through the use of tests, quizzes or may receive their grade based on the average performance score of the group. This structure promotes positive interdependence because students understand
they are responsible for their own learning and the learning of group members. This responsibility can impact their achievement, which motivates them to work hard so all can achieve.

**Think-Pair-Share.** Students are given a topic to think about independently and then pair with another group member to discuss their thoughts, knowledge and understanding of the topic. The paired up students then share their thoughts with the entire class. This structure promotes face-to-face promotive by allowing students to support each other’s academic success by work together to complete learning tasks.

**Number Heads Together.** Students work in assigned groups to answer questions posed by the teacher. Before an answer can be given, students are required to put their heads together to develop a complete answer. This structure can be used as a review before a quiz or test is given. This structure also promotes positive interdependence because students understand that they are accountable to themselves and to their group for the mastery of information and aids with retaining information.

**Inside-Outside Circle.** This structure requires students to be teachers as well as learners. Students stand in two concentric circles. The inside circle faces outward and the outside circle faces inward. The teacher poses questions to students orally or via note cards. Students respond to questions and then rotate to the next partner. This structure promotes face-to-face interaction, which allows students to work directly with one another to share knowledge and understanding of subject matter. Completing this learning task as a group helps to enhance the academic achievement of all members.

**Co-op.** Students develop a project by working independently to complete assigned task that contributes to the group project. This project is shared with the entire
class and evaluated as one completed project by the teacher. This structure promotes positive interdependence because each group member is accountable for his or her portion of a project that is combined to complete the group project. Students may be evaluated independently or as a group.

Success for All. Success for All is an all-inclusive reform model for elementary schools that is now operating in more than 1,800 schools in 49 states, as well as in 5 foreign countries (Hurley, 2009). This model was designed to ensure the reading success of every student by applying the following instructional approaches in grades pre-kindergarten through sixth:

1. Individualized tutoring for students in the primary grades who experience difficulty with reading.

2. Offering of family support programs.

3. Professional development for educators that focus on the implementation of high quality program elements.

After completing first-grade, teachers use strategies adapted from Cooperative Learning Integrated Reading and Composition where students work cooperatively in small groups to complete activities focused on central ideas, summarization, language, reading, and creative writing (Hurley, 2001). A trademark of Success for All is well-structured materials for students, teacher guidebooks, assessment resources and other supplementary supports.

Group Investigation. Group Investigation is an effective instructional approach for encouraging as well as guiding students’ involvement in learning by allowing them to take an active role in planning an area of study with group members who have similar
interests. The group collaboratively plan out a strategy for conducting research on a particular topic, divide the work, synthesize and summarizes the work then present their finding to the entire class. In order to assess student learning in Group Investigation, the teacher evaluates students’ higher-level thinking pertaining to their area of study, the application of knowledge to new problems, the use of inferences, and the drawing of conclusions (Sharan, 1990).

These well-known structures support the five key principles of cooperative learning can contribute to student learning. Kirk (2001) states, “cooperatively structured classrooms contribute greatly to a positive class tone, as children’s needs are being fulfilled” (p. 34).

**Roles and Responsibilities of Group Members.** Cooperative learning includes assigning student specific roles and responsibilities within the group. These roles and responsibilities encourage accountability for self as well as for the group. Kirk (2001) states, “assigning roles ensures that no individual shirks his or her responsibility, as can happen in small group work” (p. 33). The following positions and responsibilities may be assigned to students:

1. **Leader:** Manager of the group and accountable for making sure all members adhere to the role and responsibilities related to their role.
2. **Recorder:** Documents group responses and records answers when the group reaches consensus.
3. **Encourager:** Encourages and praises the participation and efforts of all members.
4. **Checker:** Verifies that all members of the group agree with chosen method for solving problems and fully understand subject matter.
5. **Time Keeper**: Makes certain the group remains on task and adhere to time limits for completing assigned task.

Each student must understand that their particular role is important because it contributes to the group dynamics and promotes both positive interdependence and individual accountability

**Roles and Responsibilities of Teachers.** Key component of successful implementation of cooperative learning is the teacher. The teacher must hold a constructivist view of learning, which entails believing that all students are capable of learning regardless of ability level, race or gender. Teachers must provide opportunities for all students to develop critical thinking skills, collaborate, and problem solve.

Teachers are encouraged to receive training in order to have knowledge and understanding of cooperative learning for its successful implementation. Teachers’ knowledge and understanding of teaching practices and instructional methods that is utilized in classrooms should aid in the restructuring of information associated with cooperative learning in order to fit their style of teaching.

Cooperative learning emphasizes the crucial role of teachers in supervising group activities (Law, 2008). In order for students to reap the benefits of cooperative learning, teachers must be dedicated to its full implementation, which includes being immersed in activities with students. Teachers must constantly communicate high expectations for student achievement and take an active role in student learning. The following six actions taken by teachers can impact how cooperative learning impacts student learning:

1. While students are working collaboratively in groups, the teacher must move around the classroom to monitor group behavior.
2. Provide meaningful feedback to enhance group dynamics and student learning.
3. Ask probing questions to promote critical thinking.
4. Provide assistance but intervene only when necessary.
5. Evaluate group progress to determine if learning is occurring.
6. Hold groups accountable for competing and submitting assignments in a timely manner.

Kirk (2001) states, “the teacher’s role is one of observer and mediator, intervening by asking questions, encouraging students, suggesting possibilities on specific academic and social skills and providing feedback during group processing” (p.32).

Teacher should not assume that students automatically know how cooperative learning groups are to function effectively because many have not experienced working collaboratively or if they have been exposed to this instructional strategy have developed negative perceptions of it. Working collaboratively in groups is a skill that has to be taught by students as well as teachers (Gay, 2000). Using cooperative learning can be challenging for students and teachers. Some students may be resistant while others may attempt to avoid working collaboratively and taking ownership for completing their assigned task. According to Johnson (1999), there will be times when students will refuse to work cooperatively or will not understand how to help the group succeed. Teachers can resolve or eliminate these sorts of concerns by assigning each member of the group a specific role to play in the group.

Some teachers may not be comfortable with relinquishing some authority and classroom management when utilizing cooperative learning. The teacher can manage these concerns by building a learning environment that values collaboration and
community, which is consistently communicated and demonstrated by all learners. Teachers are encouraged to begin slowly with its implementation so students can gradually adjust and become comfortable and then skilled at learning cooperatively to enhance learning. Teachers must be willing to embrace the vision of good teaching as a process of “drawing out” rather than “stuffing in” knowledge and understanding of mathematics.

**Benefits of Cooperative Learning.** The widespread use of cooperative learning is due to its countless benefits for teaching and learning which has been unmistakably confirmed in the literature for more than 20 years (Nattiv, 1994). Research reveals cooperative learning can improve students’ academic and social skills, enhances students’ eagerness for knowledge, understanding and application; and willpower to achieve academic achievement (Orlich, 2007). Students are able to improve their skill set in all areas, making them well-rounded individuals who can make great contributions to school and society. Cooperative learning skills are the keystones to maintaining a stable family, a successful career, and a stable group of friends (Johnson, 1990). Cooperative learning has been proven to enhance the social skills of students, which is contributed to participating in group work. When students are encouraged to work cooperatively, they learn to manage conflicts while considering the and respecting the opinions of others. Enhancing the social skills of students may be particularly significant in adolescences, which is a period when the need to belong conflicts with the need to be recognized as an individual (Wood, 1987).

Research also suggests that cooperative learning is a valuable instructional strategy that encourages student to interact with one another and develop a positive mind-
set toward school. Cooperative learning has been associated with increases in students’ self-esteem, attending classes and remaining on task, satisfied with school and classes, and the drive to learn, as well as a reduction in dependency on the instructor (Whicker, 1997). One of the most significant benefits of cooperative learning has been the increase in positive intergroup relations. Researchers have repeatedly reported the improvement in race relations and acceptance of students who have been mainstreamed into classes (Whicker, 1997). This interaction between students promotes understanding and tolerance for others from different backgrounds. Therefore, students are allowed to build character when they are afforded opportunities to compare ideals with reality in their own lives and in the lives of those around them (Haberman, 2010).

An additional benefit of cooperative learning is how it enhances the critical thinking and problem solving abilities of students, which in turn improves their levels of achievement. According to Lin (2006), “when students used major components of cooperative learning by practicing their new learning or teaching it to others, or apply their learning immediately, they were able to retain seventy-five Percent to ninety Percent of the material after 24 hours” (p. 35).

Authors Orlich, Harder, Callahan, Trevisan & Brown (2007) list additional benefits of cooperative learning;

1. Improvement of comprehension of basic academic content;
2. Reinforcement of social skills;
3. Student decision making allowed;
4. Creation of active learning environment;
5. Boost student self-esteem;
6. Celebration of diverse learning styles;
7. Promotion of student responsibility; and
8. Focus on success for everyone.

These additional benefits of cooperative learning and its influence on students’ social interaction, personal growth and development; and academic achievement, makes its use in classrooms worthwhile, meaningful and rewarding for students and teachers. Lopata (2003) states research continues to support the use of cooperative learning as a means to encourage academic and social growth.

**Cooperative Learning and Gifted Students.** Most teachers acknowledge the benefits of cooperative learning on low and middle achieving students. However, research has also confirmed the benefits cooperative learning has on high achieving students. David and Robert Johnson have conducted several studies comparing the achievement of high, middle and low achieving students in cooperative learning. Johnson (1990) note the following benefits for high achieving students:

A. When working in heterogeneous groups, scores on retention test are higher verses high achievers participating in competitive or individualistic learning environments.

B. The quality of reasoning strategies used by high achievers were higher when working in cooperative groups.

C. The enhancement of cognitive processes when involved in conversations encompassing talking through and explaining material and concepts.

D. The development of collaborative skills and friendships with peers.
E. The development of leadership, communication, conflict management, and decision-making skills needed for success in future career opportunities.

**Mathematics in Urban Schools.** Students of color make up a large portion of pupils in the U.S. educational system. Many of them struggle to meet satisfactory achievement levels in core content areas, which include mathematics (Cross, 2012). High rates of unsatisfactory competency in mathematics for students of color has caused many educators to reconsider their approach to educating students to afford them all the opportunity to experience quality mathematics instruction that promotes academic success. The National Council of Teachers of Mathematics (NCTM), an international professional organization committed to quality in the teaching and learning of mathematics called for a surge in emphasis on teaching and learning of mathematics (McKinney, 2009). This organization has presented an aspiring vision of a demanding, high-quality mathematics-learning environment with a clear and all-inclusive goal to encourage dialogue and efforts for the enhancement of mathematics education and mathematical proficiency for students in grades Pre-K-grade 12. NCTM presented the Principles and Standards for School Mathematics (PSSM), which included six fundamental principles that describe specific components that are essential for creating a quality mathematics-learning environment. These specific components include:

1. **Equity**- Quality in mathematics education necessitates equity-high expectations and strong backing for all learners.

2. **Curriculum**- A curriculum is more than an assortment of lessons: it must be comprehensible, concentrated on essential mathematics, and well-articulated across all grades.
3. **Teaching**- Operative mathematics teaching entails understanding what students know and need to learn and then challenging and supporting them to learn it well.

4. **Learning**- Students must learn mathematics with understanding, progressively constructing new knowledge from experience and prior knowledge.

5. **Assessment**- Assessment must support the learning of significant mathematics and provide valuable information to instructor as well as learners.

6. **Technology**- Technology is crucial in teaching and learning mathematics; it impacts the mathematics that is taught and increases students’ learning (McKinney, 2009).

These principles emphasize problem solving, critical thinking, and conceptual understanding which make-up the essential components of a quality mathematics education program. In order to ensure these essential components are implemented to create a quality mathematics program, there must be a focus on equity. Cross (2012) defines equity as providing fair distribution and access to the physical, intellectual, and technological resources that contribute to learning. This distribution of resources should available to schools, students, teachers, to promote and support quality instruction in mathematics that impact student learning. Unfortunately, a great share of classrooms continues to fall short of putting into practice quality instruction in mathematics, especially urban high poverty schools in spite of the clear direction of goals and standards set forth by NCTM (McKinney, 2009). Berry conducted research that documented disparities in achievement levels for African-American students, as well as other ethnic groups. Mathematics instruction for urban students often puts emphasis on detached concepts, mathematics jargon out of context, following direct steps, and answering
questions without explanation. Many mathematics students spend much of their time on basic computation instead of being engaged in rich mathematical problem-solving experiences.

McKinney (2009) conducted a study that involved examining the mathematics pedagogical as well as instructional skills of sixty-four teachers who teach seventh and eighth grade students in high-poverty middle schools. Results reveal that teachers utilized a variety of instructional strategies, but lecture, drill and practice, and teacher-directed instruction continue to rule many high-poverty classrooms. Ladson-Billings (1997) discussed the impact of these practices on student achievement by referring to it as the “pedagogy of poverty”. The pedagogy of poverty consists of 14 teaching acts or routines which include the following: giving information, asking questions, giving directions, making assignments, monitoring seatwork, reviewing assignments, giving tests, reviewing tests, reviewing tests, assigning homework, reviewing homework, settling disputes, punishing noncompliance, marking papers, and giving grade (Haberman, 2010).

Other researchers have reported similar observations about the trend for Black students getting more old-style, drill-based instruction focused on basic computation skills (Lubienski, 2002). Tomlinson states educators are mainly restricted when the single or major pedagogical strategy utilized is teacher-centered (2000). The lack of utilizing varying strategies in classrooms contribute to the evidence of disparities in mathematics achievement that continues to exist in assessment results, enrollment numbers in higher-level courses as well as in distribution of resources in American
schools (Berry, 2003). Mathematical knowledge and skills are essential for daily living in an increasingly global economy.

The National Assessment of Educational Progress (NAEP) collects mathematics assessment data on students in grades four, eight and twelve. NAEP data is also utilized to identify variables such as socioeconomic status, school policies, allocation of human and material resources, and classroom instructional practices that may account for gaps in mathematics assessment results. According to the 1996 NAEP assessment, 4 Percent of African-American eighth grade students scored at or above the level of proficient, 24 Percent performed at the basic level of proficiency, and 72 Percent performed below the level of basic. According to 2000 NAEP assessment results, 6 Percent of African-American eighth grade students scored at or above the level of proficient, 27 Percent performed at the basic level of proficiency, and 68 Percent performed below the level of basic (Braswell et al. 2001). It is evident that African-American eighth grade students made marginal gains. However, the gaps between African-American and white students continue to remain comparatively unchanged. The National Research Council (1989) believes much of the failure in school mathematics is contributed to a tradition of teaching that does not correlate to the way most students learn.

Researchers of mathematics education have given some attention to gaps in mathematics achievement, but with limited quantity and depth (Lubienski & Bowen, 2000). Research results related to the utilization of cooperative learning can be used to close achievement gaps in mathematics.

**Cooperative Learning and Mathematics Achievement.** Cooperative learning in mathematics has been an area of interest for educators and researchers because of its
impact on student achievement. A multitude of studies have been conducted to examine cooperative learning’s impact on student achievement and to provide support for this instructional strategy. The National Council of Teachers of Mathematics (NCTM, 1989) advocates cooperative learning because “small groups provide a forum in which students ask questions, discuss ideas, make mistakes, learn to listen to others’ ideas, offer constructive criticism, and summarize their discoveries in writing” (p. 79). Cooperative learning aligns with the teaching of mathematics because of the following benefits of learning mathematics in small groups:

- Small groups provide a medium for students to ask questions discuss ideas, make errors, learn to listen to the ideas of others, and give constructive criticism.
- Small groups offer opportunities for all students to experience success in mathematics by interacting to learn concepts and enhance problem-solving techniques.
- Small groups are suited for learning mathematics because solutions can be proposed which offers occasions for students to persuade each other through logic.
- Small groups provide opportunities for students to share various methods of solving a problem then discuss the merits of different solutions.
- Small groups encourage students to master computational techniques and basic facts by playing games and solving puzzles related to mathematics (Davidson, 1990).
Slavin (1996) conducted a study of third and fourth grade students in which cooperative learning methods were used. Results indicate all students in the experimental group acquired noteworthy increases in mathematics. Duren and Cherrington (1992) conducted a similar study with students enrolled in mathematics courses designated for higher-grade levels and reported results suggesting that cooperative learning supports achievement. Duren and Cherrington conducted an additional study involving seventh and eighth grade pre-algebra student who used cooperative learning strategies. Their results indicate that these students scored higher than the controlled group and they retained the information for a longer period of time (1992). Researchers Thomas and Sherman also reported students obtaining higher achievement gains among ninth and tenth grade students who were enrolled in general mathematics courses that utilized cooperative learning as an instructional strategy verses performing independently (1986).

Treisman (1990) created the Mathematics Workshop Program (MWP) then conducted a study with Latino and African American students at the University of California at Berkley pertaining to cooperative learning in mathematics. His findings on the achievement data of 646 students suggest that when given the opportunity to work cooperatively in groups to help each other find solutions, understand the principles and ideas on which problems are based on, and share strategies for finding solutions and determining proofs for problems, students achieved high grades in calculus.

Slavin and Karweit (1984) conducted cooperative learning research on 9th grade students enrolled in a general mathematics course. These students significantly outperformed who studied course material independently.
The findings from these studies support the benefits of utilizing cooperative learning and can be used to assist teachers with accomplishing a number of goals simultaneously including raising the achievement levels of all students, building positive relationships among students, as well as giving students experiences they need for healthy social, psychological, and cognitive development (Johnson and Johnson, 1994).

The majority of cooperative learning research has occurred in the lower grades. Although few studies have focused on the effectiveness of cooperative learning at the secondary level, research has led researchers to predict that students utilizing cooperative learning would obtain higher levels of achievement verses students who worked independently (Whicker, 2001). Therefore, the implementation of cooperative learning can possibly enhance student achievement in mathematics as they transition from primary through secondary schooling with the knowledge and skills needed to successfully complete advance mathematics courses preparing them for college and career. In spite of growth in the use of cooperative learning, there are concerns about the quality of methods used to implement cooperative learning. Notably, Slavin (1999) voiced his concern with teachers utilizing in-formal versions of the cooperative learning model which lack the use of group goals and individual accountability. It is imperative that teachers effectively use all elements to promote the implementation of cooperative learning.

**Teacher Knowledge and Understanding of Cooperative Learning.** In order to implement for cooperative learning effectively to enhance student achievement, teachers must have knowledge and understanding of this instructional strategy. The effectiveness of cooperative learning has been well documented in literature. Despite the amount of research conducted in support of cooperative learning, specifics of its application in
classrooms are limited. Few studies have examined how teachers’ knowledge and understanding of cooperative learning affects student achievement. Antil et al (1998) conducted research to examine what extent elementary teachers utilized cooperative learning. Survey results indicate 93% of teachers reported using cooperative learning but a few were using cooperative learning in a structured manner. Researchers concluded that teachers recognized the virtues of cooperative learning but failed to implement the practices according to the suggested model thereby, modifying the practices in a way that is not consistent with structures related to cooperative learning.

Borko et al. (1989) conducted a study to look at the differences in instructional practices between exemplar and non-expert teachers. Results suggest that exemplar teachers utilize more effective instructional methods and demonstrated more progressive pedagogical understanding than non-expert teachers.

Lopata et al. (2003) conducted a study to examine the degree to which exemplar teachers reported using cooperative learning versus the degree to which they would prefer to use this method as well as the relative use of each element of cooperative learning. Results indicated that teachers who were exposed to cooperative learning through professional development demonstrated a smaller gap between actual and preferred use of cooperative learning in classrooms than those teachers who were not exposed to cooperative learning through professional development.

These studies look at the use of cooperative learning by teachers, but did not discuss its actual application, including the five essential elements of cooperative learning.
**Teachers’ Perceptions of Cooperative Learning.** It is imperative to consider teachers’ perceptions of cooperative learning as an instructional method because of its impact on student learning. Gilles and Boyle (2008) conducted a study, which focused on teachers’ perceptions of cooperative learning. The following six categories emerged from the data examined by researchers: teamwork, group composition, structure, self-efficacy, social skills, and helping behaviors.

**Teamwork.** Teachers acknowledged the importance of building teams because of the support students provide to each other while working cooperatively.

**Group Composition.** Teachers understood the importance of group composition and variables that can affect student learning which include: randomly assigning students to groups, allowing friends to work together if they genuinely focused on learning, mixed gender groups, group size, and mixed-ability grouping. When creating groups, teachers must consider each of these variables to meet the diverse needs of students in order to move learning forward.

**Structure.** Structuring groups is an important aspect of cooperative learning. Teachers acknowledge that students must understand and accept the fact that all were to contribute and hold a significant role in all team members learning as well as accept responsibility for assigned task. If these responsibilities were met, all group members would share the benefits.

**Self-efficacy.** Teachers believe that encouraging students to have a sense of achievement is important but they must also understand that learning is valued and achievement go together because of effort and shown by personal improvement, verses to comparing self to others.
**Social Skills.** All teachers involved in the study acknowledged the importance of teaching students how to communicate effectively in order to work together cooperatively. Students may not have interpersonal skills. Therefore, it is necessary to teach this skill set in order to promote effective cooperation.

**Helping Behaviors.** Teachers acknowledge the benefits of students helping each other. When students work cooperatively, they have the opportunity to hold meaningful discussions by listening to what each other has to say, valuing the opinions and ideas of each other.

Gilles and Boyle (2008) believe that understanding teachers’ perceptions of cooperative learning as a pedagogical practice will help to determine its implementation in classrooms. Teachers’ perception data can be used to create professional development opportunities for teachers to thoroughly understand each cooperative learning principle and how to best utilize it in the classroom to enhance teaching and learning.

**Review of Methodological Issues**

Research related to teachers’ knowledge and perceptions of cooperative learning is somewhat limited. However, studies that do exist have largely been qualitative. Mulryan (1994) conducted a qualitative study to examine students’ and teachers’ perceptions of small-group instruction related to cooperative learning. Taped individual interviews were conducted and anecdotal notes were written as students worked cooperatively in groups. Students and teachers were interviewed at the beginning of the study and after the observational section of the study. Study results revealed collaboration and sharing were the most important aspects of cooperative learning.
Teacher’s stated that cooperative learning gave students the opportunity to learn from one another and share ideas in a non-threatening setting.

Jones and Caston (2004) conducted a qualitative study to examine how cooperative learning improved the academic achievement of elementary African-American males in grades 3 through 6. The researchers conducted individual face-to-face interviews over a 3-month period with 16 students. Each student was interview on 6 separate occasions for approximately 30 minutes each. All interview sessions were audio recorded. Study results reveal the majority of students preferred to learn by working in groups with minimal teacher interaction. The majority of the students also preferred completing class projects and other assigned task in groups.

Ding et al. (2007) conducted a study to examine ways in which teachers used cooperative learning in mathematic classrooms. A qualitative method was used to explore teacher intervention focusing specifically on the cognitive processes of students. The researchers utilized videotaping as the primary source for data collection in which 6 teachers used cooperative learning to teach mathematics focused on Connected Mathematics text: Bits and Pieces I. Results revealed that the differences in teacher intervention value scores disclosed that not all teachers were good at promoting students’ independent thinking.

Gilles and Boyle (2008) conducted a qualitative study to examine teachers’ perceptions of cooperative learning. Seven teachers participated in the study in which they agreed to be videotaped twice while using cooperative learning in their classroom. Each teacher was video-taped for 45 minutes during each session. Semi structured interviews were conducted with teachers at the end of the school year in order to gauge
their perceptions of utilizing cooperative learning in the classroom. Study results indicate that teachers acknowledge when students are provided the opportunity to work cooperatively, valuable learning takes place. Meaningful discussions take place and students learn to value the opinions and ideas one another.

Although research related to teachers’ knowledge and perceptions of cooperative learning have largely been qualitative, there are disadvantages to using this research method especially when they involve conducting interviews or observations. Lodico (2010) identified five disadvantages to using qualitative research:

1. Most interviewers meet face to face with participants, so when confidentiality is guaranteed, participants may be hesitant to reveal sensitive information.
2. Interviews require a large amount of time to administer.
3. Interviews typically involve small samples.
4. Conducting observations require a large amount of time to collect data
5. Summarizing and examining data is time consuming and complex.

Quantitative research related to teachers’ knowledge and perceptions of cooperative learning is somewhat limited. Lopata et al. (2003) conducted a study in which a survey was utilized (5-point, Likert-type scale) to examine the degree to which exemplar instructors reported using cooperative learning verses the degree to which they preferred to use this instructional method. Participants included exemplar instructors from suburban elementary, and middle schools in New York State. Survey results revealed that exemplar instructors’ actual utilization of cooperative learning fell considerably beneath the level at which they would desire to be implementing cooperative learning.
Dr. Randall (2003) completed her dissertation on the differences in knowledge and perceptions of cooperative learning between urban elementary teachers assigned to neighborhood schools and schools of choice. A non-experimental, casual comparative design was utilized for the study. The primary data collection tool used was a survey. The results revealed that no statistically significant differences in the use of cooperative learning, knowledge and attitudes between teachers in schools of choice and neighborhood schools.

A quantitative study was conducted to examine teachers’ knowledge and perceptions of cooperative learning. There are several advantages to conducting a quantitative study, specifically if it involves the utilization of surveys. First, surveys will be administered anonymously to large sums of individuals in a short amount of time. Second, since participant’s identity is anonymous, responses to statements are typically true. Third, responses are brief and easy to summarize (Lodico, 2010).

Studies conducted by Lopata et al. (2003) and Dr. Randall (2003) align with the research design chosen for this study because they seek to explain differences in order to draw conclusions. This type of design is appropriate because it does not necessitate direct manipulation of the independent variable and no treatment is provided to the participants. Also, this research design does not run into the same types of threats to internal and external validity as experimental designs.

Synthesis of Research Findings

In this section, research findings are synthesized in order to present a holistic understanding of this cooperative learning study. Synthesis of the research findings will
allow readers to understand the review of literature and conclusions related to cooperative learning.

Various studies have been conducted to examine teachers’ perceptions of cooperative learning. The majority of research methods used to conduct these studies have been qualitative. Mulryan (1994) conducted a qualitative study where teacher interviews were taped. Results from this study indicate teacher believe cooperative learning has a positive impact on student achievement. Jones and Caston (2004) conducted a qualitative study utilizing face-to-face interviews with students as the data collection tool. Results revealed students preferred to learn by working collaboratively with peers. Ding et. al (2007) also conducted a qualitative study where teachers were observed in the classroom. Study results show not all teachers were good at promoting students to think independently. Gilles and Boyle (2008) conducted a qualitative cooperative learning study in which teachers were video-taped. Study results suggest teachers acknowledge valuable learning takes place when cooperative learning is the instructional method utilized in classrooms.

In order to conduct the stated qualitative studies, researchers selected observations, and face-to-face interviews with participants that are video-taped or audio recorded as their primary sources for collecting data. Creswell (2009) states that observing participants gives the researcher a first-hand experience with participants and unusual aspects can be noticed during the observation. Nevertheless, observations can be somewhat limiting because the researcher may be seen as invasive and may not have good attending and observing skills. Creswell (2008) believes data collecting from conducting interviews can be suitable when participants cannot be directly observed. An
additional advantage of conducting interviews is the researcher controls the line of questioning presented to participants. On the other hand, according to Creswell (2009), disadvantages associated with conducting interviews include bias responses from participants because of the presence of the researcher and information that is indirect is filtered through the views of interviewees. Audio-visual materials may be an unobtrusive way of collecting, allowing participants to share their reality related to cooperative learning. Nonetheless, data collected from audio-visual materials may be difficult to interpret and the presence of an observer may be disruptive and affect participants’ responses (Creswell, 2008).

A non-experimental, causal-comparative research design was used for this cooperative learning study. A survey was the data collect tool used for this study. According to Leedy (2005), one major advantage to utilizing a survey to collect data is that participants can respond to questions with assurance that their responses will be anonymous, and so they may be more truthful than they would be in a personal interview. However, specifying all questions in advance eliminates the opportunity to pose additional questions that could shed further light on this cooperative learning study.

Critique of Previous Research. Researchers have conducted extensive cooperative learning studies that have focused on a plethora of topics, which continues to affect how teachers instruct and how students of varying ages and ability levels learn. Various quantitative and qualitative methods have been used to conducted studies on cooperative learning and its impact on student achievement in mathematics. Quasi-experimental research, which is a quantitative method of research were primarily used to compare students who studied in cooperative learning groups (experimental group) to
students who studied independently (control group) to examine student achievement results. According to Creswell (2009), experimental research strives to determine if a specific treatment influences an outcome.

Researchers conducted cooperative learning research that focused specifically on student achievement in mathematics by utilizing the quasi-experimental design. Madden and Slavin (1983) studied third and fourth grade students enrolled in a math course. Duren and Cherrington (1992) conducted research on 7th and 8th grade pre-algebra students, Slavin and Karweit (1984) conducted research on 9th grade students enrolled in a general mathematics course, Thomas and Sherman (1986) utilized the quasi-experimental research to study 9th and 10th grade students who studied general mathematics. Researchers who use quasi-experiments do not have control over assignment of individual students to conditions but can randomly assign whole groups of students to different treatments (Lodico, 2010). These researchers also typically pretest groups prior to the treatment to ensure they do not differ on the dependent variable. There are several threats to validity when using quasi-experimental research. Internal threats include experimental procedures, treatments, as well as participant’s history, maturation, regression, selection and mortality that threaten the researcher’s ability to draw correct inferences from the data (Creswell, 2009). Potential external threats must be identified to minimize any threats.

Gilles and Boyle (2008) conducted a qualitative study on teachers’ perceptions of cooperative learning. Teachers were taped using cooperative learning in their classroom during two 45-minute sessions. Semi-structured interviews were also conducted with teachers at the end of the school year to gauge their perceptions of employing cooperative
learning in the classroom. Ding et al. (2007) conducted a qualitative study to examine ways in which teachers used cooperative learning in mathematic classrooms videotaping was the primary source for data collection. Jones and Caston (2004) also conducted a qualitative study to examine how cooperative learning improved the academic achievement of elementary African-American males in grades 3 through 6. Each student was interview on 6 separate occasions for approximately 30 minutes each. All interview sessions were audio recorded. Although videotaping and audio recording has its advantages, there are some disadvantages associated with its usage. For example, the researcher may influence the collected data by imposing personal meaning of the phenomenon on participants. In addition, teachers as well as students may not display authentic behavior when they are aware that taping is occurring, which makes the validity of the research tool questionable. There are also some disadvantages to conducting interviews. Interviews provide only information “filtered” through the views of the interviewers. Also, the presence of the researcher can affect how the interviewee responds to questions. Additionally, responses from interviewee may not be articulate, perceptive, or clear (Creswell, 2008).

A survey was utilized to examine teachers’ knowledge and perceptions of cooperative learning. Participants completed an online survey. The confidentiality of the participants’ responses were preserved and helps to ensure that no one except for the researcher has access to survey information. In addition, participants are more likely to be genuine with their responses since their identity is unknown and the researcher is not present to influence participants’ behavior or to imposing personal meaning of the
phenomenon on participants, which increases the reliability and validity of the research tool.

Chapter 2 Summary

Cooperative learning is a research based instructional strategy that has proven to develop students' development of effective interpersonal and communication skills, increase tolerance and acceptance of diversity, and improve academic achievement. This instructional strategy came to existence in the early 1970s and continues to be utilized in classrooms across the nation and world because of its ability to impact teaching and learning.

A key element of cooperative learning is its focus on collaboration to promote the achievement of students as individuals and as a group. The successful academic achievement of the entire group is dependent on each member’s willingness to become teachers and learners. This willingness is at the heart of cooperative learning (Vaughn, 2002).

Positive interdependence, face-to-face interaction, individual accountability, social skills development and group processing are the five distinctive characteristics of cooperative learning that contribute to the overall development of students. Lin (2006) states: “humans learn best when they collaborate with others and actively process personally meaningful information” (p.35).

Teachers and students play important roles for the successful implementation of cooperative learning. Teachers must hold a constructivist view of learning, which includes believing that all students are capable of learning, and provide opportunities for the development of critical thinking skills, incorporate ways for students to collaborate
with peers in order to solve problems. Students must be accountable for their particular role in the group because each role contributes to the success of the group. These roles promote positive interdependence and individual accountability which will help students to become responsible contributing members of society outside of the classroom.

A plethora of cooperative learning structures exists and contributes to student development and achievement. These structures aid teachers with creating learning environments that meet the diverse needs of students regardless of achievement level, race or creed. Teachers must strategically place students into heterogeneous groups in order for them to receive all the benefits of cooperative learning. Authors Nancy Schniedewind and Davidson (2000), states: “effective heterogeneous cooperative groups allow students to learn to value diversity and the intelligences and perspective of others” (p. 27).

Cooperative learning has proven to be an effective instructional method and can contribute to the growth and development of students by preparing and tooling them with skills needed to become self-sufficient contributing members of school and society. Schools who are searching for proven methods of instruction should consider utilizing cooperative learning to improve student achievement by meeting the diverse needs of all learners.

Researchers have conducted countless studies on various aspects of cooperative learning which has influenced how teachers teach and how students learn. Results from various studies confirm the use of cooperative learning strategies result in improvements in student achievement and in other areas of student development.
CHAPTER 3. METHODOLOGY

Introduction to Chapter 3

It was not known how and to what degree the differences between urban primary and urban secondary teachers’ knowledge and perceptions of cooperative learning influence how it is utilized in mathematics classrooms. The differences between primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning can adversely impact levels of implementation in classrooms and student achievement in mathematics. Cooperative learning has been identified as a research based instructional strategy that is considered to have a high probability of enhancing student achievement for all students in all subject areas and at all grade levels (Marzano, 2001). Developers of cooperative learning include Robert Slavin (1988), David and Robert Johnson (1987), as well as Spencer Kagan (1989). These individuals have unique methods for implementing cooperative learning, and have conducted extensive research to examine its impact on student achievement. However, the existing body of knowledge has not determined if possible differences between urban primary and urban secondary mathematics teachers’ knowledge and perceptions of cooperative learning influence levels of implementation in classrooms as well as teaching and learning.

Purpose of the Study

Few if any studies have focused on identifying differences that may exist between urban primary and secondary mathematics teachers’ knowledge and perceptions of
cooperative learning. The purpose of this study was to help pinpoint possible gaps in urban teachers’ knowledge and understanding of cooperative learning as well as identify perceptions held by teachers in order to create opportunities for them to recognize the benefits of utilizing cooperative learning as an instructional strategy to enhance student learning in mathematics. A survey was used to identify the difference in urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning. By analyzing what teachers think and know about cooperative learning, college courses for pre-service teachers as well as workshops and in-service training sessions can be planned for practicing teachers to enhance teaching and learning in mathematics.

Researchers have concluded that the cooperative learning model ranked first in teaching approaches that promote higher order thinking, problem solving, and achievement (Lin, 2006).

**Research Questions and Hypotheses**

The following research question led to the overall research and data collection for this cooperative learning study: What differences exist between urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning?

The following secondary research questions and related hypothesis were tested in this study:

R1. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning?

Null Hypothesis: There will be no differences in the knowledge of the principles of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers?
R2. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the role teacher’s play in the utilization of cooperative learning in the classroom?

Null Hypothesis: There will be no differences in knowledge of the role that teachers play in the utilization of cooperative learning exist between urban primary mathematics teachers and urban secondary mathematics teachers?

R3. What differences exist between urban primary and mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy?

Null Hypothesis: There will be no differences in perceptions regarding use cooperative learning as an instructional strategy in classrooms with students between urban primary mathematics teachers and urban secondary mathematics teachers?

R4. What differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement?

Null Hypothesis: There will be no differences in regards to the perceptions of the impact cooperative learning has on student achievement in classrooms between urban primary mathematics teachers and urban secondary mathematics teachers?

Research Design

A non-experimental, causal-comparative research design was used to examine the differences between urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning, and to analyze how these differences impact teaching and learning in classrooms. Conducting causal-comparative research seeks to explain
differences between groups by examining the differences in the experiences of group members (Lodico, 2010). Additionally, participants in causal-comparative research already belong to groups based on their past experiences, and the researcher selects participants from these preexisting groups. The rationale for using this methodology is that hypotheses or theories can be tested to examine the relationship between two variables. In this study, the variables are urban primary teachers and urban secondary teachers’ knowledge and perceptions of cooperative learning. Creswell (2009) states variables are related to answer a research question. This type of design is appropriated for this study because it involves no direct manipulation of the independent variable and no treatment is provided to participants. Additionally, causal-comparative research does not run into the same types of threats to internal and external validity as experimental designs. However, the researcher lacks control over inessential variables that could impact the responses of participants.

**Target Population, Sampling Method, and Related Procedures**

**Target Population**

The target population section for this study includes participant information including sampling methods used, sample size, setting of the study, and recruitment methods used to select participants.

The population for this study were primary and secondary urban mathematics teachers employed in a central Ohio school district. Random sampling was used for this study.

**Sampling Method**
Urban primary and secondary mathematics teachers were chosen to participate in this study through random sampling. Random sampling is a technique or tool that produces essentially a mini-version of the initial population (Lodico, 2010). Random sampling is conducted in a manner that provides every person in the population with an equal and independent chance of being selected. An electronic spreadsheet supplied by Microsoft Works was utilized to select participants because it contains a built in function that will automatically generate random numbers each time the application is recalculated.

Sample Size

The urban district chosen for this study employs 380 certified (K-12) mathematics teachers (according to district human resources representative). One hundred-ninety mathematics teachers were selected for this study because it is half of the total population of mathematics teachers. Distribution was limited to the number of urban primary and secondary mathematics teachers employed in the surveyed district.

Setting

This city is the 15th largest city in the United States and home to more than 780,000 individuals. According to the US Census Bureau, Caucasians account for 61.5% of the city’s population. Other ethnicities include African-Americans (28%), Hispanic or Latinos (5.6%), Asians (4.1 %), and Native Americans (0.1%).

Major employers include Nationwide Insurance, Ohio Health, JP Morgan Chase, The State of Ohio and The Ohio State University, which is the largest employer. Although various employment sectors provide opportunities for advancement, 22.4% of the population lives below the poverty level according to the US Census Bureau. In order
to provide opportunities for upward mobility and decrease the level of poverty in the city, a plethora of educational institutions are accessible. Educational institutions available to residents include two-year community colleges, four-year institutions as well as technical institutions.

The district for this study is the largest school district in Ohio and is responsible for providing a quality education that meets the diverse needs of its more than 53,000 students in 109 schools. African-Americans comprise of 56.05% of the district’s student population. Other ethnic groups include Caucasians (26%), Hispanic (8.90%), Multi-Racial (5.50%), Asian (3.03%) and American Indian/Native Alaskan (0.2%). The district’s student population is 79% economically disadvantaged.

According to the Ohio Department of Education (2013), 3,770 teachers are employed by the school district and all have obtained a Bachelor’s Degree and 79% of them hold a Master’s Degree. Nearly 99.4% of core academic subjects are taught by properly certified high quality educators. The district also has 119 National Board Certified teachers.

**Recruitment**

A study on urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning was conducted. Permission to conduct the study was granted by the school district’s Office of Performance and Strategic Initiatives to conduct the study and was granted access to the Infinite Campus database, which listed all district employees, work assignments, and locations. In order to recruit participants, building principals were contacted to determine a feasible time to meet briefly with mathematics teachers to discuss the purpose of the study, address teacher concerns and obtain consent
to participate in the study. During this meeting, participant email addresses were also obtained so the survey can be completed electronically. Participants were then contacted via email to invite them to participate in the study, give website to complete the study and specify start and closing dates for completion of the survey. Emails were sent bi-weekly to consistently encourage participants to complete the survey. The names of teachers who chose to not to be involved in the study were removed from the list of possible participants. No incentives were offered to participants.

In order to draw conclusions from survey data, it was predetermined that thirty-three Percent (63) of surveys sent to participants had to be returned. A total of sixty-four surveys were returned.

**Instrumentation**

The researcher used an instrument developed by Dr. Randall (2003) who used the survey for her dissertation on the differences in knowledge and perceptions in cooperative education completed via Wayne State University, Detroit, Michigan. Dr. Randall’s survey was utilized since the study takes place in an urban educational setting. Few if any studies have focused specifically on teachers’ perceptions of cooperative learning who teach in urban settings. Dr. Randall’s study aligns with this cooperative learning study because it also focused on teachers’ perceptions of cooperative learning in an urban educational setting. The survey entitled Cooperative Learning Survey was used to measure the following:

1. Teacher perceptions toward cooperative learning
2. Teacher perceptions of student learning outcomes
3. Teacher use of cooperative learning
4. Teacher knowledge of cooperative learning principles
5. Teacher’s role in cooperative learning
6. Teacher characteristics (demographics)

The instrument comprised of three sections. The first section included private information as well as professional abilities. The second section focused specifically on the extent in which cooperative learning is utilized in classrooms, including the amount of time and the number of days per week students worked cooperatively in groups. The third section encompasses statements to gather information related specifically to teachers’ perceptions of cooperative learning, cooperative learning’s impact on student achievement, and teachers’ knowledge of cooperative learning. Items in this section will be measured using a 5-point Likert scale.

Data Collection

Prior to collecting data, IRB approval was obtained to conduct the study and was granted permission to conduct the study. A letter of introduction was then provided to district principals outlining the intent of the study, targeted participants and data collecting procedures. A meeting took place with mathematics teachers to discuss the purpose of the study, addressed concerns, received consent from participants as well as obtained email addresses so the survey could be completed electronically. In this approach, participants log on to a computer, used the internet or website to locate then download the questionnaire, completes the questionnaire and sends the completed questionnaire back to the researcher (Creswell, 2008). Participants received an email message that described in detail the purpose of the study, date to access the survey, deadline to complete the survey, and web address to complete the survey. All
participants preferred to complete the survey electronically. Therefore, providing paper surveys was unwarranted. Survey Monkey was utilized so all data was sent to a specific place for collection and analysis. According to Creswell (2008), electronic data collection provides an easy and quick manner of collecting data.

In order to format the data for analysis, the researcher utilized an electronic spreadsheet. According to Leedy et al. (2005), the beauty of electronic spreadsheets is that once you enter data into them, the software can quickly and easily make desired calculations. The data was then stored on a computer, so data could be retrieved by using a related keyword. Leedy et al. (2005) stated data can be sorted quickly and in multiple ways. Computerizing data offers a broad range of techniques for data management. The researcher utilized a flash drive as a backup measure to preserve data which was stored in a safe location.

**Operationalization of Variables**

The constructs that were measured for this study were urban teachers’ knowledge of cooperative learning and urban teachers’ perceptions of cooperative learning. Constructs are hypothetical concepts which are typically developed from a theoretical framework and are presumed to be real characteristics that cannot be seen (ex: intelligence, motivation, self-esteem) but can influence educational outcomes (Lodico, 2010). These constructs (knowledge and perceptions) are also known as variables when they are measured in educational research. Variables are defined as attributes, qualities, and characteristics of persons, groups, settings or institutions, such as gender, social skills, socioeconomic status, exclusiveness or achievement (Lodico, 2010). Urban teachers’ knowledge of cooperative learning and urban teachers’ perceptions of
cooperative learning are the dependent variables for this study. A dependent variable is often some form of human behavior and is influenced by, and to some extent depends on, the independent variable (Leedy, 2005). Knowledge is defined as the understanding gained by actual experience (Merriam Webster, 2004) Perception is defined as an act or result of perceiving (Merriam Webster, 2004). Cooperative learning is the independent variable in this study. Independent variable is an attribute characteristic that influences or affects an outcome or dependent variable (Creswell, 2008). Cooperative learning: is a teaching strategy in which small groups or teams, comprised of students of different levels of ability, work together to accomplish shared goals and to maximize their own and each other’s learning (Sawyer, 2005).

Data was collected pertaining to urban teachers’ knowledge and teachers’ perceptions of cooperative learning by utilizing a survey that was completed electronically via Survey Monkey. The data was then entered into a computer file for analysis using SPSS Windows software. In order to measure the impact the dependent variables have on the independent variable, a survey was used. Table 4-1 displays the six subscales and item numbers included in the survey in order to accurately measure teachers’ knowledge and perceptions of cooperative learning.
Table 3-1. Cooperative Learning Survey Subscale

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ knowledge of cooperative learning principles:</td>
<td></td>
</tr>
<tr>
<td>Face-to-face interaction</td>
<td>40, 45, 53, 54</td>
</tr>
<tr>
<td>Positive interdependence</td>
<td>18, 23, 27, 30, 35</td>
</tr>
<tr>
<td>Social and small group skills</td>
<td>24, 29, 33, 39, 48</td>
</tr>
<tr>
<td>Group processing</td>
<td>21, 26, 36, 49</td>
</tr>
<tr>
<td>Individual accountability</td>
<td>20, 41, 43, 46, 52</td>
</tr>
<tr>
<td>Teachers’ perceptions of cooperative learning’s impact on student achievement in mathematics</td>
<td>19, 28, 50, 56, 59, 61</td>
</tr>
<tr>
<td>Teacher utilization of cooperative learning</td>
<td>15, 16, 17</td>
</tr>
<tr>
<td>Teachers’ attitudes toward cooperative learning</td>
<td>22, 25, 37, 38, 42, 44, 47, 58, 60</td>
</tr>
<tr>
<td>Teachers’ role in cooperative learning</td>
<td>31, 32, 34, 51, 55, 57</td>
</tr>
<tr>
<td>Teacher personal information</td>
<td>Demographic Section (questions 1-14)</td>
</tr>
</tbody>
</table>

Four guiding questions were developed that aligned with items presented in the survey to measure the differences in knowledge and perceptions of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers. The guiding questions related to the dependent variables (teachers’ knowledge and perceptions), the independent variable (cooperative), and methods used to measure each are as follow:

R1. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning?

One-way Multivariate analysis of variance was used to determine if differences exist between urban primary mathematics teachers and urban secondary mathematics teachers on subscales, which measured their knowledge of principles of cooperative learning. If there was a substantial difference statistically on the
omnibus T-test, the univariate T-test was studied to determine the area of knowledge on cooperative learning principles contributed to the substantial difference. The mean scores were compared in order to determine which teacher group’s scores are substantially dissimilar on the subscale measuring cooperative learning principles.

R2. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the role teacher’s play in the utilization of cooperative learning in the classroom?

A T-test for two independent samples procedures was used to determine if differences exist between urban primary mathematics teachers and urban secondary mathematics teachers on subscales measuring knowledge of the role that teachers play in the utilization of cooperative learning.

R3. What differences exist between urban primary and mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy?

A T-test for two independent samples procedures was used to determine if differences exist between urban primary mathematics teachers and urban secondary mathematics teachers on subscales measuring perceptions regarding using cooperative learning as an instructional strategy in classrooms with students.

R4. What differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement?
A T-test for two independent samples procedures was used to determine if differences exist between urban primary mathematics teachers and urban secondary mathematics teachers on subscales measuring perceptions pertaining to the impact cooperative learning has on student achievement.

**Data Analysis Procedures**

Survey data was entered into a computer file for analysis using SPSS Windows, version 17.0 (SPSS, 2008). The data analysis was divided into three sections. The first section focused on demographic data about the participants. The data was analyzed to create cross tabulations and measures of central tendency using SPSS software. How teachers utilized cooperative learning in their classrooms is presented independently. In this section, a 5.0 Likert scale was used to sort and analyze the data. The data collected in the final section of the survey was analyzed using one-way multivariate analysis of variance, and t-tests for two independent samples using SPSS software to address the posed research questions for the study. Multivariate analysis is a method of testing for differences between the dependent variable due to the independent variables (Leedy et al., 2005). Four research questions will be utilized for this study. All questions were addressed using inferential statistical analyses with all decisions on the statistical significance of the findings made using an alpha level of .05.

**Limitations of the Research Design**

A causal-comparative research design was used for this study which included using a survey to gather data. This research design presents the following limitations:

1. Results are suggestive of possible causal relationships but clear cause-and-effect statements should be avoided.
2. Participant responses will reflect their reading and writing skills and, perhaps their misinterpretation of one or more questions.

3. Researcher does not have control over the independent variables, making statements of causality more difficult.

4. There is typically a low survey return rate because the majority of people fail to complete the survey (Lodico, 2010).

**Internal Validity**

A study is considered internally valid when the results or outcome of the study can be attributed to the experimental treatment and not an extraneous variable (Lodico, 2010). In order to maintain internal validity, a previously approved instrument was used for the study, and developed guiding questions that pertain specifically to teachers’ knowledge and perceptions of cooperative learning.

**External Validity**

External validity is the degree to which the results are generalized beyond the sample used for the study (Lodico, 2010). The sample for this study are urban primary and secondary mathematics teachers, which the results can be generalized. In order to maintain external validity in the study, participants who were employed by the chosen school district were selected for this study. Additionally, selected participants were currently teaching mathematics in primary or secondary classrooms.

**Expected Findings**

Few studies are available related to urban teacher knowledge of cooperative learning principles. Authors Sparapani et al. (1997) stated little is known about how practicing teachers have gained their knowledge and understanding of cooperative
learning or how it is utilized in classrooms. Studies specifically related to the differences between primary and secondary urban mathematic teachers’ knowledge and perceptions of cooperative learning have not been found. Although research has not been found, the results from this study will validate that there are differences between urban primary mathematics teachers and urban secondary mathematics teachers’ knowledge, understanding and perceptions of cooperative learning. The reason for these differences is in how the knowledge of cooperative learning was obtained. According to the study conducted by Sparapani et al. (1997), teachers gained their knowledge of cooperative learning practices through a variety of methods, which included course work, workshops colleagues, and extensive reading. The method in which teachers gained their knowledge of cooperative learning practices may influence their knowledge, understanding and implementation of cooperative learning. The data analysis pertaining to the research questions would verify there are differences that exist between urban primary mathematics and secondary urban mathematics teachers’ knowledge and perceptions of cooperative learning. The actual differences would identify when the data analysis was completed.

**Ethical Issues**

In order to ensure appropriate steps were taken to ethically protect the rights of participants, a proposal was submitted to the Institutional Review Board (IRB) prior to conducting the study. The following ethical concerns were addressed: First, the nature of the proposed study was discussed. Second, the researcher addressed how the identities of study participants would be protected. In order to protect participant identities, the researcher assigned a number to each participant instead of using formal names.
Participants who were uncomfortable completing the survey online were given the survey in paper form. Next, to protect data confidentiality during the collection process, an electronic spread sheet was used to format the data. The data was stored on a computer so information could be retrieved by using a specific password. A flash drive was used as a back-up measure to preserve data which was stored in a secure location. All data will be destroyed seven years after publication date. The proposal was approved by the IRB committee after all ethical concerns were addressed. Finally, findings from survey were published in the researcher’s dissertation. Also, findings were submitted in a written report to the school district in which the study took place.

**Researcher's Position Statement**

The academic, financial, or other special interests will not compromise the objectivity of the study, including its design, how the study is conducted, and how findings are reported.

**Conflict of Interest Assessment.**

The researcher does not have personal interests or financial interests related to the study. Incentives were not offered to participants for completing the survey.

**Position Statement.**

The researcher does not have personal relationships with participants in the study. Therefore, developing a plan to eliminate or manage potential conflict of interest is unwarranted.

**Ethical Issues in the Study**

The IRB approval for this study and the processes and procedures in place minimizes potential ethical issues. In order to maintain the integrity and objectivity of
the study, the research adhered to all practices including protecting participants, collecting and safeguarding the data, as well as ensuring conflict of interest is non-existing.

Chapter 3 Summary

The purpose of this study was to identify possible gaps in urban primary and urban secondary mathematics teachers’ knowledge, understanding, and perceptions of cooperative learning. The differences that may exist between urban primary and secondary mathematics teachers’ can adversely impact levels of implementation in classrooms and student achievement in mathematics. Conducting a study on urban primary and secondary teachers’ knowledge and perceptions of cooperative learning will yield valuable information that can be used in the field of education to create college courses for pre-service teachers as well as develop workshops and in-service training sessions to enhance teaching and learning in mathematics. In order to conduct a study that would provide meaningful data that can impact the field of education as well as teaching and learning in mathematics, the researcher chose to use a non-experimental, causal-comparative research design. Causal-comparative research seeks to explain differences between groups by examining the differences in the experiences of group members (Lodico, 2010). This type of design is appropriated for this study because it involves no direct manipulation of the independent variable and no treatment is provided to participants. Additionally, causal-comparative research does not run into the same types of threats to internal and external validity as experimental designs. Additionally, participants in causal-comparative research already belong to groups based on their past experiences, and the researcher selects participants from these preexisting groups.
Teaching mathematics to students in an urban school district is the commonality that links teachers for this study.

Purposeful sampling was used to recruit urban primary and secondary teachers for this study. The researcher used an electronic spreadsheet to randomly select participants. The researcher selected 190 mathematics teachers which was the sample size for the study. The names of teachers who declined to be involved in the study were removed from the researcher’s list of potential participants.

After obtaining IRB approval to conduct the study and permission was granted from the school district, building principals were contacted to schedule time to meet with mathematics teachers to discuss the purpose of the study, address teacher concerns, obtain permission from participants who agreed to participate in study, as well as obtain email addresses so the survey could be completed electronically via Survey Monkey. According to Creswell (2008), electronic data collection provides an easy and quick manner of collecting data. The survey included three sections to categorize the data. Sections include teacher demographics, utilization of cooperative learning, and teacher knowledge and perceptions.

SPSS Windows software was used to enter collected data for analysis. According to Leedy et al. (2005), the beauty of electronic spreadsheets is that once you enter data into them, the software can quickly and easily make desired calculations. Data was then stored on a computer and could be retrieved via password. The researcher used a flash drive to back-up data.

Collected data was divided into the following three sections to gain knowledge pertaining to the study and for effective analysis of the study:
1. Participant demographics
2. The utilization of cooperative learning in classrooms
3. Urban teachers’ knowledge and perceptions of cooperative learning.

Research questions developed by the researcher align with the research problem and items presented in the survey. The following research questions and related hypotheses are also used to analyze and measure the dependent variables (teachers’ knowledge and perceptions) and the independent variable (cooperative) for this study:

1. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning?

2. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the role teacher’s play in the utilization of cooperative learning in the classroom?

3. What differences exist between urban primary and mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy?

4. What differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement?

In order to analyze and measure urban primary and secondary teachers’ knowledge and perceptions of cooperative learning, the following methods were utilized: (A) cross tabulations and measures of central tendency (demographic data), (B) One-way Multivariate analysis of variance (knowledge of cooperative learning principles), and (C) t-test for two independent samples procedures (perceptions of cooperative learning).
Ethical issues must be identified and resolved to ensure the study is not compromised due to the lack of participant protection, data collection methods, safeguarding of data, and protection against personal interests.

It is imperative that all processes procedures for this study are followed to ensure data results from this study can influence the field of education by equipping teachers with knowledge and skills that can enhance the manner in which instruction is employed to improve student achievement in mathematics across the nation.
CHAPTER 4. DATA ANALYSIS AND RESULTS

Introduction

The focus of chapter four is to present the findings of the data analyses that were utilized to address the research questions related to urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning. A non-experimental, causal-comparative research design was used for this study. This research design was used because hypotheses or theories can be tested to examine the relationship between two variables (Creswell, 2009). In this study, the variables are urban primary teachers and urban secondary teachers’ knowledge and perceptions of cooperative learning.

The chapter is divided into three sections to accurately measure teachers’ knowledge and perceptions of cooperative learning. The first section consists of demographic characteristics that compare urban primary teachers and urban secondary teachers using descriptive statistics. The second section consists of a summary of the results of the study. The third section addresses the research questions using inferential statistical analyses. The following research questions and related hypotheses were generated to guide this cooperative learning study:

R1. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning?
Null Hypothesis: There will be no differences in the knowledge of the principles of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers?

R2. What differences exist between urban primary and secondary mathematics teachers’ knowledge of the role teacher’s play in the utilization of cooperative learning in the classroom?

Null Hypothesis: There will be no differences in knowledge of the role that teachers play in the utilization of cooperative learning exist between urban primary mathematics teachers and urban secondary mathematics teachers?

R3. What differences exist between urban primary and mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy?

Null Hypothesis: There will be no differences in perceptions regarding use cooperative learning as an instructional strategy in classrooms with students between urban primary mathematics teachers and urban secondary mathematics teachers?

R4. What differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement?

Null Hypothesis: There will be no differences in regards to the perceptions of the impact cooperative learning has on student achievement in classrooms between urban primary mathematics teachers and urban secondary mathematics teachers?

The purpose of is study was to pinpoint possible gaps in urban primary and secondary teachers’ knowledge and perceptions of cooperative learning to create
opportunities for them to recognize the benefits of utilizing cooperative learning as an instructional strategy to improve student achievement in mathematics.

**Description of the Sample**

The school district in which the data was collected was an urban public school district in Central Ohio. The school district is responsible for educating more than 53,000 students in 109 schools. African-Americans comprise of 56.05% of the district’s student population. Other ethnic groups include Caucasians (26%), Hispanic (8.90%), Multi-Racial (5.50%), Asian (3.03%), and American Indian/Native Alaskan (0.2%). The district’s student population is 79% economically disadvantaged (Ohio Department of Education, 2013).

A total of 190 surveys were sent to urban primary and secondary teachers. Of this number, 64 surveys were completed for a response rate of 33.6%. Ninety-three (49%) of the surveys were sent to urban primary teachers and ninety-seven (51%) were sent to urban secondary teachers. Urban teachers completed a total of 64 surveys. Of the surveys completed, 24 (38%) were returned from urban primary teachers and 40 (62%) were returned from urban secondary teachers. Characteristics of the sample were built-in into the survey to include gender, age, marital status, and ethnicity. Additionally, significant sample data related to education level and teaching experience is also included in the survey.

**Gender of Participants**

Table 4.1 represents the gender of participants. Forty-nine (76.6%) females participated in the survey. The number of males who participated in the study was fifteen (23.40%), which was significantly lower than the females who participated in the study.
Table 4.1 Gender

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Gender</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>Percent</td>
<td>79%</td>
<td>21%</td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Percent</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Total Count:</td>
<td>49</td>
<td>15</td>
</tr>
<tr>
<td>Total Percent:</td>
<td>77%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Age of Participants

Table 4.2 represents the age of participants. The largest group of teachers was in the 36 to 45 age range with nineteen (29.7%) participants. There were five (7.8%) participants who were 25 and under age range. There were sixteen (25%) participants in the 26 to 35 age range. Fifteen (23.4%) individuals made up the 46 to 55 age group. There were nine (14.1%) participate in the 56 and over age range.

Table 4.2 Age

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25 and under</td>
<td>26 to 35</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>20.0%</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>80.0%</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Total Count:</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Total Percent:</td>
<td></td>
<td>5%</td>
</tr>
</tbody>
</table>

Ethnicity
Table 4.3 represents the ethnicity of participants. Forty-six (71.9%) participants made up the largest group of participants who reported their ethnicity as Caucasian. African-Americans made up the second largest ethnic group with fourteen (21.9%) participants. There were two (3.1%) teachers who indicated they were Asian and two (3.1%) teachers who indicated they were Hispanic.

Table 4.3 Ethnicity

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Ethnicity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African American</td>
<td>Asian</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>12.5%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>27.5%</td>
</tr>
<tr>
<td>Total Count</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Total Percent</td>
<td></td>
<td>21.9%</td>
</tr>
</tbody>
</table>

Marital Status

Table 4.4 represents the marital status of participants. The number of teachers who reported they were married was forty-two (65.6%). Unmarried teachers include twenty-two (34.4%) participants.

Table 4.4 Marital Status

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Status</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>70.8%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>62.5%</td>
</tr>
<tr>
<td>Total Count</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>Total Percent</td>
<td></td>
<td>65.6%</td>
</tr>
</tbody>
</table>
Educational Level

Table 4.5 represents the educational levels of participants. Teachers were asked to indicate their level of education. Fifteen (23.4%) participants held bachelor degrees. The largest group of participants held master’s degrees, which were forty-four (68.8%) participants. One participant (1.6%) reported obtaining a doctoral degree and one (1.6%) participant reported holding an educational specialist degree. Three (4.7%) participants chose other but did not specify an educational level.

Table 4.5 Educational Level

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Bachelor's Degree</th>
<th>Doctoral Degree</th>
<th>Ed. Specialist Degree</th>
<th>Master's Degree</th>
<th>Other (please specify)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>Count</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>20.8%</td>
<td>0%</td>
<td>4.2%</td>
<td>75%</td>
<td>100%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>26</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>25%</td>
<td>2.5%</td>
<td>0%</td>
<td>65%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Total Count:</td>
<td>15</td>
<td>1</td>
<td>1</td>
<td>44</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Total Percent:</td>
<td>23.4%</td>
<td>1.6%</td>
<td>1.6%</td>
<td>68.8%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Certification

Table 4.6 represents the certification of participants. Fourteen (21.9%) secondary teachers reported they held a high school continuing certification. Seventeen (26.6%) teachers indicated they currently hold a high school renewal of provisional certificate. Seven (10.9%) individuals make up the group of participants with elementary continuing certifications. One (1.6%) teacher held an elementary permanent certificate as well as one (1.6%) individual who held an elementary renewal of provisional certificate. Three
(4.7%) teachers reported they hold middle school continuing certificates, four (6.3%) who hold permanent middle school certificates and one (1.6%) who holds a middle school provisional certificate. Four (6.3%) individuals reported other. These teachers did not provide additional explanation for their selection of other as their certification type.

Table 4.6 Certification

<table>
<thead>
<tr>
<th>Certification</th>
<th>Teacher Type</th>
<th>Total Count</th>
<th>Total Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>Secondary</td>
<td>Count</td>
</tr>
<tr>
<td>Elementary</td>
<td>Continuing</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Permanent</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Renewal of Provisional</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>High School</td>
<td>Continuing</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Permanent</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Provisional</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Renewal of Provisional</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Middle School</td>
<td>Continuing</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Permanent</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Provisional</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>No Response</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
<td>24</td>
</tr>
</tbody>
</table>

Special Endorsements

Table 4.7 represents special endorsements of teachers Forty-seven (73.4%) indicated they did not have a special endorsement. Thirteen (20.3%) teachers reported they had obtained a special endorsement. One (1.6%) participant selected yes, but did not specify type of endorsement. One participant (1.6) did not respond to the question.
Table 4.7 Special Endorsements

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Endorsement</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Response</td>
<td>If yes (please specify)</td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Percent</td>
<td>0%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Percent</td>
<td>7.5%</td>
<td>10%</td>
</tr>
<tr>
<td>Total Count:</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Total Percent:</td>
<td>4.7%</td>
<td>20.3%</td>
</tr>
</tbody>
</table>

Professional experience, years in present school and years in current position of teachers was also included in the survey. The results are as follow:

**Years of Teaching Experience**

Table 4.8 represents years of teaching experience. Fourteen (21.9%) teachers who had 0 to 5 years of teaching experience. There were also fourteen (21.9%) teachers who had 11 to 15 years of teaching experience. A third group also had fourteen (21.9%) teachers who had 6 to 10 years of teaching experience. Nine (14.1%) teachers indicated they have 16 to 20 years of teaching experience. There were also were nine (14.1%) teachers who had 21 to 25 years of teaching experience. Three (4.7%) teachers have 26 to 30 years of teaching experience. One (1.6%) primary teacher reported having 31 to 35 years of teaching experience.
Table 4.8 Years of Teaching Experience

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>No. of Years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 to 5</td>
<td>11 to 15</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>12.5%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>27.5%</td>
</tr>
</tbody>
</table>

Total Count: 14 14 9 9 3 1 14 64
Total Percent: 21.9% 21.9% 14.1% 14.1% 4.7% 1.6% 21.9% 100%

Years in Present School

Table 4.9 represents years in present school. Forty-eight (75%) reported they had worked in their present school 0 to 10 years. The second largest group consist of twelve (18.80%) teachers reported they have worked at their present school 11 to 20 years. One (1.6%) teacher reported working in their present school between 21 to 30 years. Three teachers skipped this question.

Table 4.9 Years in Present Schools

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>No. of Years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Response</td>
<td>0 to 10</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>4.2%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>5%</td>
</tr>
</tbody>
</table>

Total Count: 3 48 12 1 64
Total Percent: 4.7% 75% 18.8% 1.6% 100%

Years in Present Position

Table 4.10 represents years in present position. Forty-three (67.2%) of the teachers surveyed reported they have worked in their current position between 0-10
years. The second largest group consist of fifteen (23.4%) teachers reported working in their present position between 11 to 20 years. The smallest group of five (7.8%) teachers reported working in their present position between 21 to 30 years.

Table 4.10 Years in Present Position

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>No. of Years</th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Response</td>
<td>0 to 10</td>
<td>11 to 20</td>
<td>21 to 30</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>1</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>4.2%</td>
<td>75%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>0</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>0%</td>
<td>62.5%</td>
<td>27.5%</td>
</tr>
<tr>
<td></td>
<td>Total Count:</td>
<td>1</td>
<td>43</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Total Percent:</td>
<td>1.6%</td>
<td>67.2%</td>
<td>23.4%</td>
</tr>
</tbody>
</table>

Number of Students in Classroom

Table 4.11 represents the number of students in a classroom. Teachers were asked to indicate the number of students in their classroom. The largest group comprise of thirty-three (51.6%) teachers reported they have 26 to 35 students in their classroom. Twenty-two (34.4%) teachers indicated they have 16 to 25 students in their classroom. Only five (7.8%) teachers stated they have 0 to 15 students in their classroom. The smallest group of four (6.3%) teachers reported having 36 or more students.
Table 4.11 Number of Students in Classroom

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Number of Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 to 15</td>
<td>16 to 25</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>8.3%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>7.5%</td>
</tr>
<tr>
<td>Total Count:</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Total Percent:</td>
<td></td>
<td>7.8%</td>
</tr>
</tbody>
</table>

Completion of Cooperative Learning Training

Table 4.12 represents cooperative learning training. Thirty (46.9%) teachers reported completing cooperative learning training between the years of 2008 to present. Nineteen (29.7%) teachers reported completing cooperative training between the years of 1997 to 2007. Eight (12.5%) teachers indicated they completed their cooperative learning between the years of 1986 to 1996. The smallest group of four (6.3%) teachers indicated they completed cooperative learning training between the years of 1975 to 1985. Three (4.7%) teachers did not answer the question.

Table 4.12 Cooperative Learning Training

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Year Training Completed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>Count</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>4.2%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>5%</td>
</tr>
<tr>
<td>Total Count:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Total Percent:</td>
<td></td>
<td>4.7%</td>
</tr>
</tbody>
</table>
Source of Cooperative Learning Training

Table 4.13 represents sources of cooperative learning training. Forty (62.5%) teachers reported receiving cooperative learning training while taking a college course. Sixteen (25%) teachers chose district in-service program as the source that provided their cooperative learning training. Four (6.3%) teachers reported completing cooperative learning training during a school in-service program. Four (4.7%) teachers did not respond to the question.

Table 4.13 Source of Cooperative Learning Training

<table>
<thead>
<tr>
<th>Training Received</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Response</td>
<td></td>
</tr>
<tr>
<td>College course</td>
<td></td>
</tr>
<tr>
<td>District In-service Program</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
<tr>
<td>School In-service Program</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Count</th>
<th>Percent</th>
<th>Count</th>
<th>Percent</th>
<th>Count</th>
<th>Percent</th>
<th>Count</th>
<th>Percent</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>1</td>
<td>4.2%</td>
<td>15</td>
<td>62.5%</td>
<td>8</td>
<td>33.3%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>2</td>
<td>5%</td>
<td>25</td>
<td>62.5%</td>
<td>8</td>
<td>20%</td>
<td>1</td>
<td>2.5%</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total Count:</td>
<td>3</td>
<td>4.7%</td>
<td>40</td>
<td>62.5%</td>
<td>16</td>
<td>25%</td>
<td>1</td>
<td>1.6%</td>
<td>4</td>
<td>6.3%</td>
</tr>
<tr>
<td>Total Percent:</td>
<td>100%</td>
<td></td>
<td>100%</td>
<td></td>
<td>100%</td>
<td></td>
<td>100%</td>
<td></td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Use of Cooperative Learning Groups

Table 4.14 represents the use of cooperative learning groups. Teachers were asked how often they used cooperative learning groups. Eighteen (28.1%) teachers indicated they utilize cooperative learning one to two times per week. Sixteen (25.0%) teachers indicated they used cooperative learning groups two to three times per month, which was the second most chosen response. A group of ten (15.6%) teachers reported using cooperative learning groups three to four times per week. A group of nine (14.1%)
participants reported using cooperative learning daily. Seven (10.9%) teachers reported using cooperative learning once per month. One (1.6%) teacher reported never using cooperative learning groups. Three (4.7%) teachers did not respond.

Table 4.14 Use of Cooperative Learning Groups

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Use of Cooperative Learning Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Response</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
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<td>Total Count:</td>
<td>Count</td>
</tr>
<tr>
<td>Total Percent:</td>
<td>Percent</td>
</tr>
</tbody>
</table>

Cooperative Learning Sessions

Table 4.15 represents cooperative learning sessions. Teachers were asked to indicate the amount of time students spent in cooperative learning sessions. The largest group of teachers, which included thirty-eight (59.4%) individuals indicated students worked in cooperative learning sessions for 30 minutes or less. Twenty-two (34.4%) teachers stated students worked in cooperative learning sessions for 30 to 60 minutes. One (1.6%) teacher reported that students worked in cooperative learning sessions for more than 60 minutes. Three (4.7%) teachers did not respond.
Table 4.15 Cooperative Learning Sessions

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Session Times</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Response</td>
<td>30 minutes or less</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>0%</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>7.5%</td>
</tr>
<tr>
<td></td>
<td>Total Count:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Percent:</td>
<td>4.7%</td>
</tr>
</tbody>
</table>

Number of Students in Cooperative Learning Groups

Table 4.16 represents the number of students in cooperative learning groups.

Fifty-one (79.7%) of teachers reported placing 3 to 4 students into cooperative learning groups. Six (9.4%) teachers indicated they created cooperative learning groups of two students. Two (3.1%) teachers stated creating cooperative learning groups that included 5 to 6 students. There were also two (3.1%) teachers who indicated creating cooperative learning groups that included more than 6 students. Three (4.7%) teachers did not respond.

Table 4.16 Number of Students in Cooperative Learning Groups

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Group Size</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Response</td>
<td>2</td>
</tr>
<tr>
<td>Primary</td>
<td>Count</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>3</td>
</tr>
<tr>
<td>Secondary</td>
<td>Count</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Count:</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Total Percent:</td>
<td>4.7%</td>
</tr>
</tbody>
</table>

115
Summary of the Results

The methodology used for this research on cooperative learning was a non-experimental, causal-comparative research design. Conducting causal-comparative research seeks to explain differences between groups by examining the differences in the experiences of group members (Lodico, 2010). In addition, participants in causal-comparative research already belong to groups based on their past experiences; the rationale for using this methodology is that hypotheses or theories can be tested to examine the relationship between two variables. The variables for this study are primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning.

The following four research questions guided the study. All questions are presented below with results from the data analysis.

Research Question 1

What differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning?

A multivariate analysis of variance (MANOVA) was used to determine if differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning.

Five subscales were included in the survey along with specific statements in which teachers responded to according to a Likert scale. The results of teacher responses were used to measure their knowledge of the following principles: positive interdependence, group processing, face-to-face interaction, individual accountability, social and small group skills. Results of this analysis did not point to substantial differences in urban primary and secondary mathematics teachers’ overall knowledge of
cooperative learning principles. Therefore, the null hypothesis for question one is retained.

**Research Question 2**

What differences exist between urban primary and secondary mathematics teachers’ knowledge of the role teacher’s play in the utilization of cooperative learning in the classroom?

Urban primary and secondary mathematics teachers’ perceptions of the role they play in the implementation of cooperative learning were compared by utilizing a two-sample t-test. Data analysis indicated the majority of urban primary (33%) and secondary (47%) mathematics teachers agreed that students would always know how they would be evaluated. Two (4%) primary teachers and five (11%) secondary teachers indicated that they disagreed with the statement. Two (5%) secondary teachers indicated they were unsure about the statement.

The majority of primary (27%) teachers and secondary (53%) teachers replied that they did not agree that there is one best method of assigning students to groups. Three (7%) primary teachers and four (9%) secondary teachers strongly disagreed with the statement. Two (4%) primary teachers agreed that there is one best method of assigning students to groups. No secondary teachers agreed with this statement.

Most primary (30%) and secondary (43%) teachers agreed that cooperative learning might involve intergroup cooperation. One primary (2%) teacher and four (9%) secondary teachers disagreed with the statement. Two (5%) primary and one (2%) secondary teacher strongly believed cooperative learning might involve intergroup
cooperation. One (2%) primary and three (7%) secondary teachers were unsure about the
statement.

Twenty-seven percent of urban primary and 32% of secondary teachers disagreed
with the statement: “the physical arrangements of cooperative learning groups were
important”. Two (5%) primary and seven (16%) agree with the statement. Two (5%)
primary and three (7%) secondary teachers strongly disagreed with the statement. Three
(7%) secondary teachers were unsure.

Many primary (27%) and secondary (47%) mathematics teachers agree that
academic objectives for groups should be specified before the beginning of the lesson.
Eight (18%) teachers of whom four (9%) were primary and four (9%) were secondary
teachers strongly agreed with the statement. One (2%) secondary teacher disagreed with
the statement. In addition, one (2%) primary and two (4%) secondary teachers indicated
they were unsure.

Sixteen (36%) secondary teachers believed it is important to utilize the criteria-
 referenced system compared to nine (20%) primary teachers. Nine teachers (one (2%)
primary and eight (18%) secondary) indicated they did not agree with the statement. Six
(13%) primary and 3 (7%) secondary teachers indicated they were unsure.

The two sample independent t-test results did not reveal significant differences
between primary and secondary teachers’ overall perceptions of role that teachers play in
the utilization of cooperative learning. Therefore, the null hypothesis for question two is
retained.

Research Question 3
What differences exist between urban primary and secondary mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy?

Urban primary and secondary mathematics teachers’ perceptions regarding using cooperative learning as an instructional strategy in classrooms with students were compared by utilizing a two-sample t-test.

Data analysis indicated that the majority of primary (20%) and secondary (33%) mathematics teachers agreed cooperative learning benefits all students. Two (4%) primary teachers indicated they strongly agreed with the statement. Nine (20%) teachers of whom two (4%) were primary and seven (16%) were secondary teachers disagreed with the statement. Three (7%) primary and one (2%) secondary teacher indicated they strongly disagreed with the statement. Six (15%) teachers (one (2%) primary and five (11%) secondary) indicated they were unsure if cooperative learning benefits all students.

An examination of the data gathered from responses to statement 28 indicate the majority of teachers (nineteen (43%) of whom 10 (23%) were primary teachers and nine (20%) were secondary teachers) agreed students achieved more when they utilized cooperative learning. Two (5%) secondary teachers indicated they strongly agreed with the statement. Five (11%) teachers of whom one (2%) were primary and four (9%) were secondary teachers disagreed with the statement. One (2%) primary and one (2%) secondary teacher indicated they strongly disagreed with the statement. Sixteen (36%) teachers (5 (11%) primary and 11 (25%) secondary) indicated they were unsure if students achieved more when they utilize cooperative learning.

Data analysis showed that the majority of primary (27%) and secondary (48%) mathematics teachers were in agreement with the statement, “the way teachers structure
goals determine how students interact”. Two (5%) primary teachers indicated they strongly agreed with the statement. Nine (20%) teachers of whom two (4%) were primary and seven (16%) were secondary teachers disagreed with the statement. One (2%) primary and two (5%) secondary teacher indicated they disagreed with the statement. A total of six (14%) teachers (three (7%) primary and three (7%) secondary) indicated they were unsure if the way teachers structure goals determine how students interact.

A review of data collected from teacher responses determined that the majority of teachers (55%) of whom ten (22%) were primary and fifteen (33%) were secondary teachers agreed with the statement affective outcomes are determined by the way teacher structures student interaction. Two (4%) secondary teachers indicated they strongly agreed with the statement. Two (4%) secondary teachers disagreed with the statement. Sixteen (36%) teachers (seven (16%) primary and nine (20%) secondary) indicated they were unsure if affective outcomes are determined by the way teacher structures student interaction

The bulk of teachers (54%) of whom eight (18%) were primary and sixteen (36%) were secondary teachers agreed with the statement a major determinant of cognitive outcomes is student interaction patterns. One (2%) secondary teacher strongly agreed with the statement. One (2%) primary teacher strongly disagreed with the statement. Twenty-two (50%) teachers (11 (25%) primary and eleven (25%) secondary) indicated they were unsure if statement a major determinant of cognitive outcomes is student interaction patterns.
An examination of the data indicates a large percentage of teachers (60%) of whom 10 (22%) were primary and seventeen (38%) were secondary teachers agreed with the statement students achieve more working together than working alone. Two (4%) primary teachers and one (2%) secondary teacher strongly agreed with the statement. One (2%) primary teacher and two (4%) secondary teachers disagreed with the statement. One (2%) primary teacher strongly disagreed with the statement. Eleven (25%) teachers (three (7%) primary and eight (18%) secondary) indicated they were unsure if students achieve more working together than working alone. Data results indicate no differences exist between urban primary and secondary mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy.

A two-sample t-test was used to compare urban primary and secondary teachers’ perceptions of using cooperative learning as an instructional strategy. Results from the two-sample t-test indicate most teachers agree that student achievement increases when cooperative learning is utilized as an instructional strategy. The majority of teachers also agree they play an important role in structuring goals for student interaction when using cooperative learning. The way teachers structure goals for student interaction will determine how students interact, which can adversely impact student levels of achievement. Furthermore, the bulk of teachers also agree that students achieve more working together than working alone. Therefore, the null hypothesis for question three is retained.

Research Question 4
What differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement?

Urban primary and secondary mathematics teachers’ attitude regarding the impact cooperative learning has on student achievement were compared by utilizing a two-sample t-test.

Teachers were asked to respond to statement 22 which states: “my students are more motivated when I structure my class in cooperative groups”. Of the 45 participants who responded to the statement, nine (20%) of primary teachers and nine (20%) secondary teachers agreed with the statement. Three (7%) primary teachers strongly agreed with the statement. Six (13%) secondary teachers and two (4%) primary teachers disagreed with the statement. One (2%) secondary and one (2%) primary teacher strongly disagreed with the statement. Additionally, twelve (27%) secondary teachers and two (4%) primary teachers indicated they were unsure about the statement.

Results from examined data related to statement 25 show the majority of teachers (42%) of whom ten (22%) were primary teachers and nine (20%) were secondary teachers agreed that cooperative learning has positive effects on classroom discipline. One (2%) primary teachers strongly agreed with the statement. Six (13%) teachers (one (2%) primary teachers and five (11%) secondary teachers disagreed with the statement. One primary (2%) teacher strongly disagreed with the statement. Seven (16%) teachers (three (7%) primary and four (9%) secondary) indicated they were unsure if cooperative learning has positive effects on classroom discipline.
Data analysis indicate a significant number of teachers (44%) of whom nine (20%) were primary teachers and eleven (24%) were secondary teachers agreed that cooperative learning leads to more positive outcomes than competitive learning situations. One (2%) primary teachers and one (2%) secondary teacher strongly agreed with the statement. Six (13%) secondary teachers disagreed with the statement. One primary (2%) teacher strongly disagreed with the statement. Sixteen (35%) respondents, which include six (13%) primary and ten (22%) secondary teachers indicated they were unsure if cooperative learning leads to more positive outcomes than competitive learning situations.

The majority of teachers (53%) of whom nine (20%) were primary teachers and fifteen (33%) were secondary teachers agreed that students are more supportive of each other because of their use of cooperative learning. One (2%) primary teacher and one (2%) secondary teacher strongly agreed with the statement. Three (7%) secondary teachers disagreed with the statement. One primary (2%) teacher strongly disagreed with the statement. Fifteen (33%) teachers of which six (13%) were primary and nine (20%) were secondary indicated they were unsure if students are more supportive of each other because of their use of cooperative learning.

A large percent of teachers (73%) of whom ten (23%) were primary teachers and twenty-two (50%) were secondary teachers agreed that cooperative learning affects student’s self-esteem. One (3%) primary teachers strongly agreed with the statement. One (3%) secondary teacher disagreed with the statement. Ten (23%) teachers (six (14%) primary and 4 (9%) secondary) indicated they were unsure if cooperative learning affects student’s self-esteem.
A large number of teachers who completed the survey (58%) of whom nine (20%) were primary teachers and seventeen (38%) were secondary teachers agreed that using cooperative learning has helped weaker students feel more accepted. Two (4%) primary teachers and one (2%) secondary teacher strongly agreed with the statement. One (2%) primary teacher and four (9%) secondary teachers disagreed with the statement. Eleven (24%) teachers (five (11%) primary and six (13%) secondary) indicated they were unsure if using cooperative learning has helped weaker students feel more accepted.

A review of the statistics shows the majority of teachers (50%) of whom nine (21%) were primary teachers and seventeen (39%) were secondary teachers agreed that cooperative learning has helped to develop more positive attitudes toward learning in their classroom. One (2%) primary teachers and one (2%) secondary teacher strongly agreed with the statement. Three (7%) secondary teachers disagreed with the statement. Twelve (28%) teachers (6 (14%) primary and 6 (14%) secondary) indicated they were unsure if cooperative learning has assist in developing more positive attitudes toward learning in their classroom.

Teachers who participated in the study (72%) of whom fifteen (34%) were primary teachers and seventeen (38%) were secondary teachers agreed students know how to collaborate to solve a problem. Three (7%) secondary teachers disagreed with the statement. One (2%) primary teacher strongly disagreed with the statement. Eight (18%) teachers (one (2%) primary and seven (16%) secondary) indicated they were unsure if students know how to collaborate to solve a problem.

Fifty-four percent of teachers agreed that gifted students benefit when cooperative learning is utilized in the classroom. However, 16% of secondary teachers disagreed
with the statement. One primary teacher strongly disagreed with the statement. Twenty-eight percent of all teachers surveyed indicated they were unsure if gifted students benefit when cooperative learning is utilized in the classroom. Differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement. There are no differences between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement.

Two-sample t-test results revealed the majority of teachers agree that students are motivated when structured in cooperative learning groups, which has positive effects on classroom discipline. The majority of teachers also agree that cooperative learning leads to more positive outcomes including supporting each other and helping struggling students achieve as well as feel more accepted by peers, resulting in the development of positive attitudes toward learning. Furthermore, the bulk of participants agree that students know how to collaborate to solve a problem when using cooperative learning, which is beneficial to all students, including gifted students. Therefore, the null hypothesis for question four is retained.

**Detailed Analysis**

A survey was the instrument used to collect data for this study. The survey was divided into three sections to accurately measure teachers’ knowledge and perceptions of cooperative learning. The first section consists of demographic characteristics that compare urban primary and secondary teachers using descriptive statistics. The second
section comprises of descriptive statistics of the study’s variables. The final section addresses the research question using inferential statistical analyses.

Subscale statements were built-into the survey for participants to respond to using a Likert scale in order provide meaningful data related to urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning. The findings from the examination of data are organized and presented below by research question.

**Research Question 1**

What differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning?

A multivariate analysis of variance (MANOVA) was used to determine if differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning.

Five subscales were included in the survey along with specific statements in which teachers responded to according to a Likert scale. The results of teacher responses were used to measure their knowledge of the following principles: positive interdependence, group processing, face-to-face interaction, individual accountability, social and small group skills. An analysis of urban primary (3.60) and secondary (3.34) mathematics teachers’ overall knowledge of cooperative learning principles did not reveal substantial differences. Although the data revealed significant differences in how urban primary and secondary teachers’ responded to statements related to cooperative learning principles.

A t-test for two independent samples was conducted to analyze data from research questions 2-4 to determine if differences exist between urban primary and secondary
teachers concerning their knowledge of the role they play in the cooperative learning environment; their perceptions regarding the use cooperative learning as an instructional strategy; and their perceptions regarding the impact cooperative learning has on student achievement?

**Research Question 2**

What differences exist between urban primary and secondary mathematics teachers’ knowledge of the role teacher’s play in the utilization of cooperative learning in the classroom?

Six statements were included in the survey to evaluate statistical differences in the mean scores of primary and secondary mathematics teachers’ responses to research question 2. The results are presented in Table 4-17.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Primary Teacher</th>
<th>Secondary Teacher</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement 31</td>
<td>3.76</td>
<td>3.57</td>
<td>0.19</td>
</tr>
<tr>
<td>Statement 32</td>
<td>2.05</td>
<td>1.85</td>
<td>0.20</td>
</tr>
<tr>
<td>Statement 34</td>
<td>3.94</td>
<td>3.62</td>
<td>0.32</td>
</tr>
<tr>
<td>Statement 51</td>
<td>2.12</td>
<td>2.60</td>
<td>0.48</td>
</tr>
<tr>
<td>Statement 55</td>
<td>4.17</td>
<td>4.0</td>
<td>0.17</td>
</tr>
<tr>
<td>Statement 57</td>
<td>3.35</td>
<td>3.21</td>
<td>0.14</td>
</tr>
<tr>
<td>All Statements</td>
<td><strong>3.22</strong></td>
<td><strong>3.14</strong></td>
<td><strong>0.08</strong></td>
</tr>
</tbody>
</table>

Teachers’ responses to statement 31 (students always know how they will be evaluated before the lesson begins) uncovered a mean of 3.76 for primary teachers and a mean score of 3.57 for secondary teachers. When the two groups are compared, there is a mean score difference of 0.19. The difference in mean scores was not considerably different. Analysis of the data indicates the majority of urban primary (33%) and secondary (47%) agreed students would always know how they would be evaluated.
The mean scores for teacher reactions to statement 32 yield results that were not significantly different relating to the statement: “There is one best method of assigning students to groups”. Primary teachers obtained a mean of 2.05 while secondary teachers produce a mean score of 1.85. There was a mean score difference of 0.2 between the two groups. Seventy-three Percent of all respondents did not agree that there is one best method of assigning students to groups.

There was a difference in the mean scores of urban primary (3.94) and secondary (3.62) teachers from statement 34, which states: “In my class, cooperative learning may involve intergroup cooperation”, which resulted in a mean score difference of 0.32. Seventy-three percent of all teachers agreed that cooperative learning might involve intergroup cooperation.

Primary and secondary teachers’ response to statement 51 uncovered a mean score difference of 0.48, indicating a notable difference exist between the two groups relating to the statement, “The physical arrangement of cooperative learning groups is not important”. Responses from primary teachers resulted in a mean score of 2.12 compared to the mean score 2.60 for secondary teachers. Fifty-nine percent of all teachers surveyed replied they disagreed with the statement. However, 16% of secondary teachers indicated they agreed with the statement compared to 5% of primary teachers. Additionally, 7% of secondary teachers also indicated they were unsure about the statement.

Teacher responses to statement 55 indicate many primary (27%) and secondary (47%) mathematics teachers agree with the statement, “academic objectives for groups should be specified before the beginning of the lesson.” A mean score of 4.17 was calculated for primary teachers compared to mean score of 4.0 for secondary teachers.
When the two groups are compared, there is a mean score difference of 0.17. The difference in mean scores is not significant.

“I evaluate cooperative learning groups with a criteria-referenced system” is associated with statement 57. Data results from the responses of teachers uncovered a mean score of 3.35 for urban primary teachers and mean score of 3.21 for secondary teachers. The mean score difference of 0.14 indicates there is not a significant different in how primary and secondary teachers feel about evaluating cooperative learning groups with a criteria-referenced system.

Results from the six statements used as a part of the survey to measure teachers’ knowledge and perceptions of the role of they play in the cooperative learning environment yield an average mean score of 3.22 for primary teachers and an average mean score of 3.14 for secondary teachers. The difference in mean scores is 0.08 indicating no significant difference in responses among primary and secondary teachers’ related to the knowledge of the role that teachers play in the utilization of cooperative learning.

**Research Question 3**

What differences exist between urban primary and secondary mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy?

The teacher survey included six statements specifically to evaluate the statistical difference in the mean score between primary and secondary teachers’ responses to question 3. The results are shown in table 4-3.

**Table 4-18. Mean Scores of Primary and Secondary Teachers, Perceptions on Cooperative Learning Instruction**
<table>
<thead>
<tr>
<th>Statement</th>
<th>Primary Teacher</th>
<th>Secondary Teacher</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement 19</td>
<td>3.29</td>
<td>3.21</td>
<td>0.08</td>
</tr>
<tr>
<td>Statement 28</td>
<td>3.41</td>
<td>3.25</td>
<td>0.16</td>
</tr>
<tr>
<td>Statement 50</td>
<td>3.68</td>
<td>3.82</td>
<td>0.14</td>
</tr>
<tr>
<td>Statement 56</td>
<td>3.58</td>
<td>3.60</td>
<td>0.02</td>
</tr>
<tr>
<td>Statement 59</td>
<td>3.18</td>
<td>3.64</td>
<td>0.46</td>
</tr>
<tr>
<td>Statement 61</td>
<td>3.64</td>
<td>3.60</td>
<td>0.04</td>
</tr>
<tr>
<td>All Statements</td>
<td>3.46</td>
<td>3.52</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Teacher replied to statement 19. Their responses revealed a mean score of 3.29 for primary teachers and a mean score of 3.21 for secondary teachers. When the data from the two groups were closely examined, there was a mean score difference of 0.08 which is not considerably different.

Primary teachers who replied to statement 28 produced a mean score of 3.41 and secondary teachers uncovered a mean of 3.25. The teacher groups produced a mean score difference of 0.16, indicating a slight difference exist in regards to the statement: “Students achieve more when cooperative learning is utilized as an instructional strategy”. It is worthy to note that sixteen (36%) teachers (5 (11%) primary and 11 (25%) secondary) indicated they were unsure if students achieved more when they utilize cooperative learning.

A statistical analysis of teachers’ response to statement 50 revealed a mean score of 3.82 for secondary teachers and a mean score of 3.68 for primary teachers for the statement: “the way teachers structure goals determine how students interact”. When the two groups were compared, the difference in the mean score is 0.14, showing a slim difference exist.

Statement 56 responses from primary teachers revealed a mean of 3.58 and a total score of 3.60 for secondary teachers. When the two groups are compared, the
dissimilarity in the mean score is 0.02 suggesting that no significant difference exist in teachers’ response to the statement: “affective outcomes are determined by the way the teacher structures student interaction”.

Primary teachers’ answers to statement 59 resulted in a mean score of 3.18 while secondary teachers’ obtained a mean of 3.64. The two groups of teachers’ responses to the statement produced a mean score difference of 0.46, signifying a significant difference exists between primary and secondary teachers’ response to the statement: “A major determinant of cognitive outcomes is student interaction patterns”. Primary teachers do not believe students interaction patterns are as much a determinant of cognitive outcomes as secondary teachers. Additionally, analysis of the data showed fifty Percent of teachers selected unsure in response to the statement (25% primary and 25% of secondary teachers).

Results from teacher’s responses to statement 61 uncovered a mean of 3.64 for urban primary teachers and a mean of 3.60 for secondary teachers. The two groups uncovered a mean score of 0.04. When compared, no significant difference exists between primary and secondary teachers’ response to the statement: “my students achieve more working together than working alone”.

The six statements were used to gather data to measure teachers’ perceptions regarding the utilization of cooperative learning as an instructional strategy in classrooms. Results disclosed an overall mean score of 3.46 for primary teachers and 3.52 for secondary teachers, indicating no significant difference exists amongst primary and secondary teachers’ perceptions regarding using cooperative learning as an
instructional strategy in classrooms with students. However, urban primary and secondary teachers’ responses to statement 59 were significantly different.

**Research Question 4**

What differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement?

Built-in the survey were nine statements geared explicitly to evaluate the statistical difference in the mean score between primary and secondary teachers’ responses to question four. The results are revealed in table 4-4.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Primary Teacher</th>
<th>Secondary Teacher</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement 22</td>
<td>3.64</td>
<td>3.03</td>
<td>0.61</td>
</tr>
<tr>
<td>Statement 25</td>
<td>3.64</td>
<td>3.14</td>
<td>0.50</td>
</tr>
<tr>
<td>Statement 37</td>
<td>3.52</td>
<td>3.25</td>
<td>0.27</td>
</tr>
<tr>
<td>Statement 38</td>
<td>3.52</td>
<td>3.50</td>
<td>0.02</td>
</tr>
<tr>
<td>Statement 42</td>
<td>3.70</td>
<td>3.77</td>
<td>0.07</td>
</tr>
<tr>
<td>Statement 44</td>
<td>3.70</td>
<td>3.53</td>
<td>0.17</td>
</tr>
<tr>
<td>Statement 47</td>
<td>3.52</td>
<td>3.59</td>
<td>0.07</td>
</tr>
<tr>
<td>Statement 58</td>
<td>3.76</td>
<td>3.51</td>
<td>0.25</td>
</tr>
<tr>
<td>Statement 60</td>
<td>3.82</td>
<td>3.17</td>
<td>0.65</td>
</tr>
<tr>
<td>All Statements</td>
<td><strong>3.64</strong></td>
<td><strong>3.38</strong></td>
<td><strong>0.26</strong></td>
</tr>
</tbody>
</table>

A mean score of 3.64 was discovered from results related to statement 22 for primary teachers and a mean score of 3.03 for secondary teachers. There was a mean score difference of 0.61 when the two groups were compared, which indicates a significant different exist between primary and secondary teachers’ perceptions related to
the statement: “My students are more motivated when I structure my class in cooperative learning groups”.

Primary teachers’ response to statement 25 resulted in a mean score of 3.64 for and a mean score of 3.14 for secondary teachers. A mean score difference of 0.50 was uncovered when the two groups were compared, signifying primary and secondary teachers hold different perceptions on the statement: “Cooperative learning has positive effects on classroom discipline”.

Results from teacher replies to statement 37 uncovered a mean score of 3.52 for primary teachers and a mean score of 3.25 for secondary teachers. When comparing the two groups, there is a mean score difference of 0.27, indicating a slight difference exist between primary and secondary teachers’ response to the statement: “Cooperative learning leads to more positive outcomes than competitive learning situations”.

Statement 38 results revealed a mean score of 3.52 for primary teachers and a mean score of 3.5 for secondary teachers, indicating no significant difference exist between primary and secondary teachers’ response to the statement: “My students are more supportive of each other because I use cooperative learning”.

A mean score of 3.70 for primary teachers and a mean score of 3.77 for secondary teachers found after teachers responded to statement 42, which revealed a difference of 0.7, indicating no significant difference between primary and secondary teachers’ responses to the statement: “Cooperative learning affects my students’ self-esteem”.

Teachers’ responses to statement 44 exposed a mean score of 3.70 for primary teachers and a mean score of 3.53 for secondary teachers. A difference of 0.17 was found, signifying a slight difference exist between primary and secondary teachers’
response to the statement: “Using cooperative learning has helped weaker students in my class feel more accepted”.

Statistical analysis of survey data shows a mean score of 3.52 for primary teachers for statement 47 and a mean score of 3.59 for secondary teachers related to the results from the statement: “Cooperative learning has helped to develop more positive attitudes toward learning in my classroom”. The difference of 0.07 in the mean score suggests no significant difference exist between primary and secondary teachers’ response.

Teachers’ reactions to statement 58 resulted in a mean score of 3.76 for primary teachers and a mean score of 3.51 for secondary teachers. The mean score difference of 0.25 exists, resulting in a minor difference between primary and secondary teachers’ response to the statement: “My students know how to collaborate to solve a problem.”

Teachers’ response to statement 60 resulted in a significant mean score difference (0.65) between primary and secondary teachers. Primary teacher’s responses resulted in a mean of 3.82 while secondary teacher’s responses resulted in a mean score of 3.17. Data also revealed 16% of secondary teachers disagreed with the statement “Gifted students in my class benefit when I use cooperative learning”. One primary teacher strongly disagreed with this statement. Additionally, 28% of all participants replied they were unsure about the statement.

Nine statements were included in the survey to measure teachers’ attitudes pertaining to the impact cooperative learning has on student achievement with students. Overall results uncovered a mean score of 3.64 for primary teachers and 3.38 for secondary teachers, signifying a slight difference (0.26) exist between primary and
secondary teachers’ perceptions related to the impact cooperative learning has on student achievement in mathematics.

Chapter 4 Summary

This chapter revealed the data analysis of data collected from surveys completed by primary and secondary mathematics teachers related to their knowledge and perceptions of cooperative learning. Chapter four included data related to the demographics of study participants as well as describe the findings of the study in order to focus on the primary question: What are the differences in the knowledge of the principles of cooperative learning that exist between urban primary mathematics teachers and urban secondary mathematics teachers? The subscale questions were also analyzed in order to explain and expand on data that relates the teachers’ knowledge and perceptions of cooperative learning.

SPSS software was utilized to perform the statistical analyses and determine if there were significant differences exist between primary and secondary teachers’ knowledge and perceptions of cooperative learning.

Chapter 5 will include a summary of the study by discussing the findings, limitations and conclusion. Recommendations for future research will also be included with implications of this research on current and future studies related to primary and secondary teachers’ knowledge and perceptions of cooperative learning in mathematics.
CHAPTER 5. CONCLUSIONS AND DISCUSSION

Introduction

The purpose of this study was to examine the differences between urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning. Additionally, this study was conducted to pinpoint possible gaps in order to provide professional development opportunities to enhance teaching and learning in mathematics utilizing cooperative learning as an instructional method. A non-experimental, causal-comparative research design was used for this study. Conducting causal-comparative research seeks to explain differences between groups by examining the differences in the experiences of group members (Lodico, 2010). Additionally, participants in causal-comparative research already belong to groups based on their experiences, and the researcher selects participants from these preexisting groups. Urban primary and secondary mathematics teachers were the selected groups for this study.

Chapter 5 is the conclusion of the quantitative study that investigated urban primary and urban secondary mathematics teachers’ knowledge and perceptions of cooperative learning. The researcher will summarize and discuss the findings, as well as the results as it relates to the literature, identify the limitations and provide a conclusion for this study. Recommendations for future research will also be included with implications on existing and forthcoming studies related to urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning.

Summary of the Results
The purpose of this study was to examine the differences between urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning.

Participants were asked to complete an online survey by responding to statements ranked according to a 5- point Likert-scale, which was used to measure the difference between urban primary and urban secondary teachers’ knowledge and perceptions of cooperative learning. The data was then examined to draw conclusions in order to present the findings. The findings of the study will be summarized and discussed according to the four research questions which guided this cooperative learning study.

**Research Question 1**

What differences exist between urban primary and secondary mathematics teachers’ knowledge of the principles of cooperative learning?

Embedded into the survey were statements specifically related to the five principles of cooperative learning: The principles are positive interdependence, group processing, face-to-face interaction, individual accountability, and social and small group skills.

Data analysis of urban primary (3.60) and secondary (3.34) mathematics teachers’ overall knowledge of cooperative learning principles did not reveal significant differences (0.26). However, further examination of the data revealed significant differences in urban primary and secondary teachers’ responses to specific principles of cooperative learning statements.

Findings from the data analysis indicated a slight difference (0.29) in the overall mean score between urban (3.37) primary and (3.08) secondary teachers’ responses to the positive interdependence principle. The greatest difference in the mean score (0.82)
between the groups was statement 27 which states, “My students are assigned roles in their cooperative learning groups”. Secondary (36%) teachers disagreed with the statement compared to primary (9%) teachers, indicating that a large number of secondary teachers do not assign their students to roles while in cooperative learning groups.

The principle of group processing findings resulted in an overall mean difference of 0.54 between urban primary (3.47) teachers and secondary (2.93) which is significant. Likewise, there was a noteworthy difference in how urban primary (3.35) and secondary (2.39) teacher responded to statement 26 which is resulted in a mean score difference of 0.96 related to the statement, “My students have learned procedures to analyze how well their groups are functioning”. Forty percent of urban secondary teachers disagree with the statement indicating they have not focused on teaching their students techniques to evaluate how well their groups are functioning. Additionally, sixteen percent of secondary teachers indicated they were unsure of the statement. However, twenty-one percent of primary teachers agreed that their students were taught procedures to evaluate how well their groups are functioning with nine percent indicating they were unsure.

Responses to the face-to-face interaction principle displayed an overall mean difference of 0.28, suggesting a slight difference exist between urban primary (3.71) and secondary (3.43) teachers. The response with the greatest gap between the two groups was statement 53, which states, “All my students give and receive explanations when they work in cooperative groups”. The findings resulted in a mean score of 4.0 for urban primary teachers and a mean score of 3.39 for secondary teachers which is a mean score difference of 0.61. Fourteen percent of secondary teachers disagreed with the statement
indicating they do not focus on students giving and receiving explanations when working cooperatively in groups. Additionally, fourteen percent of secondary teachers replied that they were unsure about the statement.

Teachers were asked to respond to statement related to the individual accountability principle. An analysis of the data did not reveal significant differences in the overall mean scores of urban primary (3.84) and secondary (3.81) teachers.

Social and small group skills were the final principle analyzed to determine if differences exist in the knowledge of urban primary and secondary teachers. Data results revealed no significant difference in the overall mean scores of urban primary (3.64) and secondary (3.52) mathematics teachers.

The group processing principle of cooperative learning revealed the largest difference in mean scores between urban primary and secondary mathematics teachers. Of the four statements related to group processing, statement 26 revealed the largest difference in responses between urban primary and secondary teachers, indicating the majority of secondary teachers did not believe it was imperative to teach students procedures to analyze how well their groups were functioning. Positive independence and face-to-face interaction principles of cooperative learning showed minor differences between the two groups. Although, there were noteworthy differences in how the groups of teachers responded to specific statements related to the two principles. Data results related to social and small group skills and individual accountability did not reveal significant differences between the responses of urban primary and secondary teachers. Therefore, the null hypothesis for research question one is retained.

Research Question 2
What differences exist between urban primary and secondary mathematics teachers’ knowledge of the role teacher’s play in the utilization of cooperative learning in the classroom?

Urban primary and secondary mathematics teachers’ perceptions of the role they play in the implementation of cooperative learning were compared by utilizing a two-sample t-test. The findings from the data analysis of the six statements teachers’ responded to suggest no significant differences (0.08) exist between urban primary mathematics teachers and urban secondary mathematics teachers’ knowledge of the role they play in the utilization of cooperative learning. However, an analysis of teachers’ responses to one statement revealed a noteworthy difference in the mean score when comparing the two groups. Results from statement 51, “The physical arrangement of cooperative learning groups is not important” also revealed a striking difference in the mean score when data analysis from the groups of teachers was examined. A mean score of 2.12 was revealed for primary teachers and a mean score of 2.60 was revealed for secondary teachers. This mean score difference of 0.48 indicate primary teachers focused to a substantial degree on the physical arrangement of the class when utilizing cooperative learning during mathematics compared to secondary teachers.

Therefore, the null hypothesis for research question two is retained.

**Research Question 3**

What differences exist between urban primary and secondary mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy?

Six statements were examined to measure teachers’ perceptions regarding their utilization of cooperative learning as an instructional strategy in classrooms. The overall
mean score difference of 0.06 suggest no significant difference exists amongst primary and secondary teachers. However, the examination of data revealed a significant difference in the mean scores of urban primary and secondary teachers in regards to statement 59. Teachers responded to the statement, “A major determinant of cognitive outcomes is student interaction patterns”. Primary teacher’s responses resulted in a mean score of 3.18 while secondary teacher’s mean score was 3.54, resulting in a mean score difference of 0.46. Secondary teachers agreed largely that student interaction patterns are a major determinant of cognitive outcomes when compared to primary teachers. It is also interesting to note the analysis of data also revealed 50% of all teachers (25% of primary and 25% of secondary teachers) replied they were unsure of the statement. Data results indicate no differences exist between urban primary and secondary mathematics teachers’ perceptions regarding the use cooperative learning as an instructional strategy. Therefore, the null hypothesis for research question three is retained

**Research Question 4**

What differences exist between urban primary and urban secondary mathematics teachers’ perceptions regarding the impact cooperative learning has on student achievement?

Nine statements were embedded into the survey to examine then measure the statistical differences in mean scores of urban primary and secondary teachers’ perceptions of cooperative learning’s impact on student achievement. Data analysis revealed a mean score difference of 0.26, which is slightly significant. However, the analysis of data uncovered a significant difference between how teachers’ responded to
statement 60 (gifted students in my class benefit when I use cooperative learning)
resulting in the largest mean score difference (0.65) between primary and secondary
teachers related to their perceptions of cooperative learning’s impact on student
achievement. Primary teacher’s responses resulted in a mean of 3.82 while secondary
teacher’s responses resulted in a mean score of 3.17. One primary teacher strongly
disagreed with this statement. However, 16% of urban secondary teachers disagreed with
the statement signaling that many secondary teachers do not believe cooperative learning
has benefited gifted students. The findings also revealed 28% of all respondents replied
they were unsure if cooperative learning has benefited gifted students.

There are no differences between urban primary and urban secondary
mathematics teachers’ perceptions regarding the impact cooperative learning has on
student achievement. Therefore, the null hypothesis for research question four is retained

**Discussion of the Results**

Utilizing the emergent themes gathered from the analysis of data, the researcher
will discuss the results of this cooperative learning study. Based on the findings, no
significant differences exist between urban primary and secondary teachers’ overall
knowledge and perceptions of cooperative learning according to mean score results.
However, results show significant differences exist between urban primary and secondary
teachers’ responses to statements related to specific cooperative learning principles. The
lack in differences between the two groups of teachers may result from the manner in
which cooperative learning training was taught as well as the area(s) of emphasis during
training. The majority of teachers (62.5%) reported receiving cooperative learning
training by completing a college course. However, limited studies have focused
specifically on the principles of cooperative learning, which may adversely influence teachers’ knowledge, and perceptions of cooperative learning, which may in turn influence how it is implemented in classrooms to increase student achievement in mathematics.

Findings revealed the group processing principle presented the largest difference in the responses of urban primary and secondary teachers, which suggest there is a clear distinction between urban primary and secondary teachers’ knowledge and thorough understanding of group processing. This lack of knowledge and comprehensive understanding of group processing can influence the effectiveness of the implementation of cooperative learning and its effect on student achievement.

Significant differences also exist between urban primary and secondary teachers’ responses to positive interdependence statements. Findings suggest a significant portion of surveyed secondary teachers do not recognize the need for assigning students roles when working cooperatively in groups. Excluding this element of cooperative learning can also affect group effectiveness as well as student achievement in mathematics.

No significant difference exists between urban primary and secondary mathematics teachers’ mean score pertaining to their knowledge of the role they play in the utilization of cooperative learning. Yet there was a notable difference in urban primary and secondary teachers’ responses related to the physical arrangement of cooperative learning groups. Findings reveal a notable percentage of secondary teachers accept as true the physical arrangement of cooperative learning groups is not of great importance. The physical arrangement may not have been an area of focus for teachers during their cooperative learning training. Therefore, may not be an area of focus for
teachers. The lack of focus on the physical arrangement of cooperative learning groups can effect student time on task, which will in turn affect student achievement. The physical arrangement can give a clear message about the teachers’ values and expectations for student behavior.

In addition, the following conclusions were made based on the findings. Significant differences exist between urban primary and secondary mathematics teachers’ responses in regards to the impact cooperative learning has on the achievement of gifted students. The perceptions held by teachers may be due to the lack in understanding of how cooperative learning benefits all students. This lack in understanding may be caused by the cooperative learning training completed by teachers.

In conclusion, it appears that urban primary and secondary teachers have knowledge and experience related to cooperative learning. It also appears that both groups of teachers have utilized cooperative learning to some extent with students. The findings also reveal teachers may not have a clear understanding of the principles of cooperative learning as well as the role they play in the utilization and implementation of cooperative learning, which may adversely influence student achievement in mathematics.

**Discussion of the Results in Relation to the Literature**

Cooperative learning is the instructional use of small groups. All cooperative learning methods share the idea that students work together to learn and are responsible for one another’s learning as well as their own (Slavin, 1996). This instructional strategy aligns with constructivism, a powerful theory model that has origins in philosophy and psychology. Constructivism in learning is founded on the assumption that learning is an
active process in which children construct new ideas or concepts based on their current
and past knowledge. The constructivist framework challenges teachers to create learning
environments in which teachers and their students are encouraged to think and explore
(Brooks, 1999).

A study was conducted to examine if differences exist between urban primary and
secondary mathematics teachers’ knowledge and perceptions of cooperative learning and
how identified differences influence teaching and learning in the classroom. Cooperative
learning emphasizes the crucial role of teachers in supervising group activities (Law
2008). The study’s findings did not identify significant differences exist between urban
primary and secondary teachers’ overall knowledge and perceptions of cooperative
learning. However, differences in how urban primary and secondary mathematics
teachers responded to specific statements related to the principles of cooperative learning
exist. Slavin (1999) voiced his concerns pertaining to the quality of cooperative learning
methods used in classrooms. He noted in his studies of teachers’ use of cooperative
learning, most are using unconventional forms of the model, typically lacking group
goals and individual accountability. Findings from data collect from this study yield
similar results. Group processing principle presented a difference in the responses of
urban primary and secondary teachers. The lack of knowledge and understanding of
group processing can influence the effectiveness of the implementation of cooperative
learning and impact student achievement in mathematics. According to Millis (2009), it
is essential for teachers and students to pay attention to group dynamics and productivity
to help students learn how to lead, as well as make certain all members contribute by
sharing ideas that are heard and received by all.
Differences also exist between urban primary and secondary teachers’ responses to positive interdependence statements. Many secondary teachers do not recognize the need for assigning students roles when working cooperatively in groups. Assigning roles and responsibilities to students encourage accountability for self as well as for the group. Kirk (2001) states, “assigning roles ensures that no individual shirks his or her responsibility, as can happen in small group work” (p. 33).

The physical arrangement of cooperative learning groups also presented differences between urban primary and secondary teachers. Johnson et. al (1999) states how well any small group performs depends on how it is structured. To ensure a group is cooperative, teachers must recognize that various methods can be used to for a variety of purposes and the essential elements that need to be carefully structured within every cooperative activity.

Differences exist between urban primary and secondary mathematics teachers’ responses in regards to the impact cooperative learning has on the achievement of gifted students. Johnson (1990) note that high achieving students benefit from cooperative learning in various ways such as from scores on retention test that are higher verses high achievers participating in competitive or individualistic learning environments.

**Limitations**

The following limitations were present for this study:

1. The number of participants was determined by the number of urban primary and secondary mathematics teachers employed by the district. The number of mathematics teachers provided a sample but is somewhat limited considering
larger urban school districts may employ larger numbers of mathematics teachers, which would have provided a better generalization of the findings.

2. Data collected from this study will be of benefit to teachers, principals, curriculum directors as well as colleges and universities. However, the data collected from this study will be somewhat limited because only one urban public school district was involved in the study. The utilization of several urban school districts would have provided a better generalization of the findings.

3. This study was limited to utilizing a survey to gather data on cooperative learning. Other data collection tools could have been utilized to provide more in-depth findings to better understand how urban mathematics teachers’ knowledge and perceptions of cooperative learning impact student achievement.

4. The sample group for this study was assembled from and limited to urban primary and secondary mathematics teachers. Focusing only on this group of educators limits the generalization of the findings since teachers’ knowledge and understanding of cooperative learning can also impact the mathematics achievement of students in other educational settings.

5. The study was limited to one urban public school district in Central Ohio. The number of individuals who participated in the study provided a sample but is somewhat limited since larger urban school districts exist, which would have provided a better generalization of the findings.

Implication of the Results for Practice

It is imperative that teachers, curriculum directors, facilitators, and administrators to first understand the theories that support cooperative learning and then apply the
knowledge and understanding of this instructional method in the classroom to successfully impact student achievement in mathematics. Once the knowledge and understanding of cooperative learning is obtained, administration is encouraged to express an interest in teachers implementing it into their classrooms. In order to make certain teachers have a thorough knowledge and understanding of cooperative learning, they must first participate in quality professional development sessions offered by school districts and schools in general. Quality training must focus on helping teachers to become acquainted with cooperative learning to recognize the benefits to students, teaching and learning. School districts are encouraged to employ a full-time facilitator of cooperative learning to work in the school, visiting classrooms to provide feedback and assist with assessing student progress, performance as well as other functions essential to improving the implementation and utilization of cooperative learning.

In order to promote student learning, teachers must thoroughly understand the principles of cooperative learning. Each principle is unique and has a specific purpose that contributes to the academic success of students in mathematics. Additionally, the structures that support cooperative learning are essential to supporting teaching and learning. Teachers must be encouraged to utilize the structures in the manner prescribed by researchers so students can receive all the benefits of cooperative learning.

School districts are encouraged to examine how cooperative learning is utilized in classrooms in order to align best practices that support student learning as they transition from primary grade levels to secondary grade levels. These practices help students to understand they must be dedicated to their own success as well as to the success of other group members. After all, this commitment is at the heart of cooperative learning.
Additionally, when cooperative learning practices are properly implemented at all grade levels, students’ skill sets are likely to advance as they transition from grade level to grade level.

Institutions of education as well as school administration are encouraged to help teachers to develop a deep understanding of cooperative learning, including its principles and structures. It is likely teacher’s knowledge and perceptions of cooperative learning will change so that they recognize and acknowledge its benefits, inspiring them to utilize it in the classroom to meet the diverse needs of students and to improve student achievement in mathematics.

**Recommendations for Further Research**

The following recommendations are suggested for further cooperative learning research:

- It is recommended that a qualitative study is conducted to examine primary, middle and secondary teachers’ knowledge and perceptions of cooperative learning in order to determine the impact on student learning as they transition from grade to grade.

- It is recommended that a quantitative study is conducted to examine teacher’s knowledge and understanding of cooperative learning principles to examine how it influences how teachers implement it as well as its impact on student achievement.

- It is recommended that a quantitative study is conducted comparing an urban primary, suburban primary and rural primary teachers’ knowledge of cooperative
learning principles and how it influences the manner in which it is utilized in the classroom.

• It is recommended that a longitudinal research design study is conducted to examine how teachers’ knowledge and perceptions of cooperative learning evolves overtime after completing cooperative learning training and consistently utilizing it as an instructional strategy in the classroom.

• It is recommended that a qualitative cooperative learning study is conducted comparing the knowledge and perceptions of teachers who teach in different high school settings (Career Tech-vs- School for the Arts) to the impact on teaching and learning.

• It is recommended that this quantitative cooperative learning study is conducted with a larger sample to support the findings.

Conclusion

The debate surrounding cooperative learning and its impact on teaching and learning is likely to continue throughout the field of education. This study provided insight into urban primary and secondary mathematics teachers’ knowledge and perceptions of cooperative learning. Teachers are responsible for educating students to their fullest potential, which is a daunting task. Therefore, it is imperative to pose questions to understand how they view topics such as cooperative learning, which impact teaching and learning.

The knowledge and perceptions of teachers in this study indicate differences exist between urban primary and secondary teachers’ knowledge and understanding of cooperative learning principles. Participants in this study indicated they held different
views pertaining to individual accountability and group processing. Urban secondary
teachers indicated they did not place emphasis on individual accountability and group
processing which can adversely affect student achievement in mathematics. Participants
in this study also revealed there are differences that exist between the two group’s
perceptions related to cooperative learnings impact on gifted students. Teachers’
perceptions may be altered by providing extensive professional development in
cooperative learning methods, and by providing support in the classroom that include
frequent opportunities to obtain feedback on their use of cooperative learning structures
as well as help assessing student progress, performance as well as other functions
essential to the effective use of cooperative learning. When teachers are provided
support, it is likely their knowledge and perceptions of cooperative learning will change,
inspiring them to utilize it in classrooms to meet the diverse needs of students.

Politicians, scholars of education, school districts, and administrators can use the
knowledge and experience of teachers who participated in this study to provide quality
training that will guide teachers in a systematic manner to implementing cooperative
learning improve student achievement in mathematics.
REFERENCES


Ohio Department of Education, ([http://education.ohio.gov/](http://education.ohio.gov/))


APPENDIX STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University’s Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person’s ideas or works.

The following standards for original work and definition of plagiarism are discussed in the Policy:

Learners are expected to be the sole authors of their work and to acknowledge the authorship of others’ work through proper citation and reference. Use of another person’s ideas, including another learner’s, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else’s ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University’s Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.
Statement of Original Work and Signature

I have read, understood, and abided by Capella University’s Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA Publication Manual.

Learner name and date  
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Title: THEME AS A RESOURCE TO CONSTRUCT MATHEMATICAL MEANINGS: A LINGUISTIC APPROACH

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Topic Area: Teacher Education
Format: Paper Session

Description: This paper offers a particular analytic method from Systemic Functional Linguistics, thematic analysis, which reveals textual-meaning potentials due to a speaker’s choice of Theme. In order to account for the meaning-making potential of language, I draw on Halliday (1994) and his proposal of three metafunctions: ideational, interpersonal, and textual. This paper presents a Halliday-inspired analysis of how one secondary mathematics student teacher helped a group of students find meaning in computing compounded interest.

Abstract

Research has shown that a teacher’s choice of words and grammar relates to meanings made by students in the classroom. Through a detailed linguistic analysis of one particular secondary mathematics student teacher, Aaron, I aimed to learn more about the purposes behind his choices of language – in particular, the ‘beginning part’ of each spoken clause, or Theme. Drawing on Halliday’s (1978, 1994) Systemic Functional Linguistics (SFL) approach to language, I analyzed the spoken text of Aaron as he facilitated problem-solving discourse with small groups of students. A teacher’s choice of how to begin each clause is instrumental in helping students piece together mathematical meanings. By developing a money-borrowing scenario in which one student was designated to play a principal role, Aaron invited group members to follow along through a ‘flow’ of mathematical processes. As a result, the students were able to connect calculator results to those obtained from their paper-and-pencil computations. Through analyzing the textual aspects of this scenario, I suggest that Aaron’s choices of Theme served as ‘signposts’, or points of departure which served to identify what each clause was about.

Keywords: Teacher Education, Secondary Mathematics, Systemic Functional Linguistics, Classroom Discourse
Within the social nature of learning mathematics language can be viewed as the principal resource for making meaning in the classroom (Halliday, 1978). “The teacher’s oral language is a key means of linking between visual and symbolic representations, making the spoken language very powerful in classroom learnings” (Schleppegrell, 2010, p. 88). This suggests that the way that language and mathematics interact needs to become a focus of attention in the classroom. However, using aspects of mathematical language necessary to diagnose student thinking and give appropriate responses in the context of classroom discourse is a key challenge for prospective teachers (Schleppegrell, 2012). In response to this concern, this paper (as part of a larger study) examines classroom discourse through a linguistic lens and focuses on one particular student teacher in an Algebra 2 classroom. While much of mathematics instruction can be expressed in semiotic signs and symbols, the associated words and grammatical structures of classroom discourse remain the fundamental processes for a shared construction of mathematical meaning (Halliday, 1978). In this paper I focus linguistically on language through a perspective of Systemic Functional Linguistics (Halliday, 1978, 1985) and examine the ways that particular choices of words and grammar influence the meanings shared by speaker and listeners.

**Theoretical Perspectives**

Halliday and other scholars of Systemic Functional Linguistics (SFL) are concerned with how human beings construe experiences – both their own and those of others (Halliday & Matthiessen, 2006). It is language that helps us understand and analyze our world experiences and also enact our understandings as we interact others. SFL views language as a network of systems, or inter-related sets of choices for making meaning (Halliday, 1994). From this perspective the overall purpose of language can then be described as a semantic one in which researchers can record and analyze the meanings made in a particular context. In order to account for this meaning-making potential of language, Halliday (1994) has proposed three metafunctions (or meanings) that speakers or writers draw on as they choose from available language options. In this paper I focus on spoken word choices.

**Metafunctions**

Halliday (1994) has identified the three metafunctions as ideational, interpersonal, and textual. The ideational metafunction construes a model of experience in which a speaker uses language as a resource in order to represent and reflect upon the world; the interpersonal metafunction enacts social relationships through language; and the textual metafunction creates relevance to context and organizes a speaker’s message (Halliday, 1994). In addition to viewing these metafunctions as fundamental organizing principles of language, researchers can also think of them as ‘tools’ to analyze, understand, and talk about a speaker’s lexico-grammatical choices.

This study focuses on the textual metafunction and examines the way a text is organized as a piece of speech. However, it is important to note that while this organization has textual meanings, it is also inseparately and simultaneously related to a speaker’s choices in both the
ideational and interpersonal metafunctions. Consequently, these other functions cannot be ignored. Halliday and Matthiessen (2006) have described the textual function as ‘enabling’ because of its resources that organize all three meanings as discourse – meanings that can be contextualized and shared.

**The Textual Aspects of the Theme/Rheme Structure**

Halliday and Matthiessen (2006) define Theme as the element which serves as the starting-point for the message; it is what the clause is going to be about. Together with Rheme these two choices form the major system in a clause. In English, the identification of Theme is based on order and is realized by what is placed at the beginning of a clause. That is, Theme comes first, and whatever is not Theme is Rheme. The textual aspects of Theme represent the ‘signposts’ for a speaker’s point of departure or that which identifies for the listener what the clause is all about. Also, Theme typically contains familiar or ‘given’ information – information that has already been mentioned somewhere in the text or is familiar from the context (Eggins, 2004). Rheme is the temporary destination (Halliday, 1994). According to Eggins (2004), Rheme is that part of the clause in which the Theme is developed or realized. Because textual messages most often depart from the familiar and head towards the unfamiliar, Rheme typically contains unfamiliar or ‘new’ information.

Theme is the ‘glue’ that structures and binds both ideational (what the message is about) and interpersonal meanings (who is involved in the message) (Halliday, 1994). An examination of Theme and Rheme reveals connections at the clausal level between ‘new’ and ‘old’ meanings. This paper focuses on Theme and recognizes that its initial position yields a ‘special status’ within the clause. The reason for this is that Theme is one of the means by which the clause is organized as a message. Most often the success of the message in the text depends upon how a speaker begins each clause (Matthiessen, 1995). For this reason Theme, as part of the textual metafunction, is an important tool in helping to understand how a speaker focuses and organizes a message, thus contributing to its coherence and success (Matthiessen, 1995).

**Purpose**

The purpose of this paper is to contribute to the scarce literature on the preparation of secondary mathematics prospective teachers as related to their own awareness of how language choice relates to student understanding and sense-making. Through a SFL perspective of language, I report findings that explicate ways in which structures of language can be appropriate to the facilitation of problem-solving discourse in the mathematics classroom. While it is understood that experienced teachers are more adept at predicting student responses to a variety of problem-solving tasks, little is known about the ways prospective teachers are able to respond to students who find certain mathematical concepts challenging. Additionally, while Theme has been investigated in a range of genres (e.g., Berry, 1995; Davies, 1997), only limited research has been carried out at a lexico-grammatical level into authentic workplace texts such as the mathematics classroom.

Theme, both as a valuable SFL analytic tool and as a pedagogic resource, can help those in mathematics education better understand the ways prospective teachers anticipate the meaning-making needs of students. Understanding how Theme functions can answer questions about the ways a prospective teacher orients and re-orient students’ expectations for the direction of unfolding text – what Martin and Rose (2006) have referred to as periodic waves of the information flow. For these reasons, my overall purpose in this research is to learn more
about the ways prospective teachers make choices of Theme – choices which are crucial to the organization, interpretation, and construal of mathematical meanings.

**Participants and Context**

In my larger study I video-recorded 53 conversations, each 5–15 minutes in length, involving three prospective secondary mathematics teachers and 14 small groups of students. The video recordings and subsequent transcripts captured the speech of these student teachers as they facilitated problem-solving discourse at each of their respective high schools. The student teachers chose their own mathematical tasks which they designed to ‘spark’ group discourse. I collected the majority of data over two visits to each school, allowing for a period of two to three weeks between each visit. In this paper I report on Aaron who was placed as a student teacher at a large public high school (over 1000 students) in the desert southwest. Specifically, I report on my analysis of Aaron’s spoken text with one particular group of four Algebra 2 students (Juan, CeCe, Alfredo and Leslie). The discourse between Aaron and the four students evolved around the task of finding interest and amount due on a bank loan of $1000, compounded yearly at 10%.

For this paper I chose to analyze one particular excerpt of this discourse (see Table 1 in the Analysis section of this paper). However, in order to add to contextual aspects of this study, I first report that prior to this excerpt, the students had revealed a shared misunderstanding of how to calculate compounded interest. As Aaron came to discover, their paper-and-pencil calculations did not match output values from the calculator (values that resulted from inputting a value \( t = 2 \) into the function \( y = 1000(1.1)^t \)). As Aaron walked around the group, looking at each student’s work, he noticed that two of the students used paper-and-pencil to find amounts due (after the first year and then after the second year), one student only used a calculator, and the fourth student was using both a calculator and paper/pencil to record findings. Prior to Aaron talking with the group, the students could not agree on their findings and were unable to explain to each other why they had different results ($1200 vs. $1210). Additionally, one student, Juan, had not yet contributed verbally to the group’s discussion. After observing and listening to the group for a time, Aaron said, “Alright, Juan, you’re going to borrow $1000 from me.”

Through a detailed linguistic analysis of Aaron’s speech in the money-borrowing scenario, I aim to learn more about the purposes behind his particular choices of language. My research questions are:

- What in Aaron’s text helped the students develop an understanding of compounded interest?
- How did Aaron’s textual messages mesh with his overarching purpose or concern in the text?
- In what ways was Aaron able to anticipate the understanding needs of the group members?

**Analysis of Theme**

Theme is the first experiential element in the clause; the meanings are encoded as *participant, process* (verb), or *circumstance*. As mentioned previously, Theme is always first, followed by Rheme. Identifying Theme is a bit more complicated and can have as many as three different Theme-types. Additionally, scholars vary in how they choose to identify textual Themes (e.g., Davies, 1997; Ravelli, 1995). I draw on the research of Halliday (1994) and Matthiessen (1995) and identify Themes according to the following categories: *textual, interpersonal, and topical*. 
Textual Theme

In order to create a cohesive text with well-signposted connections between messages, speakers often preface experiential meanings with a group or phrase whose function is to connect a message to a previous message. Conjunctions serve as text-creating meanings and are referred to as textual Themes. While textual Themes do not fulfil the primary requirement of Theme which is to signal the point of departure for the experiences in the clause, Conjunctions such as if, although, unless, because, and in order to are likely to introduce dependent clauses which enhance the argument. Other Conjunctive Adjuncts such as therefore, nevertheless, in addition, finally, and in conclusion may also be thematic if they are used at the beginning of a clause to signpost the development of the discussion (Butts, Fahey, Feez, Spinks, & Yallop, 2000).

Interpersonal Theme

There are also times when clauses begin with interpersonal meanings indicating the kind of interaction between speakers or the positions they are taking. These times refer to using the interpersonal Theme. Examples of constituents which can function as interpersonal Themes are the categories of Mood Adjuncts (I think, always, probably), Comment Adjuncts as related to attitude (unfortunately, apparently) and Vocative Adjuncts in which a person is addressed by name (Eggins, 2004). There is some divergence regarding how to classify interpersonal Themes in the interrogative Mood. Eggins (2004) has referred to Finites in this Mood (could, shall, what, where, how) solely as topical Themes, while Butts et al. (2000) include such Finites as interpersonal and topical at the same time.

<table>
<thead>
<tr>
<th>Where did you go yesterday?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topical Theme</td>
</tr>
<tr>
<td>Interpersonal/Topical Theme</td>
</tr>
</tbody>
</table>

Topical Theme

Often the first element in the experiences encoded in a message is a Circumstance (as early as last year), an adverbial group (merrily, merrily), or a prepositional phrase (on the first day of school). These topical Themes signal the point of departure for the experiences in the message. Additionally, an entire nominal group also serves frequently as a topical Theme (the man in the moon; Peter, Paul, and Mary). According to SFL researchers, the thematic potential of an English clause is not considered exhausted until reaching the end of the topical Theme (Butts et al., 2000); and the rule is to identify only one topical Theme per clause (Eggins, 2004). This means that if the clause begins with a textual or interpersonal Theme, analysis must continue until reaching a topical element. Once a topical constituent has been identified, all remaining constituents can be consigned to the role of Rheme.

Marked and Unmarked Themes for Different Mood Types

In a thematic analysis Mood plays a substantial role in influencing choices of Theme. The following sections explain these influences of Mood on Theme. For example, when asking a question in the interrogative Mood, it is typical to begin with words such as what, where, when, why and how. However, and more interesting to linguists, is when the question asked is in the declarative Mood. Later in this paper the reader will see where Aaron asked a question but did so in a way in which the word ‘how’ did not begin the clause. In cases such as these, the Theme choice is unexpected for the particular Mood. Situations such as this bring up the notion of ‘markedness’ and its application to Theme.
When linguists say that a part of language is unmarked, they mean that it is the most expected, common and unremarkable case (Butts et al., 2000). Conversely, when something is marked, it is unusual and should be noticed because of the way it stands out. In my analysis I apply this notion of markedness to Aaron’s choices of Theme in order to separate the typical and expected patterns from the atypical and unexpected.

**Identifying Theme in the Declarative Mood (Statements)**

**Unmarked.** In this Mood, the Subject is the element chosen as Theme unless the speaker has a reason for choosing something else. Because this is the most typical or expected pattern, it is called the default or unmarked pattern. As a side note, a cline in scaling from ‘unmarked’ to ‘most marked’ does exist in every mood rather than any clear-cut division (Butt et al., 2000). The subject can be a noun group (pronoun, common or proper noun) or nominalization in the form of a wh-clause:

| He | laughed at my joke. |
| My sister Becky | lives in another state. |
| What I need | is to get a good grade on the test. |
| **Theme (unmarked)** | **Rheme** |

**Marked.** A speaker can depart from these more typical patterns by putting an adverb/adverb group or prepositional phrase in Theme position. For example:

| Class: adverb group | Early yesterday, | we went out for breakfast. |
| Class: temporal location adverb | Now | I see what you mean. |
| Class: prepositional phrase | In the end | they lived happily ever after. |
| **Theme (marked)** | **Rheme** |

An even more marked pattern emerges when the speaker wants to focus on the direct object rather than the subject. The direct object can be a noun group or a wh-clause:

| Class: noun group | This paint color | I love! |
| Class: wh-clause | What luggage they couldn’t carry with them | they put in a locker. |
| **Theme (marked)** | **Rheme** |

**Identifying Theme in the Interrogative Mood (Questions)**

**Unmarked.** The interrogative is typically used when the speaker asks a question. Interrogatives are separated between polar (yes-no) questions and content interrogatives. The natural starting point for polar questions can be a finite verb (can, might, have, do), and the topical Theme (sometimes noted as the ‘interpersonal/topical’ Theme) is realized by the subject:

| Have you | found the answer yet? |
| Finite, Interpersonal Theme | Topical Theme (unmarked) | Rheme |

Where the speaker requires specific information in a wh-interrogative, the wh-word (where, why, what, which, who, how) is the unmarked Theme:

| How | did you find the answer? |
| Interpersonal/Topical Theme (unmarked) | Rheme |
Marked. All other variations apart from the two examples above are considered to be marked – for example, when the Circumstance displaces the Finite or wh-word as Theme because it appears first in the clause:

<table>
<thead>
<tr>
<th>Circumstance/Theme (marked)</th>
<th>Finite</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the spring shall we go boating?</td>
<td></td>
</tr>
</tbody>
</table>

Identifying Theme in the Imperative Mood (Commands)

Unmarked. The typical function of an imperative clause is to give a command (do, put, give) or make a suggestion (let’s). The basic meaning conveyed from the speaker’s point of view is ‘I want you (or us) to do something’. When ‘you’ is not part of making a command, the unmarked Theme is the finite verb (give, don’t, let’s).

<table>
<thead>
<tr>
<th>Theme (unmarked)</th>
<th>Rheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give it to me!</td>
<td></td>
</tr>
<tr>
<td>Let’s read the story together.</td>
<td></td>
</tr>
</tbody>
</table>

Marked. When you does begin the Command, it is considered a marked Theme:

<table>
<thead>
<tr>
<th>Theme (marked)</th>
<th>Rheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>give it to me!</td>
<td></td>
</tr>
</tbody>
</table>

Additionally, clauses with Circumstance as Theme are even more marked:

<table>
<thead>
<tr>
<th>Theme (marked)</th>
<th>Rheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under no circumstances open the door before you see who’s there.</td>
<td></td>
</tr>
</tbody>
</table>

Analysis

All choices are meaningful, but when researchers find marked Themes, they look for the purpose behind the speaker’s patterning (Butts et al., 2000). Examples of such a purpose may include a speaker’s intention to draw the listener’s attention to a particular group of words. However, according to Butts et al. (2000), more often it is to build a coherent text that is easy to follow.

The table below (Table 1) shows a separation of unmarked and marked choices of Theme in Aaron’s scenario text. I examined the marked Themes in order to help interpret Aaron’s purposes in choosing those Themes, along with any resulting messages these choices may have revealed to the students. Additionally, I observed how Aaron’s Thematic choices meshed with his overarching concerns in the text. Lastly, I made note of the ways Aaron was able to anticipate any understanding needs of the students. [Note: Because some adverbs refer to points or intervals of time in which an action or event takes place, I have chosen to classify Aaron’s word choices of ‘now’ and ‘then’ as temporal location adverbs (Altshuler, 2009). As adverbs, these two words constituted marked topical Themes in the table below.]

After analyzing Aaron’s clauses encoded in experiential, interpersonal and textual meanings, I put those meanings back together in order to talk about the scenario text as a whole – that is, the overall patterns of experiential meaning and message organization. Examining the structural configurations of each clause in Aaron’s text helped me understand the contribution that Aaron’s choice of Theme made to the cohesive development of the text.
Table 1. Aaron’s Scenario Text

Marked Theme selections are in red print; student responses are in blue.

<table>
<thead>
<tr>
<th>Clause</th>
<th>Theme Selections</th>
<th>Textual Theme</th>
<th>Interpersonal Theme</th>
<th>Topical Theme</th>
<th>Rheme (New Information)</th>
<th>Mood</th>
<th>Student Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>marked</td>
<td>Juan</td>
<td>you’re</td>
<td>going to borrow $1000 from me.</td>
<td>Imperative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>unmarked</td>
<td>I</td>
<td></td>
<td>charged him (Juan) 10% interest.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>marked</td>
<td>He</td>
<td></td>
<td>now owed me how much?</td>
<td>Interrogative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>marked</td>
<td>Okay, so</td>
<td>now</td>
<td>he owes me $1100.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>marked</td>
<td>How</td>
<td></td>
<td>I’m going to look at this</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>unmarked</td>
<td>and</td>
<td>what it says in the problem there</td>
<td>is I’m going to pretend he paid back all of that $1100.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>marked</td>
<td>And</td>
<td>then,</td>
<td>I’m going to re-loan him that $1100 to him.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>marked</td>
<td>So</td>
<td>now,</td>
<td>you’re not borrowing $1000 from me.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.6</td>
<td>unmarked</td>
<td></td>
<td>you’re</td>
<td>borrowing $1100 from me.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>marked</td>
<td></td>
<td>Now</td>
<td>I’m going to charge him 10% interest on that.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.8</td>
<td>unmarked</td>
<td>What [Interpersonal/Topical Theme]</td>
<td>is the 10% interest charge on that?</td>
<td>Interrogative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>marked</td>
<td>So</td>
<td>now,</td>
<td>you have $110 interest.</td>
<td>Declarative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>unmarked</td>
<td>How</td>
<td>much total</td>
<td>does he owe me?</td>
<td>Interrogative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>unmarked</td>
<td>And</td>
<td>isn’t [Interpersonal/Topical Theme]</td>
<td>that what you guys got here?</td>
<td>Interrogative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overview of Theme/Mood Analysis

The majority of this text was spoken in the declarative Mood (10 out of 15 clauses, approximately 67%). Only one clause was in the imperative Mood, and the remaining four clauses were in the interrogative Mood. Six of the 15 clauses followed a Theme to Rheme pattern while the remaining clauses followed a Theme to Theme pattern. The Theme to Rheme patterns were split between the declarative and interrogative Moods (four were declarative; two were interrogative). The nine Theme to Theme patterns were divided between the declarative, interrogative, and imperative Moods (six were declarative; two were interrogative; one was imperative). Eight of the 15 clauses were analyzed as marked (a little more than 50%), and through my analysis I concluded that there were four individual reasons doing so (see Table 2).

Table 2. Reasons for Selecting Themes as Marked

<table>
<thead>
<tr>
<th>Clause No.</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>This clause began with the words ‘Juan, you’re’…, which is atypical for a command given in the imperative Mood.</td>
</tr>
<tr>
<td>1.3</td>
<td>This clause began with the subject ‘He’, which is atypical for a question asked in the interrogative Mood.</td>
</tr>
<tr>
<td>2.1, 2.4, 2.5, 2.7, 3.1</td>
<td>Each of these clauses has a topical Theme with the words ‘now’ and ‘then’. I have classified these words as temporal location adverbs. It is atypical for statements to begin with a Circumstance of time in the declarative Mood.</td>
</tr>
<tr>
<td>2.2</td>
<td>This clause begins with the word ‘how’ which is atypical for a statement made in the declarative Mood. That is, the Theme does not equal the Subject.</td>
</tr>
</tbody>
</table>

Findings

Clauses 1.1 – 1.3

The first section of text is an introduction, although in clause 1.3 Aaron broke away from a more traditional introduction and asked a question. In noting the marked Themes, I found that Aaron’s purpose may have been to draw the group’s attention to Juan as the principal actor in the scenario. The following summarizes the Themes in this text with the experiential meanings italicized:

Textual Themes: none
Interpersonal Themes: Juan
Topical Themes:  
  Process: none  
  Circumstance: none  
  Participant: You’re (marked)  
  I (unmarked)  
  He (marked)
In this first section of text Aaron has set up a scenario for the group, his goal being to make borrowing money ‘more real’ for the students by involving them in the scenario. The experiential meanings center on the participants in the scenario: you’re (Juan), I (Aaron), and He (Juan). In particular, Juan is to be the main ‘actor’ in the scenario – that is, the person who would borrow the $1000 from Aaron. I selected both clause 1.1 and clause 1.3 as marked clauses for different, yet related reasons.

Aaron’s main purpose in the marked Theme in 1.1, ‘Juan’ (interpersonal) and ‘you’re’ (topical), may have been to engage Juan in discourse due to a concern that Juan was not interacting verbally with other group members. By designating Juan as principal actor in the scenario, Aaron signaled an expectation that he and Juan would need to talk about the task. Also, recognizing Juan by name suggests that Aaron made an interpersonal connection to Juan’s identity and individuality. Even though the students understood that Juan was not really going to borrow money from Aaron, clause 1.1 served as a command in the context of the scenario. While Aaron could have said “Juan is going to borrow $1000 from me”, his use of the verb ‘is’ reflected a state of being or that of existence. Using ‘is’ in that way would have indicated the declarative Mood rather than the imperative Mood. With Aaron’s command “Juan, you’re going to borrow $1000 from me”, the obligation to do so (or to think about doing so) was stronger.

Beginning clause 1.3 with the subject ‘He’ is an atypical way to begin a question in the interrogative Mood. However, this pronoun-reference to Juan again focused the group’s attention on Juan – that is (and to paraphrase), ‘Juan is the person who owes me money and how much money does he owe me?’ Aaron’s choice of ‘He’ in 1.3 did not signal a question directed to Juan alone; rather, all members of the group were invited to answer. However, Leslie was the student who answered with “one thousand, one hundred.”

**Clauses 2.1 – 2.8**

The second section of text is a procedure. In this section Aaron’s purpose may have been to build a coherent text that would be easy for the group to follow. The following summarizes the Themes in this section of text:

| Textual Themes: | Okay so, and, And, So |
| Interpersonal/Topical Themes: | What (unmarked) |
| Topical Themes: | none |
| Process: | now (marked), then (marked), now (marked), Now (marked) |
| Circumstance: | How (marked), what it says in the problem there (unmarked), you’re (unmarked) |

In this section Aaron used the conjunction ‘and’ with discourse markers ‘okay’ and ‘so’ as textual Themes (see marked clauses 2.1, 2.4 and 2.5). Prefacing the experiential meanings of participant, process, circumstance with these markers functioned to connect these meanings to neighboring clauses. This served to ‘signpost’ or guide the students through the scenario. For example in 2.1, Aaron said, “Okay, so now he owes me $1100. ‘So now’ served to characterize the upcoming action of owing money as pending or emerging (Altshuler, 2010). The temporal adverb ‘now’ (used in clauses 2.1, 2.5 and 2.7) located the action of owing money in a time continuum. In other words, Juan owed $1100 at that point in the scenario.
In clause 2.2 ‘how’ was identified as the topical Theme due to its adverbial nature. The word choice of ‘how’ as Theme is important here because it served to signal that Aaron was going to share his way of thinking about what it means to compute 10% interest compounded over two years’ time. Pedagogically, I found Aaron’s views interesting; he viewed the continuous nature of the function \( y = 1000(1.1)^t \) in the context of two discrete moments in time – a loan and a re-loan after the initial loan was paid back in full. Aaron told the group “…I’m going to pretend he (Juan) paid back all of that $1100. And then, I’m going to re-loan him that $1100 to him” (2.3, 2.4). In this way Aaron may have anticipated that the students needed to experience computing interest in that way; and that this manner of thinking could help the students better understand the relationships between using the y-function (with a calculator) and computing compound interest at two discrete points in time with paper-and-pencil.

**Clauses 3.1 – 5.1**

Aaron’s purpose in the last section of text may have been to signal a conclusion to the scenario and to end with a message that would turn the previous two sections of discourse into a coherent whole (5.1). In this section there is only one Theme identified as marked; the following summarizes the Themes in this text:

- **Textual Themes:** So, And, So
- **Interpersonal Themes:** How
- **Interpersonal/Topical Themes:** Isn’t
- **Topical Themes:** 
  - **Process:** none
  - **Circumstance:** now (marked), much total (unmarked)
  - **Participant:** the reason you’re not adding $110 each time (unmarked)

The purpose of the marked Theme in this section again served as a temporal location adverb.

**Interpretations of the Text as a Whole**

In this study Aaron attempted to guide an exchange of meanings as he tried to help a group of four students follow and understand essential meanings related to a task about compounded interest. To do so, he developed a scenario in which he invited one of the students, Juan, to be the principal actor. In this way he communicated to Juan a desire to include him in the discourse. And while Juan still did not interact with other group members in this excerpt of text, he did participate verbally later on with other group tasks. Aaron used textual and topical Themes that (1) cued the students about topics that were to follow and (2) drew their attention to particular statements or points in the scenario. Throughout Aaron’s text his choice of Themes focused on Juan and the other students. This was evidenced by the marked Themes in which Aaron chose participant as the experiential meaning. This suggested that ‘who’ was doing the mathematical work was as important to Aaron as the work processes themselves. I concluded from this that Aaron’s textual messages did mesh with his overarching concern that the students be engaged in thinking and talking about the mathematics.

While the majority of Aaron’s text was stated in the declarative Mood, he did ask questions in order to better grasp the students’ level of understanding. Working to guide an exchange of meanings with the students helped to signal a caring, an interpersonal relationship
with the students to ‘come along with me and my thinking’ in this scenario. Aaron’s questions towards the end of the text served to help him decide whether to go back and review any prior messages. For example, in clause 1.3 Aaron drew on Leslie’s correct answer and continued with, “Okay, so now he owes me $1100.” Again in 2.8, Aaron confirmed Alberto’s response and replied, “So now, you have $110 interest.”

**Concluding Remarks**

The third metafunction, the textual metafunction, constructs ideational and interpersonal meanings as information that can be shared by speaker and listener. “It enables this sharing by providing the resources for guiding the exchange of meaning in text” (Matthiessen, 1995, p. 22). I have introduced and elaborated on this metafunction and used a SFL technique that analyzes how speakers organize their messages. I used this technique to analyze the ways one secondary mathematics student teacher, Aaron, facilitated a group discussion – how he was able to keep the group well-informed about where they were in their understanding of compounded interest and where they were headed as the text unfolded.

As a mathematics educator and researcher, it has been both intriguing and challenging to view classroom discourse from a linguistic perspective. I have found it intriguing because zooming-in at such a fine-grained level has provided the analytical tools needed to reveal meanings about classroom discourse that I might have otherwise missed. However, I have also found using textual tools of analysis challenging because (1) I am not a linguist, and (2) I know that along with the ‘zooming-in’ there would also need to be a ‘zooming-out’ in order to provide enough context to make the analysis mean something to others in mathematics education. I conclude this paper by stepping back from my linguistic analysis and findings in order to highlight a few implications I see for using this analytic method.

From a practical perspective a teacher’s choice of how to begin each clause is instrumental in helping students piece together and connect mathematical meanings. Therefore, what comes first signals an important and separate kind of meaning to students. While experienced mathematics teachers may have the discursive moves to continually re-orient students’ expectations for the direction of an unfolding text, novice teachers may not be as aware of how students construe their messages. Examining Aaron’s text at such a fine-level of analysis has added to my understanding of how Aaron used textual resources to organize his messages. Stepping back to look at the scenario text as a whole, its overall patterns of experiential meanings and message organization, has helped me to see the contribution that choices of Theme make to the cohesive development of a text.

Moschkovich (2010, p. 152) has recommended that research needs to “recognize the complexity of language use in classrooms and the need to explore language in all its complexity” as a meaning-making system. SFL tools of analysis allow for the analysis of any text, thus providing a basis from which to discuss complex relationships between grammatical patterns and any meanings realized as expressions of semantic choices. Understanding more about the complexities of language and the ways that novice teachers chose to orient meanings in their messages can support researchers and educators in their efforts to help novice teachers become aware of their own language choices.
References


Problem-Based Learning Innovation and High School STEM Programs

STEM Education

Paper

This presentation will include an overview of STEM education in the United States and globally. A detailed overview of three California high schools utilizing problem-based learning in the context of STEM education will be shared.

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Abstract: California is a world leader in STEM education in the preparation of students for the global society through innovation, inquiry, collaboration and creative problem solving (California Department of Education, 2016). This paper explores STEM education globally and includes a comprehensive overview of three high school programs. STEM education includes science, technology, engineering and mathematics. Through small learning pathways, three California High Schools have created problem–based learning through STEM curriculum. These schools have developed projects to provide students with the tools to examine real world problems through engineering, health/medical, criminal justice, and international business as focus areas.

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Title of Submission
Engaging Students’ through experiential learning in Web Design Programming Course at Thompson Rivers University

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Abstract

Having students involved with such service-learning web projects activities parallel my teaching philosophy as "you have to be able to practice what you teach". This session will describe the community outreach service-learning web projects where I have collaborated and coordinated with several local, regional and international non-profit organizations and small businesses to connect students in my Web Design Programming class with an actual business client as a requirement of the student final project.

Full Paper

These are communities’ outreach service-learning web projects where I have collaborated and coordinated with several local, regional and international non-profit organizations and small businesses to connect students in my COMP 2680, Web Design I Programming class requiring students to complete a final project for the course with an actual business client.

These outreach activities where students in my COMP 2680 would either create and/or modify a web site has become a win-win for the organizations involved, Thompson Rivers University (TRU), TRU Computing Science (CS) department and more importantly students in my COMP 2680 classes since 2003.

Starting in July 2016 these service-learning web projects have been extended to my distance education students via Thompson Rivers University Open Learning in my COMP 2681 course

How it all started?

I started teaching COMP 2680 in January 2001. Previously, this course was taught by a different faculty member, Dr. Richard Paweska. When Richard taught this course, he made students create an on-line version of their resume that usually consisted of about 3 web pages. I tried this for a couple of years and the feedback received from students was that it was boring and non-challenging.

As I was fairly new to Kamloops, and that the web was just starting to gain popularity an idea came across in 2003 about helping non-profit and small businesses develop web sites for their businesses. I knew that during that time very few businesses had a web site, so I knew this idea would be highly beneficial.

Why do outreach activities?

Having students involve with such service-learning web projects activities parallel my teaching philosophy as "you have to be able to practice what you teach". Further my philosophy is actioned in my curriculum by inclusion of the following three factors:

- Actual problem based hands-on learning
- Effective communication skills
- Foundation for life-long continual learning

My students learn to practice problem-solving, and critical thinking techniques for lifelong learning skills during the process of completing the service-learning web project with clients. Key benefits of service-learning web projects:
• For the students:
  - Interact with a real client, thereby promoting student engagement and learning. This enabled them to build skills like time management, project management, communication and technical skills to name a few.
  - Network with businesses thus building their own portfolio for either co-op jobs, webmasters or career upon graduation.

• For the organizations:
  - Have a current web site(s) with current web technologies implemented at no cost.

• For the department:
  - Enhances the name of the program in the communities where the web sites are designed and created.

• For the university:
  - Name is promoted and enhanced locally, regionally and internationally in the communities where the web sites are designed and created.

These outreach activities have been recognized by both within and outside TRU contributing to enhanced and innovative teaching, learning and service. Evidence shown in my application for promotion to SL by external reviewers.

**Process Involved**

First: I had to craft a web project document, a structure for students to follow. Sample shown during presentation

Second: Reaching out to local and surrounding businesses: Done by creating a small ad that was advertised with no charge through a couple of local radio stations, local TV station as well as through the local newspapers. Note: The responses received was overwhelming and it was no surprise I had a waitlist.

Third: Connecting teams of student with businesses. For the most part I gave students the liberty of forming their own groups usually two on average, though at times I have allowed 3 depending on the nature and complexity of the business. I require students to have their first meeting face to face within a week. The important piece is that businesses need to be aware that the web site would be limited to within the scope of the web project document. Further, a disclaimer is to be signed in that this work is student based not professional. Also businesses are required to provide contact, including images, video, audio and any other relevant information for instance logos, background images etc.

Fourth: Students embark on the creation of the web project. Businesses are free to suggest a design for the web site or alternatively students are free to suggest some design options.

Fifth: Students are often reminded to follow timelines in developing the web site based at the same rate as topics are presented during lectures.

Sixth: Sometime around just past mid-way of the semester the first evaluation of the web project is done. By this time, HTML & CSS must be in place. Placeholders are used for images or other content if not supplied by client.

Seventh: Three weeks later a second evaluation is done, by now JavaScript functional, advance CSS, multimedia features should be implemented.
Eighth: At this point teams wanting to implement extended web features are encouraged to have its implementation done. Note: Criteria for extended features will be explained during presentation. Base features must be in place before any extended features will be considered.

Note: Teams are encouraged throughout the project to work on project documentation, including the creation of the cross reference table for ease of marking. I will explain the purpose of the cross reference page during my presentation.

**Project Evaluation by Businesses:**

Students are to create an evaluation form that has to be signed off by the business. Samples of these will be shown during the presentation.

**Maintaining Such Outreach Activities:**

As the years went by from first initiation in 2003, the local environment was kind of saturated. Those wanting to have a web site created had one done. This is where I expanded to areas outside the Kamloops areas and went to other parts of BC. Communities included Chase, Salmon Arm, Nakusp, Clearwater, Kelowna, Vernon. Later it was expanded to include international organizations coming from mainly from international students who were enrolled in my classes.

Note: The various departments within TRU often has requested my help as well. This includes professors web page, research students wanting to showcase their work to the community.

Recently, some older businesses were wanting to have their sites updated with newer web standards, as well as, newer businesses moving to the Kamloops areas.

I believe that the web is an area where constant upgrading/maintenance is required on an on-going basis.

**What are the dangers in integrating these activities into courses?**

Not all businesses web sites would require all the requirements in the project document be fulfilled. In this way, students are given some flexibility, in that certain elements of the project requirements can be made as a sample but not included in the business web site. A link called cross reference page is where students can include info strictly for fulfilling course requirements.

**How to manage the client expectation in such activities?**

1. Clients need to know that web sites designed and created are by students' who are learning web design programming. Hence not to expect professional web sites, though in some instances client can expect one or the other extreme. (Web sites that are either badly designed or created or very well designed and created.) Lots depend on who are the students' being allocated.

2. Clients need to know that their web sites will be designed and created within the scope of the web project document which is in line with the course requirements. Although there are instances where some students’ go over and beyond the expectations of the course and project requirements.

**Web Project Listing:**

Listing of some web projects built by students of COMP 2680/COMP 2681 (Online version of the course) over the years can be viewed at:

http://faculty.tru.ca/mohda/studentsite
**Web Masters and further development:**

After the project is completed some businesses take on the students for further enhancing the web site beyond the scope of the project requirements and/or to be web masters for web maintenance.
Title of Submission – Submission Id #: 1222

Yoga for Computer Users Workshop

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Abstract and Full Paper

Yoga for Computer Users

Our bodies have been built to move! In our postmodern age we are spending too many hours in sedentary position, especially those hours spent in front of our computers. To counter the effects of this join us for ~ Awakening the Spirit Within ~

A 90-minute workshop for the practice of breath work, mindfulness, and a series of office stretches. An experiential environment that will promote a healthy kinesthetic environment!

Consciously, give yourself permission to be here, in this room, at this time. This is about you, for you. This experience is about you being with you. Lay down all that has come before and deliberately close the door to what lies ahead. Be in the moment, the now and become aware of what lies within you.

To do this, we start with Pranayama (Prana), the breath:

Key advantages of Prana:

1. Boast vitality
2. Gain confidence
3. Relieving stress
4. Rid of negative emotions

Different types of Prana breathing techniques

1. Cleansing or sigh breathe
2. Diaphragmatic or belly breathe
3. 4 part or square breath
4. Alternate nostril breathe (Balance breathing technique)
5. Lion’s Breathe

Mindfulness:

While focusing on your 4-part breath sequence, as thoughts come up recognize them for what they are and allow them to go thru’ you. You might find the River Bank analogy helpful.

While sitting comfortably on the banks of a river you see a raft floating down stream. As it passes by willing place your thoughts upon it knowing you can gather them later, that the universe will keep them safe until you retrieve them.

<table>
<thead>
<tr>
<th>Office Stretches: A Small Sample (To Choose From)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mountain Pose</td>
</tr>
<tr>
<td>Raised Arms Sequence</td>
</tr>
<tr>
<td>Shoulder Stretches</td>
</tr>
<tr>
<td>Forward Bend</td>
</tr>
<tr>
<td>Geisha Squat</td>
</tr>
<tr>
<td>Cow’s Head Pose</td>
</tr>
<tr>
<td>Knee to Chest</td>
</tr>
</tbody>
</table>
Title: Proposal Title: Decoding and Challenging Pre-established Notions of Female Oppression

Topic Area: Women of Color in Higher Education

Presentation Format: Panel Sessions (Panel or poster).

Abstract: This study examines how dominant Western discourse constructs the Middle East women as oppressed while it describes the views different individuals and societies have of them based on their culture, religion, and politics. This study seeks to extend gender theory and research on gender-based inequalities while addressing cultural imperialism and moral authority of Western culture and media. There is a strong correlation between women’s level of higher education and their critical consciousness regarding their oppression.

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Abstract

Objective: This study challenges preconceived western-dominant critiques of female oppression through the comparative and intersectional analysis of women in the Middle East. Analysis of the gendered modernity/tradition binary logic serves as the conceptual backbone of the East and the West while it critiques the influence of media on individual and societal perspectives. Researchers in this study use the personal narratives of women to challenge capitalist views and notions of gendered oppression. This research offers a critical perspective on the Western construction of women in the East as oppressed and discusses the context and importance of storytelling to increase the level of critical consciousness. Researchers explore how “other oppressed” women might self-define their situation of oppression outside of media depictions and capitalistic notions propagated by the West. Most importantly, we highlight how women self-identify to debunk or challenge the “single stories” and essentialist categorizations of their particular cultural group. In this study, a critical pedagogy project emerged to bring about critical media literacy and intercultural perspectives of the “other” women in this study. This qualitative study also offers that women in the Middle East expressed personal might not offer resistance to their oppression; however, higher levels of education were associated with higher levels of critical thinking. In this study, women acknowledged the permeation of patriarchy across all aspects of society. In conclusion, it is important to mention that the “single story” of women’s oppression in the East such as Iran should not be used to generalize a situation of oppression for all women from this country.

Methodology: This research began with an interest in the inequalities of our society and schools. This study uses a multiple case study approach while it focuses on Feminist Theory and Critical Race Theory (CRT) as its framework in order to explain the role of media in the relationships
between the East and the West. This study comprises two phases, surveys and interviews as data-
gathering techniques. Participants include Women from the East. This research is advocacy
oriented with the aim of political and ideological motivation for society and institutions
regarding women oppression in society and schools.

**Expected outcomes:** The outcomes of this research might be helpful for future studies about
Women’s oppressions. This study might reduce West’s negative attitudes regarding Women of
color and might improve diversity and multicultural education in schools. Feminist theory is
integral to this study as it challenges essentialist categorization and a commonality of oppression,
recognizing that different individuals experience oppression differently. The interactive
educational project, which emerges from this study research, employs critical literacy to analyze
media representations of gendered oppression and deconstruct this media to redefine how our
oppression is propagated to others through a transformative critical media collage. The critical
pedagogy utilized in this study warrants a thorough exploration of the collaborative problem-
posing approach undertaken by the researchers.
Title: Co-navigating the U.S. Educational System by ESL students’ Parents

Topic Area: ESL/TESL

Presentation Format: Paper Session

Abstract: America is a complex society, which has been formed by diverse culture and languages. The number of ESL students is growing everyday while their academic success is essential in the greater achievement of the United States. Recognizing the increasing academic achievement gap between ESL students and majority students, and the role of parents in ESL students’ achievements, it is important to understand how these parents navigate ESL students’ education in the United States.

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Abstract

**Objective:** The number of ESL (English as a Second Language) students is growing everyday, and many studies report persistent educational achievement gaps between majority groups and ESL students in the United States. Language barriers, lack of communication, and poor academic performance are the main issues that ESL students and their parents face in society and educational system (Nieto, 2004). Monocultural policymakers and teachers blame ESL students for being unwilling to learn English, and blame their parents for not caring about their children’s success or being involved in their children’s education. In addition, one-size-fits-all curricula in school disregard the knowledge and skills that bilingual and bicultural students bring with them to school. The goal of this intentional ignorance is forcing ESL students to fully adopt American culture and language and assimilate into the American melting pot. ESL students and their families are not welcome in American society and schools. The apparent strengths of knowledge and skills on the part of ESL students are converted to deficits in American society and schools. Consequently, bilingual students and their parents are considered as issue and problem in the U.S. educational system. Very few research studies examine the role of ESL students’ parents in their children’s academic outcomes. Likewise, researchers have not yet adequately analyzed how, why, and to what extent the parents of ESL students influence their children’s education and the strategies that they might use to be involved in ESL students’ academic outcomes. There is a need for a fundamental shift in society and schools’ deficit thinking about ESL students and their parents in order to reduce the achievement gaps across student populations. Identifying the barriers that ESL students and their families face in schools and the strategies that they use to navigate academic challenges is central in this research.
**Methodology:** This research began with an interest in a problem rooted in the inequalities of our society and schools that need information to make changes. This study uses a multiple case study approach while it focuses on Critical Race Theory (CRT) as its framework in order to explain the role of parents in academic performances of ESL students. This study comprises two phases, including pre-interview questionnaires and interviews as data-gathering techniques. Participants include eight parents of ESL students. This research is advocacy oriented with the aim of political and ideological motivation for society and institutions. The outcomes of this research might be helpful for future studies about the challenges that ESL students face in society and schools and the role of parental involvement and funds of knowledge in ESL students’ achievements. This study might reduce teachers’ negative views regarding ESL students and their families and might improve cultural practices that teachers implement in classrooms.

**Expected outcomes:** This study is based on several assumptions. First, it assumes that, with the shifting demographic origins of immigrants from Europe to other countries such as Latin and Asian countries, the one-size-fits-all European norms and standards aligned with American society and schools create social and academic barriers for ESL students and their families (Nieto, 2004). Second, society and Schools’ policy imparts bilingual and ESL students’ skills and background knowledge in order to prepare them for future globalization. Third, despite the deficit thinking paradigm held by dominant groups, teachers, and policymakers, ESL students’ parents use different strategies to be involved in their children’s education development and find a balance between home and dominant cultures to navigate their children’s education in the United States (Moll & González, 2004).
1. **Title of the Submission**: Towards a Framework for Building International Joint Degree Programs

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6. **Abstract**: This presentation aims to develop a sustainable framework for building new international joint programs. Built on the comprehensive internationalization model proposed by American Council on Education, the proposed framework will serve as a practical road map for the specific procedures in establishing new international joint programs. Consists of three major steps, the framework is applicable to developing new international joint programs in diversified areas. A case study in a Sino-US joint program of food science will be demonstrated as the application of the framework. Potential difficulties through each step of the procedures will also be discussed, useful suggestions on how to overcome challenges will be provided as well.
IS THE KEY TO DEVELOPING A CRITICAL THINKER FOUND IN INSTRUCTIONAL APPROACHES?

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Introduction

Critical thinking has emerged as an essential learning outcome at all levels of education (Bailin, Case, Coombs, & Daniels, 1999) and a necessary skill to prepare students to be successful in a competitive, global environment (Partnership for 21st Century Skills, 2008). The 21st century has brought significant changes to the world economy. Trilling and Fadel (2009) described this shift as one moving from an industrial emphasis to one focusing on a global network of knowledge as the main contributor of economic growth. Senechal (2010) concluded these shifts in the global economy call for all of education to emphasize 21st century skills.

To be competitive in today’s global economy, educators in the United States must continue to demand innovation by incorporating skills that include critical thinking, problem solving, communication, collaboration, and creativity into every aspect of our education system (Partnership for 21st Century Skills, 2011), “creating an aligned, 21st century public education system that prepares students, workers, and citizens to triumph in the global skills race is the central economic competitiveness issue for the next decade” (p. 1). “We can no longer claim that the U.S. educational results are unparalleled. Students around the world outperform American students on assessments that measure 21st century skills” (National Education Association, 2012b, p. 1). It is imperative that education recognize and restructure, if necessary, the development of critical thinking skills to remain competitive in the global economy.

Facione (1990) argued that, since the late 1980s, critical thinking has been an important component of the K-12 and post-secondary curricula. More recently, the Association of American College and Universities (2007) identified critical thinking as one of several innovating skills needed to prepare students for post-secondary education. Many colleges and universities have recognized their role in developing critical thinking at the higher education level by specifically highlighting critical thinking as an institutional goal or outcome. Although teaching critical thinking is an essential priority of higher education, it is important to determine the extent to which critical thinking is already being addressed at the post-secondary level. In a recent study, Arum and Roksa (2011) found that undergraduates, during their first two years of college, only slightly improved in their critical thinking and complex reasoning skills. This evidence questions the effectiveness of the current approaches of teaching critical thinking skills in higher education.

Wisconsin’s vision of student success ensures every child is a graduate who has “successfully completed a rigorous, meaningful, 21st century education that will prepare [students] for careers, college and citizenship” (Department of Public Instruction, 2011, p. 11). In 2013, Wisconsin Department of Public Instruction released the Wisconsin Standards for Career and Technical Education ensuring rigorous and relevant content preparing students for college and career readiness. Included in these standards are the Wisconsin Common Career Technical Standards (WCCTS), which include specific competencies related to the development of critical thinking, reinforcing the importance of developing critical thinking skills in PK-12 students (Wisconsin Department of Public Instruction, 2013). This suggests that the development of critical thinking is not limited to higher education, but an integral part of K-12 education as well (National Education Association, 2012a).
As with higher education, PK-12 also has a role in developing critical thinking skills; however, Hayes and Devitt (2008) explained, “critical thinking strategies are not extensively developed or practiced during primary and secondary education” (p. 65), yet, critical thinking is supported as a skill that is important for students to be able to achieve as defined by the Wisconsin Common Career Technical Standards. Higher education is experiencing a similar challenge – critical thinking is often listed as an important outcome, and yet evidence suggests that students are not developing critical thinking skills (Arum & Roska, 2011). Daud and Husin (2004) described higher education’s instructional approach to develop critical thinking skills as often emphasizing, “what to think rather than how to think” (p. 478) and questioned this approach’s effectiveness. Critical thinking is clearly an important learning outcome at all levels of education; however, debates continue about how to best develop critical thinking.

**Literature Review**

There is little debate about the importance of critical thinking, but agreement on the best approach to teach critical thinking continues (Bailin, Case, Coombs, & Daniels, 1999). The American Philosopher, Robert Ennis, has an extensive career studying critical thinking focusing on how to define, instruct, and assess critical thinking in all levels of education. Ennis’ (1989) critical thinking typology of four types of courses offer a classification for instructional interventions related to instructional approaches. The four approaches are general, infusion, immersion, and mixed. Table 1 summarizes the four approaches as defined by Ennis (1989).

Table 1

<table>
<thead>
<tr>
<th>General Approach</th>
<th>Infusion Approach</th>
<th>Immersion Approach</th>
<th>Mixed Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stand-alone critical thinking course</td>
<td>Critical thinking instruction in subject-matter with explicit objectives</td>
<td>Critical thinking instruction in subject-matter but objectives are not made explicit</td>
<td>Combination of the General Approach with either of the Infusion or Immersion Approach</td>
</tr>
</tbody>
</table>

There is substantial research on the development of critical thinking skills in relation to specific pedagogical methods, but the research yielded mixed results. Bailey (1979) found greater gains of critical thinking scores in courses that emphasized critical thinking and problem solving instructional approaches whereas Eason (1986) found greater gains for students using out-of-class assignments designed to increase critical thinking. Tsui (1999) found writing assignments with instructor feedback, independent research projects, group projects, and essay exams seem to enhance critical thinking skills. Halpern (2001) showed instructional approaches that explicitly state critical thinking learning outcomes in discipline specific courses (infusion
approach) or in a separate, stand-alone critical thinking course (general approach) can improve critical thinking. Abrami et al.’s (2008) findings indicated larger instructional effects when critical thinking is clearly a part of course design. “Developing CT [critical thinking] skills separately and then applying them to course content explicitly works best; immersing students in thought-provoking subject matter instruction without explicit use of CT principles was least effective” (p. 1121). Aizikovitsh and Amit (2010) conducted a study that evaluated the infusion approach to the teaching of critical thinking skills through mathematics and used the Cornell Critical Thinking Test instruments and found considerably improvement in critical thinking abilities and dispositions. These studies indicate that critical thinking skills can be developed using various instructional approaches.

In contrast, some studies found no significant effects on the development of critical thinking skills in relation to specific pedagogical methods. For example, Mentkowski and Strait (1983) conducted an extensive longitudinal and cross-sectional study utilizing several measures of critical thinking at Alverno College. Critical thinking is the foundation of the curriculum at Alverno and followed an infused approach where courses specified critical thinking objectives as outcomes and included systematic assessments. They found no significant gains in critical thinking skills of the cohort groups in the cross-sectional comparison and no significant gains in critical thinking skills using two other testing instruments. Cotter and Tally’s (2009), findings supported the conclusion that differences in teaching method do not impact the development of critical thinking skills and concluded “critical thinking assignments did not have a positive effect on either formal operational thought or critical thinking skills” (p. 3). Johnson, Tenenbaum, and Archibald (2010) conducted a study that investigated if online social annotations affect the development of reading comprehension, critical thinking, and meta-cognitive skills in second semester freshman English classes. The results of this study found no significant difference between the online social annotation approach and the control group.

It can be concluded from the literature that studies involving the development of critical thinking skills through instructional approaches have produced inconsistent results. For example, studies conducted by Mentkowski and Strait (1983) and Cotter and Tally (2009) showed that the pedagogical approach to teaching critical thinking has no effect on the development of critical thinking. At the same time, Abrami et al. (2008) concluded the pedagogical approach to teaching critical thinking is most favorable to the development of critical thinking when critical thinking skills are first taught separately then applied to course content. Aizikovitsh and Amit (2010), found improvements in critical thinking when critical thinking instruction is infused in the subject-matter and critical thinking objectives are made explicit. These inconsistent results support the need for additional research in the area of developing critical thinking skills through instructional approaches. The following question guided this paper: What influence do embedded implicit or explicit approaches to the instruction of critical thinking have on the development of critical thinking skills?

Method

The literature suggests a long history of critical thinking development at all levels of education. Higher education does not seem to question the importance of critical thinking, but research findings showed complex and conflicting results. The focus of this investigation was to determine whether alternative instructional approaches to developing critical thinking,
exemplified by different general education requirements at different institutions, influence the development of critical thinking skills among undergraduate students.

This study focused on the development of critical thinking skills in Minnesota undergraduate students; therefore, the target population of this study was all undergraduate students enrolled in Minnesota four-year state universities. All universities share a common definition of critical thinking, but can be categorized into two distinct instructional approaches to developing critical thinking. Minnesota State University, Moorhead; Southwest Minnesota State University; and St. Cloud State University require a specific course in critical thinking. Bemidji State University; Minnesota State University, Mankato; Metropolitan State University; and Winona State University maintain critical thinking develops as a result of the completion of general education requirements, but does not require a specific course in critical thinking. This study compared the scores of the Cornell Critical Thinking Test between undergraduate students that were required to take a critical thinking course and undergraduate students that did not take a specific course in critical thinking.

**Population.** St. Cloud State University was selected because it is the largest university in the Minnesota State Colleges and University (MnSCU) system and represented students who were required to take a specific course in critical thinking. Winona State University was selected because it specifically promotes an “in-depth knowledge base along with the critical thinking and communication skills” (Minnesota State Colleges & Universities, n.d.) needed in careers and advanced studies. Winona State, the oldest university in the MnSCU system, represented students not required to take a specific course in critical thinking. These two campuses were selected to try and best represent the undergraduate population in Minnesota as well as the two differing approaches to critical thinking.

To obtain a sample of the larger population, this study utilized a stratified random sampling. At St. Cloud State University (SCSU) and Winona State University (WSU) by the end of their third year of college most students have completed the requirements to satisfy the critical thinking goal area; therefore, third-year undergraduate students were the population of this study. Working with the institutional research departments, I obtained the email addresses of third-year, non-transfer students as of the 2013 fall term at each respective college (defined by 60-90 credits completed). These lists were used to contact, by email, potential participants in this research study. The total number of possible participants at SCSU was 1,504, and the total number of possible participants at WSU was 1,211.

A total of 105 participants volunteered; 40 participants from WSU, and 65 participants from SCSU. The total number of participants from St. Cloud State University was 32 or 2.12% of the sample population. Of the 32 SCSU participants, 29 participants completed a critical thinking course and three participants did not complete a critical thinking course. The total number of participants from Winona State University was 22 or 1.8% of the sample population. Of the 22 WSU participants, zero participants completed a critical thinking course and 22 participants did not complete a critical thinking course. Overall, of the 54 total participants, 29 participants did complete a critical thinking course; 29 participants from St. Cloud State University and zero participants from Winona State University. Of the 54 total participants, 25 participants did not complete a critical thinking course; three participants from St. Cloud State
University and 22 participants from Winona State University. The total number of participants who completed a critical thinking course and the total number of participants who did not complete a critical thinking course are presented in Table 2.

Table 2
Cross-Tabulation of Participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>N</th>
<th>Percentage of Participation</th>
<th>Number of Participants who did completed a critical thinking course</th>
<th>Number of Participants who did not complete a critical thinking course</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCSU</td>
<td>32</td>
<td>2.12</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>WSU</td>
<td>22</td>
<td>1.82</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>1.98</td>
<td>29</td>
<td>25</td>
</tr>
</tbody>
</table>

Instrument for Data Collection. The Cornell Critical Thinking Test (CCTT), Level Z, was used to measure the development of critical thinking skills. The CCTT is a general critical thinking ability test used to determine the critical thinking abilities of students (Ennis, Millman, & Tomko, 2005). The test evaluates and predicts student skills in critical thinking. Level Z is for advanced and gifted high school students, undergraduates, graduate students, and adults and tests critical thinking in the areas of induction, deduction, observation, credibility, assumptions, and meaning (Ennis et al., 2005).

The test is structured as a multiple choice test where students are presented with a passage in which certain conclusions are underlined. Students then determine if the conclusions follow logically, contradict, or do neither. The CCTT is scored using the total number of right answers. No subset scores in the areas of induction, deduction, observation, credibility, assumptions, and meaning are calculated. Ennis et al. (2005) recommended “for rough diagnostic purposes, it is possible to compute subtest scores. Such subset scores, since they are composed of a small number of items, should not be used to make individual comparisons” (p. 7).

Reliability estimates for Level Z, using the Spearman-Brown approach, have ranged from .49 to .87 (Ennis et al., 2005). Ennis et al. (2005) used another measure of internal consistency defined as the “set of correlations between parts of the test and the total score” (p. 16). Known as the Kuder-Richardson approach, it “provides an index of internal consistency, not of ability to provide the same results repeatedly” (p. 16). The part-score for internal consistency KR-18 estimates for Level Z were .76, .66, .60, .55, .72, .65, and .65 with an overall total score of .76. Ennis et al. (2005) stated the scores were “almost as high as the internal consistency estimate (.76) for the whole test with the same administration of the test” (p. 17).

The validity of the Level Z test is based on criterion-related evidence and the correlation between level Z and other critical thinking and reasoning tests. Of the 11 critical thinking tests, Ennis et al. (2005) reported that “seven correlations between Level Z and other critical thinking
tests ranged around .50” which indicated a “reasonable degree of relationship, given the differences in approach of different test makers” (p. 32). Additional correlations of Level Z and other variables (IQ/Aptitude/Admissions, gender, academic accomplishments, grade level, personality, socio-and economic status) supported the “consistency and generalizability of these relationships, provid[ing] strong support for the construct validity of Level Z” (p. 38).

**Research Design.** This study followed a causal-comparative research design and investigated if alternative instructional approaches to developing critical thinking skills, exemplified by different general education requirements in two different MnSCU institutions, impacted the development of critical thinking skills in undergraduate students. This study compared two institutions, St. Cloud State University and Winona State University, as the independent variable, with critical thinking scores as the dependent variable. This study compared the scores between St. Cloud State University third-year, non-transfer students and Winona State University third-year, non-transfer students.

**Data Collection.** Students completed the Cornell Critical Thinking Test in paper-pencil format. Student identification was verified prior to testing. No other identifying information of the participants was collected or recorded. Each of the SCSU participants completed a course completion form indicating if they have completed one of the following courses: PHIL 194 Critical Reasoning, CMST 306 Rhetoric in Popular Culture, CMST 318 Argumentation and Advocacy, ENGL 306 Rhetoric in Popular Culture, POL 191 Introduction to Political and Legal Reasoning, and POL 192 Critical Reasoning: Issues and Events in American Politics. Each of the WSU participants completed a course completion form indicating if they have completed PHIL 110 Critical Thinking. In each testing session, students were given a testing booklet and scantron form. The testing booklet, course completion sheet, and scantron were collected at the end of the testing session. The scantron number, a yes or no indicator of completion of a critical thinking course, and scores from the scantron were manually entered in Statistical Package for Social Sciences (SPSS) for statistical analysis using a group statistics t-test that compared the scores of the Cornell Critical Thinking Test Level Z between participants who did not complete a critical thinking course with participants who did complete a critical thinking course.

**Results**

This study investigated the effect of two differing pedagogical approaches on the critical thinking skills among undergraduate students. Outcome variables are scores obtained as an overall score on the Cornell Critical Thinking Test Level Z. The data analysis included a group statistics t-test that compared the critical thinking scores of the Cornell Critical Thinking Test Level Z between participants who did not complete a critical thinking course with participants who did complete a critical thinking course. The aggregated data for this study showed that the scores of participants who did not complete a critical thinking course were slightly higher than the scores of participants who did complete a critical thinking course; however, the data analysis indicates that the effect was not statistically significant. Scores for students who completed a critical thinking course (M= 26.28, SD 5.61) were not significantly higher than the scores of students who did not complete a critical thinking course (M=28.10, SD 4.84), t (52) = 1.28, p = .205.
Discussion

Overall, the findings of this study did not reveal a significant difference in student scores resulting from the use of different instructional approaches; however, the current trend within education is to define critical thinking as a measurable student learning outcome, increasing the need to identify the most effective instructional approaches to improve critical thinking skills.

Perhaps it is not enough to study the difference in critical thinking scores based solely on Ennis’ (1989) classification of instructional approaches, but to include the dispositions necessary to use critical thinking skills. Ennis (1987) defines dispositions as seek reasons, try to be well informed, be open-minded, and be sensitive to the feelings, level of knowledge, and degree of sophistication of others (p. 12) among others. By definition, the general, infused, imbedded, and mixed instructional approaches each reference the development of critical thinking skills and dispositions. The Cornell Critical Thinking Test is a “general critical thinking ability test . . . and does not cover attitudes or dispositions of a critical thinker (Ennis et al., 2005, p. 2). This study focused on the approach of developing critical thinking skills rather than seeking to further define the specific skills and dispositions related to each respective approach. Understanding to what extent critical thinking skills are covered in course work and the role of how dispositions are included in the instructional process could impact whether students are able and willing to engage in critical thinking.

The inconsistency of content and delivery of critical thinking course materials may further complicate the effectiveness of a single critical thinking course. Tsui (1999) stated that “courses and programs designed to foster critical thinking might differ widely in content as well as delivery” (p. 186). It is questionable whether an institution can consistently apply critical thinking instruction across the curriculum in a way that improves upon the delivery of the content of critical thinking in the infusion or the immersion approach. Nonetheless, inconsistent instructional techniques between institutions and courses may have influenced the results of this study to find no significant gains in critical thinking.

This study is important because it brings to the forefront that instructional approaches alone may not influence the development of critical thinking skills. A closer look is needed at the impact of dispositions on critical thinking development and the delivery of course content. This study can further the discussion at all levels of educational institutions to be purposeful in including critical thinking learning outcomes in the overall curriculum plan and measuring the development of critical thinking skills and dispositions with consistent institutional assessments.

**Limitations.** The Cornell Critical Thinking Test (CCTT) measures critical thinking ability in the areas of induction, deduction, observation, credibility, assumptions, and meaning. The CCTT is a well-established testing instrument, “designed for evaluation and have been used in curriculum and teaching experiments for appraisal of the critical thinking ability of a group” (Ennis et al., 2005, p. 1). This study may be limited because the CCTT measures critical thinking ability, but does not measure if alternative approaches impact the development of critical thinking skills in undergraduate students.
This study assumed that the similarity of average ACT scores, average high school GPA, class rank, and high school preparation curriculum between SCSU and WSU participants would produce very similar study groups. That, in turn, would focus the interpretation on the primary dependent variable, the form of critical thinking instruction, rather than student’s academic abilities. This may not have been a valid assumption and, therefore, represents the second limitation of this study. This relationship between average ACT scores and average high school GPA could suggest WSU participants may have developed critical thinking skills prior to enrolling in college or were better equipped academically to further develop critical thinking skills during college instruction, whether through the general or immersion approach. In effect, the slightly higher scores of WSU students on the Cornell Critical Thinking Test Level Z may have occurred independent of the different methods for fulfilling the critical thinking goal area within the universities’ general education curricula.

A third limitation of this study is that it does not account for variables that could potentially contribute to the development of critical thinking skills such as: employment, leadership roles, and sports participation, among others. The development of critical thinking is not isolated to the general, infused, immersed or mixed approaches used in college curricula. Critical thinking skills can be developed through personal and professional experiences outside the classroom. This study is limited in that it did not account for other experiences related to developing critical thinking outside the college curriculum.

**Recommendations.** Several recommendations can be based on these findings. Instructors need to evaluate the role dispositions play in the development of critical thinking. Dispositions may influence the learning process in a critical thinking course, the delivery of content, and the overall learning process; factors that could potentially impact the development of critical thinking skills. Objective, standardized testing instruments are available to measure the growth in dispositions to think critically.

Pedagogy approaches to teaching and learning critical thinking may impact the development of critical thinking skills and dispositions. This study focused on the type of instructional approach (general, infusion, immersion, and mixed) and did not consider the impact of instructional techniques used in classroom to teach critical thinking abilities and dispositions. It is necessary to consider the instructional strategies, at the very least, utilized in critical thinking courses or content-specific courses that identify critical thinking outcomes.

**Future Research.** A more in depth study is needed on both the instructional approaches and instructional strategies used in classrooms to teach critical thinking abilities and dispositions. If the development of critical thinking is a gradual and cumulative process, then it is necessary to have multiple courses in which critical thinking skills and dispositions can be developed. It is Ennis’ (1989) mixed approach that combines a stand-alone critical thinking course with courses that infuse or immerse critical thinking skills and disposition into the content of the subject-matter. Further research on how instructional strategies develop dispositions is also needed to determine if students can apply critical thinking abilities to different contexts outside a critical thinking course.
References


1. Title: *The Role of Art in Chinese Society: Past and Present* (#1228)

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The Role of Art in Chinese Society: Past and Present

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Abstract

Art has been an integral part of Chinese culture since time immemorial. For thousands of years, emperors and government officials have commissioned magnificent works of sculpture and architecture, while scholars, poets and painters have developed calligraphy, poetry and paintings of great delicacy and finesse. Historically, art in China has served important functions for those in power: protection, luxury, guardianship, politics, preparation for the afterlife, and maintaining historical records. Ways in which art has played a role for the general population have traditionally included creating harmony and balance, expressing beauty, scholarship, cultural decoration, providing a livelihood and entertainment.

Art in today's China takes on new significance with the modernization begun by the economic reforms of the twentieth century. In many ways, the traditional arts have survived in spirit and, in some cases, preservation (despite significant losses during the Cultural Revolution of the 1960's and 70's). However, a daring new vision of artistic self-expression is now emerging through the work of certain artists, not all of whom are in favor with the Chinese government. This presentation explores visually how the rich artistic traditions that have graced Chinese cultural life for millennia are still very much present in
modern China, a land and people striving to merge their ancient past with the dynamic present and the challenges of the future.
Experiential Learning in the Classroom: An OB/Leadership Simulation Project Phase II

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Abstract
This is part II of a multi-phase project addressing the use of two specific experiential learning exercises and their results in both face-to-face and online leadership education in a college of business. In the first phase, we used Kolb’s (1984) Experiential Learning Theory (ELT) to conduct a role-play exercise based on Comer’s (1993) face-to-face role-play. We conducted the exercise through asynchronous discussion boards in a learning management platform. In part II, we use a synchronous team based simulation to determine the impact of experiential learning on leadership classroom. We use the Harvard Business School “Leadership and Team Simulation: Everest” exercise to examine how instructors can use this tool to help facilitate student learning. Instructions for conducting the simulation are outlined. Results of the data are discussed as well as the future direction of simulation use and learning in the classroom.

Experiential Learning Online and in the Classroom:
An OB/Leadership Simulation Project Phase II

Introduction

This is the second phase of a multi-phase project addressing simulations in face-to-face and online leadership education. In the first phase of our research, we used Kolb’s Experiential Learning Theory (ELT) to evaluate the impact of experiential learning by comparing face-to-face and online learning environments. A role-play exercise based on Comer’s (1993) in-class (face-to-face) role-play was conducted through the online discussion boards of a learning management platform. Issues that arose during the first phase of the project involved online students being required to log in periodically during the week the exercise was conducted to post their comments and discussion. This allowed some of the students to social loaf or provide limited participation potentially negatively impacting the outcomes for the other students on their team. These issues were not present in the face-to-face courses since the exercise was conducted in a single class session rather than during a weeklong virtual session. As an extension of this research, the exercise was changed to mitigate the impact of time for online students. In phase II we again, investigate how experiential learning may improve student learning of leadership and teamwork skills through a simulation exercise in online classes using face-to-face courses as a control. In Phase II, the simulation we used is the Harvard Business School “Leadership and Team Simulation: Everest”. We provide instructions and best practices for conducting the exercise. Results of the data will be discussed as well as the future direction of experiential learning in online classrooms.

Research Objectives
1. Is experiential learning/classroom simulation an effective way to learn leadership and team dynamics in the classroom?

2. Is experiential learning effective in an online classroom?

3. Can a role-play exercise facilitated in an online discussion board effectively foster learning in an online classroom?

**Methodology**

**Sample.** The sample for this study is graduate students enrolled in a graduate Foundations of Teams and Leadership course at a private western university in the United States.

**The Exercise.** The students will participate in the Harvard Business School “Leadership and Team Simulation: Everest” exercise. The exercise is conducted in a computer-based environment where students will work on individual workstations. Participants can discuss actions, make decisions and communicate openly but must use the simulations chat function so that conversations can be monitored and captured. Since this exercise is conducted in a virtual environment and all communications are done by electronic means makes this an excellent choice to compare learning in both the face-to-face and online learning environments.

**Procedures.** All activities will take place in either a computer/collaboration classroom or through the discussion module of a learning management system. Subjects will first be asked to fill out a pretest asking general knowledge about leadership, teamwork and organizational behavior concepts. The instructions specifically ask subjects not to refer to the course textbook or to use the Internet to find the answers.

Next, each subject will register for the simulation at HBS Publishing website (link provided). Subjects are assigned to groups of five individuals at the beginning of the semester so they may develop as a team. Each student is assigned a role within his or her team. These roles
are pre-determined in the simulation. The roles within the simulation include the team leader, a team physician, a photographer, a marathon runner and an environmentalist. In the event there are more members in a specific course a sixth team member can be assigned as an observer. Subjects are told that they will partake in a role-play activity that will demonstrate different leadership and teamwork concepts. Each individual in the group then can view the role they have been assigned and instructions for completing the simulation exercise. The scenario of the simulation involves being part of a team attempting to climb Mount Everest. The simulation covers five simulated days of activities where the teams will ascend to four separate camps and finally to the summit. Groups have one class period (approximately two hours) to conduct the simulation. Subjects are reminded to “keep in character” for the duration of the activity. At the conclusion of the role-play activity, subjects will fill out a posttest and participate in a debriefing of the exercise.

In addition to the post-test, students will complete a reflective analysis on the exercise that addresses the four components of Kolb’s (1984) Experiential Learning Theory and specifics about the dynamics of the team they were assigned to. These reflections are composed of open-ended responses to a number of prompt questions.

**Data Analysis.** Data will be analyzed using both simple t-tests to compare face-to-face and online classes perceptions of learning and team performance. Additional multivariate tests will be conducted on the data using participant demographics as controls. These include student gender, program and mode of instruction. Testing will be based on descriptive statistics. Simple t tests will be used to compare pre- and post-test results from the groups.

**Discussion of Expected Outcomes**
Following experiential learning theory outlined by Kolb (1984), the modality of a learning exercise administered in either an online or face-to-face classroom should not matter. According to Kolb & Kolb (2005), learning is a process that allows individuals to reflect on past knowledge and experience while integrating new knowledge and experience. Instructors need to be prepared to deal with social loafing in groups in both modalities. This can occur in both classroom modalities, however, it is much easier for students to “drop out” of their participation in the group role-play. This has a negative consequence to those who are participating in an simulation. This phase of the research removes the need for participants in the online environment to frequently log into the LMS to participate by conducting a simulation that runs continuously requiring students to remain logged in for the entire duration. The one drawback to this for online students is the need to set a time for the simulation at a day and time that would be available for all students to participate regardless of where they are physically located. In the six times the simulation has been conducted there have been no problems arriving at a day/time that works for all participants.

References


Qik’rtam Litnauwistai (Island’s Teachers)

Work in progress: Research proposal

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Abstract

Gilmore, Smith and Kairaiuak (1996) challenged faculty within the University of Alaska system with the following: “It is imperative that we take individual and institutional responsibility for critically examining the practices of our own institutions and for initiating and maintaining an open dialogue that will ultimately nurture the possibilities for growth and change within our institutions” (p. 274). In my research, I will examine my implementation of the University of Alaska Anchorage (UAA) College of Education (COE) Education program at Kodiak College (KoC) from a macro- to micro-level, looking for the benefits and challenges for Kodiak Island teacher candidates in delivery methods, community integration, and departmental practices. As Coordinator of UAA Education programs on the Emerald Isle, I have a vested interest in this mixed methods, participatory action research (PAR) study designed to increase the number of Alutiiq (Alaska Native) teachers for our local community and village schools.
Research Issues

Current and future rural Alaskan teachers

Who is currently teaching in rural Alaska’s schools?

In the majority of the classrooms, Caucasian teachers, educated in the Lower 48, are instructing children in Alaska’s rural schools. “Statewide, about half the students in Alaska public schools are White, but almost 90% of the Alaska’s teachers are White. Alaska Native and American Indian teachers continue to comprise only 5% of the teacher workforce and other minorities another 5%” (Hill & Hirshberg, 2013, p. 4). Significant differences exist not only in the ethnicities, but also between the worldviews of Alaska’s students and their teachers. These disparate demographics, unfortunately, have remained consistent in last ten years (Hill & Hirshberg, 2005). Kodiak Island Borough School District does not publicly disseminate information on current teacher demographics, but like the rest of the state, the workforce appears to be overwhelmingly Caucasian. Research has shown that the prevalence of Caucasian teachers in rural, predominantly Alaska Native schools continues to perpetuate the dominant Western culture and educational philosophies of assimilation. (Anderson-Spear & Hobson, 2003; Kawagley, 1999; Kawagley, D.Norris-Tull, & R.Norris-Tull, 1998; Lipka, 1998; MacLean, n.d.; Ongtooguk, n.d.)

Preliminary findings in Alaska’s teacher supply, demand, and turnover were recently released by Hill and Hirshberg (2013) of the Center for Alaska Policy Research (CAPR) at the University of Alaska Anchorage. Teacher turnover in rural Alaska schools was found to be twice as high, on average, compared to urban schools (p. 1). The findings also revealed new teachers prepared outside of Alaska, had twice the turnover rate as new teachers prepared inside the state
Teacher turnover can be correlated with low student achievement (Hill & Hirshberg, 2005). Data on teacher turnover were, unfortunately, consistent with reports done over the last ten years (Hill & Hirshberg, 2005).

**Who should be our future teachers for Alaska?**

Rural Alaska Native students have the right to receive a culturally relevant education delivered by teachers who desire to live in rural Alaska, understand the context, and support the Alaska Native language and culture. Culture based education (CBE) has been a key component in significant educational progress being made with Hawai‘i’s K-12 indigenous students. (Kana’iaupuni & Kawai‘ea’a, 2008; Kana’iaupuni, Ledward & Jensen, 2010). For the purposes of their research, Kana’iaupuni, Ledward, and Jensen (2010) explained that “CBE is identifiable by five critical components including language, family and community, content, context, and assessment” (p. 4). I propose that Native Alaska educators are best situated to connect to their students through their Alaska Native language, involve the families, and fully understand and engage in the local community because they are already an existing member of the community.

The University of Alaska (UA) Statewide has identified teacher education as a primary initiative in its *Shaping Alaska’s Future* (2014) Mission statement: *Productive partnerships with Alaska’s schools:*

The professional preparation that leads to retention of Alaska-educated teachers, especially those in rural Alaska, begins with UA’s education programs and continues into UA Statewide’s Alaska teacher placement process and the Alaska Statewide Mentor Program. The legislature has made it clear that UA is neither recruiting enough education students nor graduating enough teachers who are willing to accept positions in rural
Alaska and remain teaching there long enough to positively impact student learning.

(Issue B)

As a teacher educator for the University of Alaska Anchorage’s (UAA) College of Education (COE) at Kodiak College (KoC), a rural Alaska community campus, my charge is clear, not only as University directive, but also from a social justice stance.

**Embracing the challenge**

Gilmore, Smith and Kairaiuak (1996) challenged faculty within the University of Alaska system with the following: “It is imperative that we take individual and institutional responsibility for critically examining the practices of our own institutions and for initiating and maintaining an open dialogue that will ultimately nurture the possibilities for growth and change within our institutions” (p. 274). In my research, I will examine my implementation of the UAA COE Education program from a macro- to micro-level, looking for the benefits and challenges for Kodiak Island teacher candidates in delivery methods, community integration, and departmental practices. As Coordinator of UAA Education programs on the Emerald Isle, I have a vested interest in this mixed methods, participatory action research (PAR) study designed to increase the number of Alutiiq (Alaska Native) teachers for our local community and village schools.

Tedmanson and Banerjee (2010) explain that participatory action research “is an emancipatory method in which individuals affected by an issue or problem engage in activities of practical relevance to their lived experience, generating new understandings of both process and context. It is a method that enables the coproduction of new knowledge and theoretical insights for innovation and social change in applied contexts” (p. 656). The authors go on to explain that
“when communities initiate, design, implement, and participate in directing collaborative actions for local benefit, a transformation of power occurs. This method contributes to decolonizing power relations between the researcher and the researched” (p. 658). PAR also emphasizes the necessity to reflect on the application and results of the actions taken, consider what worked and what did not, and make changes in the process or activity if needed. These “cycles of reflexivity” (p. 658) require that research should not be just an academic exercise, but a catalyst for action and change when indicated. This pattern of reflection is consistent with Indigenous research. Patel explained that she would take a “pause” (p. 358), and Walters (2009) stated that silence can be healthy when used as a time of quiet before “seeking the sacred” (minute 6:08). Archibald (2008) reported that an Elder shared that the ancestors “said that it is important to take time to sit, think about, and feel what we have learned” (p. 53). A deep reflection on one’s practice can result in powerful understanding and lead to effecting change.

Participatory action research resonates with my epistemology, as I acknowledge different Ways of Knowing, information gathering, and knowledge transmission which goes beyond Western academic research methods. Seeking the wisdom of the People in the community, the researched, is necessary for this researcher. Participatory action research also aligns with my ontology, a social justice stance to approaching education and research. Billies, Francisco, Krueger, and Linville (2010) articulate my views when they wrote,

“We have been influenced by the work of activist scholars from the late 1960s and 1970s—an era when activists challenged oppressive and exclusive structures that maintained social inequalities and academics sought ways to make their research relevant to the social issues demanding attention and social change.” p. 277
The macro- to micro-level review of benefits and challenges for Kodiak Island teacher candidates calls for a mixed method review, examining both quantitative institutional data and qualitative information gathered from community agencies/organizations, community members, Elders, and teacher candidates. Four areas of focus will contribute to answering the primary and secondary research questions:

**eLearning for future educators in rural Alaska**

During his keynote address to the Alaska Federation of Natives in 1985, John C. Sackett stated, “To get a degree and a high-paying job means that Native students must leave their village. They must leave home and family. They must leave a way of life to relocate in larger communities, indeed in another world, in order to achieve the success defined by our schools” (p. 32-33). It was a hard sacrifice for young men and women then, as it is now, 29 years later. What
has changed in that time period, however, is access to higher education and the ability to earn a teaching degree without leaving home in rural Alaska. Ray Barnhardt (2010) voiced encouraging words in relation to Alaska Native education by saying, “This picture is not as bleak as it once was, however, as indigenous people themselves . . . have begun to rethink their role and seek to blend old and new practices in ways that are more likely to fit the contemporary conditions of the people being served” (p. xxi).

I propose eLearning teacher preparation programs could fit into contemporary conditions and positively effect change by increasing the number of indigenous teachers serving rural Alaska schools, and specifically Kodiak Island. Teacher candidates in rural Alaska do not have access to a main University campus so a significant portion of any Education degree must be earned via eLearning. Determining students’ success in eLearning based on delivery methods would provide valuable information for University of Alaska Education professors in scheduling courses to meet the needs of Alaska Native students.

Using a University of Alaska Banner system search, I will identify eLearning Education courses successfully completed by self-identified Alaska Native students who have an Alaska rural zip code. Successful completion rates of eLearning courses, based on synchronous or asynchronous delivery, will be compared. For the purpose of this study, course completion will be defined as earning a passing graded (Letter grade D or higher).

**Strength-based research with community collaboration**

The characteristics of Indigenous research begin with an obligation to serve the community and its members above all (Archibald, 2008) and conduct research with respect, relevance, reciprocity, responsibility, (inter)relatedness/relationships (Archibald, 2008; Brayboy
et al., 2012; Johnson, 2013; Leonard, 2013; Smith, 2012; & Wilson, 2008), holism, and synergy (Archibald, 2008). Another primary consideration for conducting Indigenous (or any marginalized group) research is using the “Rs” to build a framework of “self-determination, decolonization, and social justice” (Smith, 2012, p. 4). Using a “strength-based” process has the potential for “essentially redefining relationships between and among researchers and the researched to establish truly collaborative relationships in which power is viewed as a shared resource” (Brayboy et al., 2012).

Collaborative, reciprocal relationships between the KoC Education Department and Kodiak Island’s community agencies/organizations will provide a platform for shared dialogue, understanding, power, and action. The Alutiiq Museum, Native Village of Afognak, Kodiak Area Native Association, and the KoC Alutiiq Studies Program are key agencies/organizations that represent the Alutiiq People on Kodiak Island. Linda Smith (2012) reminds researchers, “In Indigenous frameworks, relationships matter. Respectful, reciprocal, genuine relationships lie at the heart of community life and community development” (p. 125). After consent is in place, I will build collaborative, reciprocal relationships as “community capacities” (Smith, 2012, p. 213) by holding multiple discussions and brainstorming sessions with the respective directors or key personnel from the identified agencies/organizations. Mutually beneficial projects, priorities, and/or processes, designed to bridge the educational institution with the community agencies/organizations will be identified and Memoranda of Understanding will be signed. Articulating expectations and activities will provide structure for the partners and a document to guide reflection on what is working, and what needs to change. It can be a tool to effect change through the participatory action research cycle. Barnhardt and Kawagley (n.d.) remind scholars that establishing partnerships with Alaska Native groups has great potential benefit. They note,
“We can enter into joint ventures that are mutually respectful and recognize the validity of diverse sets of knowledge, as well as the benefits to be gained if they are pooled together in complementary ways” (para. 22).

**Strength-based research with cultural input from community members**

In research and education it is important to get cultural input from Elders and community members. Although writing a dissertation is considered the work of the graduate student alone, input needs to come from appropriate sources. This directive is stated (Alaska Native Knowledge Network [ANKN], 2000) and thoroughly discussed as an imperative for Indigenous research (Alaska Federation of Natives [AFN], 1993; Archibald, 2008; Lewis, 2011; Smith, 2012; Wilson, 2008). The AFN *Guidelines for Research* (1993) declared, “The best scientific and ethical standards are obtained when Alaska Natives are directly involved in research conducted in our communities and in studies where the findings have a direct impact on native populations” (para. 3).

I will seek guidance from Alutiiq community members through conversations held in focus groups. The Kodiak Rural Regional Leadership Forum convenes twice a year so Alaska Native community representatives from town and the six villages on Kodiak can gather to discuss local concerns and seek solutions on community issues. This group would provide excellent feedback on existing benefits and challenges for local teacher candidates to pursue an education degree at UAA/KoC.

After obtaining consent for participation, either through written responses and/or audio/video recording the session, I will briefly explain that my research and goal is to promote Alaska Native teacher candidates in the KoC education program. I will seek advice from the
participants on ways to improve the existing program and departmental practices at KoC. Open ended questions will be asked to glean information. Questions or requests might include the following:

- Please share your opinion on having teachers who are Alaska Native at your local school and in your community.
- Please share your opinion on the challenges of recruiting and retaining teachers who are Alaska Native at your local school.
- How might KoC best serve Alaska Natives who might want to become teachers?
- Have you noticed any obstacles or challenges for your community members who might want to study education at KoC? How do you think KoC could eliminate, or at least reduce the obstacles?
- Do you have anything you want to add about teacher education on Kodiak Island?

Written responses or transcripts of the audio/video recordings will be analyzed for themes and specific feedback that could be applied in the teacher education program. Information gathered from participants could be reported back to the Kodiak Rural Regional Leadership Forum at a subsequent meeting.

**Strength-based research with cultural input from Elders**

The literature also encourages researchers to seek out the “mentorship” of elders to promote practices which are “culturally safe” (Smith, 2013, p. 186). Elders, keepers and dispensers of history and knowledge, share their stories, insights and wisdom in an individualized manner based on the needs of the listener. Researchers are encouraged to seek out guidance from Elders as they approach the community, patiently listen to gain insights, and then
double check their understanding by returning to the Elders for confirmation. The Elders know “values and respectful practices were intertwined with identity, places, and place-named stories” (Archibald, 2008, p. 74) and their expertise and insights play key roles in successful research.

Interviews with two or three Kodiak Island Elders and/or knowledgeable community educators would provide me with crucial insights and understanding on how the KoC Education program could best serve town and village teacher candidates. The consent process and topics of inquiry would be similar to the focus groups, and audio/video recordings would also be requested for transcription. With the Elders, however, I would hold more of a personal conversation and allow the answers to be given over time and repeated visits. Archibald (2008) reminds researchers that the expectation should be that “important cultural knowledge and teachings are learned carefully—over time—through interaction with Elder teachers” (p. 37). The transcripts and findings would be reviewed with the Elders to assure accuracy and gain any needed clarification.

**Strength-based research with input from Kodiak College students**

If recent Alaska Native graduates of the teacher education program are available for an interview, the feedback would be invaluable. Their knowledge and experiences of the institution and program benefits and challenges would be an authentic voice in the research process. They would have keen, realistic views of the system after successfully navigating it to reach graduation. At the time of this writing, there are Alaska Native teacher candidates in the Education program, but they have not yet graduated.

There is a conflict of interest in interviewing any student still in the education program, however, because of my dual role as the teacher candidates’ clinical faculty and seminar
professor. The role of clinical faculty is to evaluate interns’ performance in the classroom which determines the ability to earn an institutional recommendation for teacher certification. It would be inappropriate to ask a teacher candidate to participate in the study as s/he might feel obligated to agree to my request. The timing of the interviews and the potential for alternative interviewers will be explored as appropriate options.

My research issues

History of UAA College of Education at Kodiak College

According to Jacobs (2010), the UAA College of Education was officially established in 2002, and recognized by National Council for Accreditation of Teacher Education in 2005. The Bachelor of Arts in Elementary Education and Early Childhood Education, the two UAA COE programs supported at Kodiak College were introduced by the COE in 2006. The first KoC faculty member for the College of Education, Dr. Delany Smith, was hired in 2007, but served only three semesters before leaving the island. The Education program at KoC struggled with no faculty as attempts to fill the position were met with a failed search. I was hired in fall 2009 as a term associate professor. Over the past six years, the KoC Education program has grown to serve approximately thirty Kodiakans actively engaged in Education programs. The first on-island graduate walked across the stage in 2012, followed by another in 2013. There were four graduates in spring of 2014. Certified teachers from the UAA COE at KoC program now serve in all four of the Kodiak Island Borough School District Elementary Schools, and at Kodiak Middle School (sixth grade).

As a rural setting, accessible only by boat or plane, Kodiak has unique needs for teachers who want to commit to long-term island living. Offering Education programs to teacher
candidates already residing and invested in the community is a good solution to this need. The demographics of participants in UAA COE at KoC program do not yet mirror the students in Kodiak’s K-12 classrooms, however, I am hopeful that this participatory action research study will provide data to help me increase the Alaska Native teacher candidates in the program.

**Research/Cultural Documentation issues anticipated for my research**

Specific advice for sharing power with the Indigenous community and its members was gleaned from the literature. First, researchers must constantly question their personal motives, explore who benefits from the conducted research, examine who has the right to share discovered knowledge, and to what extent (Archibald, 2008; Brayboy et al., & Smith, 2012). A second piece of advice was to listen deeply and respectfully (Archibald, 2008; Brayboy et al., 2012, & McCarty, Wyman, & Nicholas, 2014). I particularly enjoyed the Elder’s advice shared by Archibald (2008) to listen with “three ears: two on the sides of our head and the one that is in our heart” (p. 8).

As a non-native in an Indigenous Studies program, I recognize I may at times find myself in conflict between Western and Indigenous theories. I must be especially cognizant of the biases formed as part of the dominant society. I must work harder to conduct research with respect, relevance, reciprocity, responsibility, and (inter)relatedness as an “outsider” (McCarty et al., 2014). I must be hyper-vigilant to promote self-determination, decolonization, and social justice with the individuals involved in my research. As Archibald pointed out, non-native researchers should not be excluded, but should be invited into the “conversation” and follow the lead set by Indigenous researchers (p. 19).
I also realize I have the obligation and opportunity to frame my research questions and methods differently than what might be expected in Western academia. I will avoid using a deficit model and strive to be mindful of the power, policies and practices used in my research in my local community. The PAR model, with a stance in social justice provides the platform to respond to the request by Indigenous scholars to discontinue coloniality currently found in educational research (Archibald, 2008; Battiste, 2008; Ormond, Cram, & Carter, 2006; Patel, 2014; Smith, 2013; Wilson, 2008). Patel (2014) encourages researchers to shift their focus away from “those struggling” and “the area of need” and instead focus on the bigger issue, the “system that comprehensively functions to secure and refresh higher status for those already holding power and marginalize non-dominant populations” (p. 365). My plan for this study will seek to focus on what strategies I can utilize in my practice as a pre-service teacher educator to recruit, best serve, and retain Alaska Native teacher candidates. The examination and focus of improvement is on the educational system and program delivery model to meet the needs of all teacher candidates, especially our future Alutiiq educators. Listening to voices of the teacher candidates and community will be courageous, essential, ethical, and necessary for successful social justice research (Ormond, Cram, & Carter, 2006).

As I seek answers to questions about teacher education on Kodiak Island, I also need to remember, “Researchers are knowledge brokers, people who have the power to construct legitimating arguments for or against ideas, theories or practices. They are collectors of information and producers of meaning which can be used for, or against Indigenous interests” (University of Victoria as cited by Ormond, Cram, & Carter, 2006, p. 177). I have a responsibility to my community to carefully consider the results of my research, since I am in a position to have the theories I develop inform my practice as the Education faculty and
Coordinator of UAA Education programs on Kodiak Island. I take this ethical responsibility seriously and will keep the research focused on practices that benefit the Alaska Native community with whom I work. I will also have the responsibility to reciprocate by keeping my community partners informed and taking action on pertinent recommendations.

**Respect for cultural knowledge and culturally considerate information analysis**

I will not only abide by UA’s Responsible Conduct of Research expectations throughout my research and reporting process, but additionally, in accordance with participatory action research. “PAR’s democratic ethics require that people have genuine say in the decisions taken within local action and work toward great participation by all strata of the population” (Billies et al., 2010, p. 280). This not only means checking in with the partners at the conclusion of the study, but throughout the study. Wilson (2008) reminded researchers, “One method through which authenticity or credibility may be ensured is through continuous feedback with all the research participants. This allows each person in the research relationship to not only check the accuracy of the analysis but also to elaborate upon ideas and to learn from other participants” (p. 121). The nature of my work in the KoC Education Department and involvement in the community will allow for continued reciprocal exchanges of information throughout the study, at the formal conclusion of the study, and beyond the writing of the dissertation. The true indication of the success of my research will be to see more Alutiiq educators on island for our local and village schools.

**Conclusion**

As I work and research in the Indigenous community on Kodiak Island, I will strive to humbly approach my task of building a framework of “self-determination, decolonization, and
social justice” (Smith, 2012, p. 4) in the KoC Education program based in the information
gathered in this study. I will work collaboratively with the community, Elders, and teacher
candidates to conduct participatory action research with respect, relevance, reciprocity,
responsibility, and to build relationships that persist beyond the study.
References

http://ankn.uaf.edu/IKS/afnguide.html


Belmont University’s Department of Education provides opportunities for teacher education candidates and faculty to advocate for children, families, and the community through engaged service in intentional field experiences and clinical placements. This paper discusses how and why Belmont’s Educator Preparation program utilizes embedded, cohesive coursework in local schools and community organizations accompanied by texts, speakers, and resources that provide multiple perspectives on development, education, and community to develop faculty and pre-service teachers intellectually and socially.

ABSTRACT:
Advocating for Intellectual and Social Development Through Engaged Service Learning Opportunities in Teacher Education

Belmont University’s Department of Education continually strives to be a teacher education program dedicated to preparing educators by utilizing real world experiences through the spirit of service. As a School within a University that has a heart for service learning, it is a natural extension of Belmont’s mission and vision for the Department of Education to provide opportunities to learn, serve, and advocate for children, families, and schools in our diverse community. We have found through our own experience, as well as research, that we learn best through interactions with others in a real world context which allows us to develop not only intellectually but also socially (Bates & Lin, 2015; Dewey, 1916; Vogelgesang, Drummond, & Gilmartin, 2003; Vygotsky, 1978; McEwin, et. al, 1995).

In fall 2015, our department began the strategic planning process to develop a more clearly articulated Mission Statement as well as a shared Vision and set of Beliefs that more accurately reflect our mission to be an education program that prepares “educators and leaders of organizations who champion equity, opportunity, and dignity for all”. This Vision to “prepare professionals of diverse backgrounds to develop the knowledge, skills, and character necessary to become exemplary educators and leaders who advocate for children, families and communities” plays a pivotal role in the field placements, assignments, texts, and materials we utilize to create well-rounded and self aware educators. We, as a department, feel the best way to achieve our Mission and Vision is through embedded, cohesive coursework in local schools and community organizations accompanied by texts, speakers, and resources that provide multiple perspectives on development, education, and community.
These clinical experiences are designed to provide opportunities for faculty, students, and staff to inform, shape, and reflect on professional practices while investing in the community in which they live and work. Research has shown that the connections built through a common goal are powerful learning opportunities for the university, P-12 schools, and the community (Brumbach & Ridenour, 2003; Vernon-Dotson & Floyd, 2012; Larson & Kyle, 2014). These clinical practices are the foundation for developing leaders who are in touch with the needs of their community as well as ones who are knowledgeable about methods to actively address these within the systems and structures of society (Wiseman, 2009; Rigelman & Ruben, 2012; Soria, 2015). Relationships, research, sharing of resources and expertise, and collaboration are key components to developing these partnerships (Grobe, 1990).

Because faculty members in the Department of Education have a firm belief in the importance of community engagement through service learning, teacher education candidates have the privilege of being connected and involved in the educational lives of the students and families in our surrounding community through courses that are embedded within local schools and after-school programs. These opportunities range from university courses being taught within local schools where candidates learn about schools and learners through tutoring, observations, assisting in classrooms, and guest speakers from the school or community who have a vested interest in supporting learner and community development to weekly tutoring in local after-school and adult learner programs that serve diverse populations including second language learners, students living in poverty, and refugees. For example, our candidates visit a local Islamic Center to learn more about traditions, practices, and ways they can best support Islamic students in the classroom. University faculty and students participate in school and/or organizational trainings and investigate the sites where we work and learn to gain an understanding of the specific strengths, needs, and populations. By doing so, we are all more informed and; therefore, able to be in a position to better initiate change and growth.

We have found that when all parties are invested in not only understanding the impact of generational poverty on children and families, but also in collaborating with others to build engagement and community in order to develop support systems, real change can occur. Teacher education candidates learn how to advocate for causes they hold dear through the creation of a multi-media advocacy toolkit in their initial education course. They are given the opportunity to meet with teachers, administrators, and community members to hear a multitude of voices and share insights into how best to prepare teachers and students for the future. Teacher education candidates also design lessons, develop materials, and provide services these students and schools would normally not have access to as part of the required coursework for their licensure. By integrating the work in the field with the work in the university classroom, there is a seamless transition from theory to practice. Faculty and students at all levels encounter obstacles and must engage in problem solving and creative efforts to meet the goals set for the partnership. Sometimes this involves reaching out to other organizations for insight and resources. Our village grows with each new semester and is strengthened by the minds, voices, and hearts of all involved.
Belmont University’s Department of Education is truly connected to the schools and communities that surround us. Effective communication, active listening, and collaboration have allowed us to grow in our efforts to connect the teacher education candidates in our program with our world: local, regional, national, and international levels. This paper/presentation will highlight how the Department of Education at Belmont University, as a unit, builds faculty and student understanding through intentional field experiences and clinical placements using the lens of engaged service.
Belmont University and Service Learning

Belmont University in Nashville, Tennessee, is a “student-centered Christian community providing an academically challenging education that empowers men and women of diverse backgrounds to engage and transform the world with disciplined intelligence, compassion, courage and faith” (Belmont University’s Mission Statement). Our vision is to be a leader among teaching universities, bringing together the best of liberal arts and professional education in a Christian community of learning and service. Belmont ranked No. 6 in the Regional Universities South category and was named as a “Most Innovative” university by U.S. News & World Report. The university serves 7,700 students who come from every state and more than 25 countries. Belmont’s Vision 2020 reflects our continued commitment to be “Nashville’s University” by aligning our vision and resources with the ever-changing needs of the community. Our campus is at the intersection of several culturally diverse neighborhoods and Nashville is home to thousands of refugees, immigrants, and disadvantaged families and children.

Service Learning begins the moment new freshmen arrive on campus. In Fall 2016, 2,000 new and transfer students participated in the SERVE Project volunteering in over 30 agencies and organizations their first week at Belmont. Over the next four years students continue to participate in service learning activities, such as required Convocation hours serving their community, service learning projects embedded in traditional classrooms, and multiple opportunities offered through the Office of Spiritual Development to provide Christian missions and service opportunities. Alumni also return to campus to share their experiences. For example, panels of alumni come speak to current students on various occasions throughout their program. During Justice & Missions week, an alum shared about his journey to pursuing justice through teaching in the inner city of Memphis, Tennessee.

The Department of Education puts a strong emphasis on our role as the “University with Feet in the Street.” We work alongside districts, schools, and communities to advocate for students, families, and the profession all the while developing teacher education candidates with a strong desire to transform the world in which they live and work. At the heart of our motto, Building Together for Excellence in Education is “building” an academically challenging teacher education program through collaboration and cooperative planning to engage candidates in transformative learning. Excellence is represented by the InTASC Standards (Council of Chief State School Officers, 2011) that embrace a collaborative and professional culture to advocate for children and involve the community in meeting common goals.

Our innovative pedagogy stresses the importance of individuals and the importance of community. The experiences we provide to our candidates require them to self-examine their habits of mind and to realize that teaching goes beyond subject matter. The intersection of a liberal arts education and professional education begins with the development of the person. Amidst a “selfie” culture, we invite our candidates into a learning environment where the camera is turned away from self and toward others. It is through this view that they begin to challenge their assumptions about diversity. As
individual candidates enter this process of transformation, they become mindful of the moral and ethical responsibilities to these communities of learning.

Undergraduate teacher candidates are grounded in a strong liberal arts background, an in-depth study in a major, and a major in education. Graduate and undergraduate programs emphasize knowledge and discernment, intellectual discourse and ethical and moral reflection. Our conceptual framework is grounded in the notion that teaching is an integral human activity that both imparts and facilitates the gaining of knowledge. According to the Association of American Colleges and Universities (AAC&U), a liberal education is an “approach to learning that empowers individuals and prepares them to deal with complexity, diversity, and change” (AAC&U, 2007).

These qualities are central to 21st Century teaching. A common thread woven throughout these qualities is effective decision making. Whether a teacher is in the role of leader, facilitator, social worker, manager, or advocate they make important decisions approximately every two minutes (Borko, 2004; Ormrod, 2011) Oftentimes outcomes standards simply rely on the “what” and less on the “why.” Teacher candidates must go beyond narrowly defined teaching strategies and engage in a more holistic educational experience to equip them to become reflective practitioners (Schon, 1983). If education and learning are indeed social and interactive processes as Dewey (1938) purports, then it cannot be possible to provide a framework that prescribes specific formulas to use for every situation. These valuable interactions are made possible through engaged service learning opportunities designed and carried out through collaboration between the community and the university.

The Department of Education and the Office of Service Learning collaborate to maximize our impact on the community. The Office of Service Learning supports instructors in their work with the community by providing a plethora of resources ranging from research on the effectiveness of service learning to practical resources such as toolkits, surveys, memoranda of understanding templates, sample syllabi, forms, and assistance from the director. One such resource is the “Faculty Toolkit for Service Learning in Higher Education” (Seifer & Connors, Eds., 2007). These units of study break down the components of service learning in reference to coursework, community connections, cultural competence, and scholarship to name a few. As this resource is widely available across campus, we use its definitions to frame our understanding of service learning.

Service-Learning is defined as “a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities” (Seifer & Connors, Eds., 2007, p. 4). Community, for the purposes of this paper, is defined as “people and organizations coming together either through a common bond or stake in a given interest or set of interests. The term community can be self-defined or can be geographic. The term community also connotes a climate to be created” (p.4). Partnership is essential when working to develop service-learning opportunities. The Learn and Serve America’s National Service Learning Clearinghouse (Seifer & Connors) defines partnership as a
"close mutual cooperation between parties having shared interests, responsibilities, privileges, and power" (Barnes, 2016, p.4).

Service learning allows university faculty and students the opportunity to work and learn in a “community context” (Seifer & Connors, Eds., 2007, p. 5) as an extension of their roles as educators and students into that of actively engaged citizens (Seifer & Connors; Bringle & Hatcher, 1995). These types of opportunities have the potential to provide students with “transformative learning experiences” (Seifer & Connors, p. 5) where they are able to grow, connect, and reflect through structured intentional interactions as well as unintended ones. Teacher education students applying knowledge from the university as well as field experiences in a real word setting can develop deeper understanding through critical reflections of their actions, planning, knowledge, and mindset (Darling-Hammond, 2000). Not only does engaged service learning in embedded learning environments provide opportunities to develop intellectually through content and pedagogical experiences, it also connects them socially on a personal level with the community through relationships modeled by faculty and community partners (Jagla, et al, 2013). These relationships highlight the importance of shared vision, voice, and responsibility in transforming education and, more specifically, the lives of the students and families with which we work. These models of intellectual and social development, in turn, can provide a foundation for the continuation of this work once the pre-service teachers enter their field as practitioners (Caspe, et al, 2011).

Service Learning’s focus on creating active citizens aligns to Belmont’s Department of Education’s focus on advocacy. Our department’s commitment to advocating for children, families, communities, and the profession naturally connects with the tenets of service learning. Advocacy, as defined by The National PTA and Harvard Family Research Project collaboration, is “supporting and speaking up for children-in schools, communities, and before government bodies and other organizations that make decisions affecting children” (PTA, 2014, p.1). Through assignments spread throughout the licensure program, teacher education candidates have the opportunity to learn about advocacy, effective ways to advocate for issues that impact the lives of children, and develop and create advocacy projects such as multi-media press kits on topics of interest and urgency and information briefs to support early childhood education. These projects give students real world experience and awareness that their voices matter for the profession and those we serve. These pre-service teachers are exposed to advocacy through the lenses of the profession, specific content areas, as well as for different groups served by schools, i.e., early childhood and English learners. Jagla, Erickson and Tinkler (2013) in the book Transforming Teacher Education through Service Learning avert that a “significant portion of advocacy is education” (p. xi) and as these students move into classrooms and schools they have the knowledge and skills to share and continue these effective practices and partnerships.

As our nation’s classrooms steadily grow more diverse, dispositions of teachers must also be considered as they meet these opportunities and challenges. Educators who are prepared to address these issues can bring about positive change in regards to attitudes and beliefs about children and families from diverse backgrounds and all they have to
offer. For example, addressing the persistence of achievement gaps for minority and low-income students is within our power as educators. Through collaboration with communities and families, teachers as well as pre-service teachers can make a positive impact on these gaps and provide opportunities for all learners to achieve (Caspe, et al, 2011). Meaningful collaborations and experiences in educator preparation programs can provide the intellectual and social skills and confidence needed to engage and transform the world through a vision of equity.

**Embedded Service Learning Experiences and School Partnerships**

Belmont University is situated in the heart of Nashville, Tennessee, where our campus is at the intersection of several culturally diverse neighborhoods and the city is home to thousands of refugees, immigrants, and disadvantaged families and children. Our school district services about 85,000 students with about 30% who speak a first language other than English. Over 70% of our students qualify for free and reduced lunch (The Tennessean, November 14, 2015).

In order to tap into the unique opportunities of working with diverse students and families, educators must be knowledgeable about the communities in which they serve and learn through extensive field experiences that represent the diversity of our nation (Barnes, 2016; Caspe, et al, 2011; Darling-Hammond, 2000). Culturally responsive teaching is a thread throughout the program, starting with the initial education course to the culmination of the clinical experience. Culturally responsive teaching, as described by Gay (2010, p. 31), is the use of “cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them.” Ladson-Billings (1994, p. 17-18) similarly describes it as “a pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes.” The idea of incorporating the lives and frames of references of the learners with whom we work is carried out through tutoring plans, interest and attitude inventories and surveys to design individualized instruction, interviews with children and families, as well as insights from community leaders from a variety of groups and organizations representing the diverse landscape of Nashville.

Social Emotional Learning (SEL) is another critical thread throughout the program. The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines SEL as the “process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (casel.org). An extensive body of rigorous research demonstrates that SEL programs have a significant impact on academic achievement (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). SEL is an essential element of the learning process. While it is imperative that there is a focus on standards, objectives, and assessments to move our learners forward in an ever increasingly complex educational landscape, the importance of relationships, social and...
emotional competence and skills to thrive are equally essential (Darling-Hammond, 2006).

As teacher education candidates move into a more central role in the education of early childhood, elementary, middle and secondary students over the course of their program, their work with P-12 and university faculty takes on more concrete connections among content, pedagogy, and personal relationships. These learning experiences are designed to take place in intentionally selected field experiences and clinical practice sites. Faculty across the department reach out and make connections to various schools and/or programs as well as respond to specific requests from the community. It is essential that the community’s needs and voice be one of the driving forces of these partnerships so the instruction is targeted and meets the needs of the school community (Grobe, 1990; Brumback & Ridenour, 2003). Working alongside faculty who encounter instructional challenges and seek to be responsive to them provides teacher education students the opportunity to develop dispositions and strategies for more effectively meeting these needs.

While these types of courses and experiential learning opportunities are valuable, it requires extensive time, patience, and understanding that goes well beyond the typical course design process. Belmont faculty are well aware of the time commitments involved and weigh it against the overwhelming benefits for our pre-service teachers, the P-12 students and faculty, the community as a whole, and their own professional development (Jagla, et al, 2013). The university’s commitment to being “Nashville’s University” and the department’s commitment to being fully involved and invested in the community in which we live, work, learn, and serve is integral to the success of these engaged service learning embedded courses. Research has shown that programs that provide these types of interconnected experiences across field placements and courses develop educators who are prepared for the unexpected challenges and opportunities of the classroom and are able to apply theory to practice more effectively (Darling-Hammond, 2006).

In order to give our pre-service teachers a wide range of experiences, faculty provide service learning opportunities in a variety of environments ranging from urban elementary, middle, and high schools, after-school programs, outreach programs for refugees and adult learners to working with rural populations as well as families of children with disabilities. These experiences range in design and application of content and pedagogy, but all have the potential to expand their understanding of people from many different walks of life. We, at Belmont, count ourselves lucky that we are positioned in such an area as to have access to a variety of learning environments and potential partners. Collaborations with these entities allow students to develop intellectually and socially by diving deeper into their understanding of cultural contexts and their implications for expectations, planning, instruction, learning, assessment, and communication.

Belmont teacher education students explore the context of each school, organization, and community through research, site visits, meetings with school administrators, faculty, and community members before beginning their work with students, teachers, and families.
By learning about these sites’ missions and visions for learners, our teacher education candidates can more clearly see how it aligns with the university’s and department’s vision and mission (Slater & Ravid, 2010). Once the background information is gathered and analyzed, it becomes the responsibility of the faculty and pre-service teachers to personalize the data and create a more holistic understanding of what it means to work and learn in that particular context. Through this process, Belmont students and faculty grow in their social awareness as well as personal reflection of their own experiences and bias. These interactions, reflections, and critical thinking opportunities develop their understanding of the importance of social-emotional learning for educators and students.

These embedded experiences in diverse settings with educators and community members who see and value the potential in ALL learners can create future educators who embrace the whole learner. Field experiences in these diverse environments alone are not enough to instigate change. Intentional conversations, training, and in depth reflections are pivotal in bridging intellectual and social development. Utilizing resources from Southern Poverty Law’s Teaching Tolerance resource as well as protocols for reflection, identification of abuse and maltreatment trainings, and focused observations with critical thinking conversations make the abstract more concrete for our pre-service teachers.

School partnerships developed organically. It became our mission to be advocates for local families and children and to provide an academically challenging teacher education program. We approached schools with the idea of providing an innovative pedagogy for teacher candidates while also meeting the needs of the schools. While each university-school partnership shares the same mission, vision, goals, and commitment to transformational learning, they each share a unique learning environment. Initially Foundations of Education and Human Development courses were taught at Rose Park Math and Science Magnet Middle School located a few blocks north of campus, but this has since changed to only the Foundations of Education course meeting at this site. As a math/science magnet school, the school administrators selected math as the primary focus on learning outcomes for their students as a result of our partnership. The school provides the university with its own classroom in the school where education courses are taught. Candidates are then paired with students for math and literacy tutoring using the Common Core and Tennessee State Curriculum Standards. In addition to these tutoring sessions, candidates research the school and community and get detailed data on student demographics and performance as well as assessments used for placement from the numeracy and literacy coaches at the middle school. The school was recently named as the SCORE Outstanding Middle School for academic growth it achieved with its students. The principal of the school credits the work of his faculty along with the contributions made by Belmont candidates. Our candidates were able to see students move from below basic to proficient, proficient to advanced, and some as far as from below basic to advanced. In addition to gains in math and literacy scores, students also received the support of role models and mentors.

Teacher education candidates enrolled in the evening section of Foundations of Education also have the opportunity to work in an outreach program at a local church as an extended service learning field experience. The candidates tutor refugees on a weekly
basis and assist them in their transition to the United States and, more specifically, Nashville. Pre-service teachers engaged in this service learning field experience gain social and intellectual insight through the weekly interactions. Simultaneously they are developing and implementing English content lessons while learning about a variety of cultures and the everyday challenges these newcomers face. The pairing of course content and the human experience create a broader understanding of what it means to be a learner and an educator.

Teacher candidates receive an education into the lived realities of these students and its impact on social, emotional, physical, and cognitive development. Child Development was previously taught at Glendale Spanish Immersion Elementary School. Beginning in the fall of 2016, this course is now taught at Waverly-Belmont Elementary School. The school is located less than one mile from campus and is one of only two technology demonstration schools within the district. As a Title I school, the student population for the school is reflective of the diverse communities it serves and includes students from a wide range of socioeconomic statuses as well as race and ethnicities. The school provides Belmont with a demonstration classroom with a wide array of technology where the Child Development course is taught. The opportunity for teacher education candidates to observe, learn about, and use these innovative pieces of technology will set them apart and prepare them for their future classrooms. Candidates develop a child study over the course of semester through focused observations, interviews, and one-on-one tutoring on a weekly basis. These interactions and observations provide insight into child development in real time and within the context of a structured learning environment while also taking into account the child’s life outside of the school day. Candidates are able to see how a child’s development in one area can impact other areas of development. Along with the child study, teacher education candidates develop a compendium of resources gathered from interactions with mentors in the building; research based on multiple perspectives of child development, and develop parent/family information modules about child development at different stages from birth to age 10.

Candidates enrolled in Literacy Methods courses complete a year-long practicum experience in a Metro Nashville Reading Clinic. These clinics are housed in elementary and middle schools throughout the district and serve learners who are typically two grade levels below their current grade placement and oftentimes English learners. This partnership grew out of common concern for struggling P-12 students who were falling farther behind. A consortium of local universities and schools worked together to provide tutors and site coordinators for the clinics through their respective service learning programs. Candidates complete a training session with a Metro Reading Clinic Coordinator on how to structure the lesson, select developmentally appropriate materials, and assess progress over the course of the year. Teacher education candidates tutor weekly and reflect on student growth, interest and attitude, as well as instructional strategies that are effective in supporting the student’s literacy development. Data collected across the district shows a positive impact on student literacy scores based on the work of the reading clinics. Candidates are able to observe and participate in a child’s literacy development over the course of a year and make recommendations for future instruction based on this knowledge. The insight gained from this year long consistent
and cohesive service learning experience better prepares these future educators for working with a wide range of students in the classroom.

In an effort to provide an even wider variety of field experiences for our teacher education candidates, a collection of small grants were written to support STEM days with a rural elementary and high school. The schools are located approximately 50 miles from Belmont in an adjacent county. This partnership started with a candidate enrolled in the Reading Specialist graduate program at Belmont. After completion of her graduate coursework, this first grade teacher was a guest speaker in the literacy methods courses and addressed challenges and opportunities for working with rural populations as well as how to integrate literacy across the curriculum through fiction, nonfiction, writing, guest speakers, and field trips. The teacher education students welcomed this unique perspective and voiced an interest in visiting this classroom and school. Initially candidates who were able to commute visited the classroom as one of their required practicum observations. After multiple collaborations with the teacher in local, state, national, and international conferences, we worked to write multiple grants for developing a collaborative service learning experience for teacher education candidates seeking early childhood, elementary, and middle grades licensure. We received grants from Tennessee, Sumner, and Davidson County Farm Bureau, Ag in the Classroom, and Tractor Supply Company to provide transportation, materials, and texts for the STEM Literacy Days. These experiential learning opportunities allow candidates to work with students in a Title I rural elementary school as well as teachers and students involved in FFA and agricultural education courses at the high school. The candidates receive training and free materials from the State Coordinator for Tennessee Ag in the Classroom to prepare them to incorporate agricultural literacy in their future classrooms and for the purpose of this project. The candidates research the contextual factors of the schools and communities and develop lesson plans based on Common Core and Tennessee State Curriculum standards in literacy, math, science, and social studies for a STEM Literacy Day in the fall and spring. These hands-on lessons involve fiction and nonfiction literature accompanied by writing opportunities, hands-on science activities such as planting tomatoes, creating “soil cups” to simulate the layers of soil, making “gardens in a glove” to observe the germination of seeds, and using microscopes to identify features of various seeds. The high school students also plan and teach mini-modules on farm animals, green houses, and farm implements and tractors over time. These lessons are supplemented by community resources such as a tractor safety session from John Deere and a Combine Simulator from Tennessee Farm Bureau. These opportunities to work with a rural community expose the candidates to a new context for teaching and learning as well as serve as a model for grant writing and community collaboration. The pre-service teachers were interviewed for a Farm Bureau radio show and shared how they learned about agriculture as well as how to integrate content areas in a more seamless manner through this engaged service learning project. The success of this project was such that the teacher and course instructor were selected to present at the National Ag in the Classroom Conference to share about collaboration and its impact on students at the P-12 and university levels.
Our first partnership began in 2010 with a course in Human Development taught at a private middle school for African-American boys. The school was closed due to financial issues so the class moved to a charter middle school where many of these students transferred. Two years later this school was closed by the district due to low test scores. We continued to follow the children and moved to Pearl-Cohn Entertainment Magnet High School. We were able to follow these students because of relationships built with teachers and administrators who saw our commitment to work with these students despite the barriers often imposed by outside financial, political, and administrative forces.

Pearl-Cohn Entertainment Magnet High School is located approximately six miles from campus and is the only entertainment magnet school in the country. African-American students comprise 90% of the student population. The school offers pathways in Marketing Communications, Personal Care Services/Stylist and Image Consulting, and the Recording Industry. In partnership with Warner Music Group, Pearl-Cohn is the first school in the nation to house a student-run recording label affiliated with a major recording label. A student was awarded a National Academy of Television Arts and Sciences Student Production Award in October 2016 for his non-fiction short form documentary “Citizen Laith” about his life as a refugee.

Since 2013 Educational Psychology continues to be taught at this school, but the field experiences have varied across the years. Teacher candidates typically spend 30 minutes working one to one with high school students and then spend an hour assisting teachers in the classroom. The professor shadows the candidates as they work with students and conducts planning meetings with administrators while candidates are in the classrooms. Following the time with students and observations in classrooms, candidates meet as a class to connect educational psychology theory to practice. The first year the literacy coach provided content and materials for weekly tutoring sessions with a focus on literacy. The test scores of students tutored that first year in English I and II revealed an 8.1% increase over the previous year’s performance in English I and a 5.7% increase over previous year’s performance in English II. The school exceeded their goal in English I by 2.7% and in English II by 0.6%. While the tutoring sessions may have had some influence on these test scores, the overwhelmingly noticeable change could be found in the transformations we were observing as positive relationships were formed between teacher candidates and high school students. School personnel also serve as guest speakers including the executive principal, literacy coach, SEL counselor, academic counselor, curriculum specialist, and a variety of nonprofit community service personnel.

The following two years we adjusted the clinical experience to focus more on Social Emotional Learning (SEL), particularly on setting and achieving positive goals,
establishing and maintaining positive relationships, and making responsible decisions. Teacher candidates are given various prompts and activities for each session with their student. For example, students take the Myers-Briggs Type Indicator and then have a discussion the following week with the teacher candidate about how these results can provide them with personal insight and may help students to better understand themselves and others. (Note: teacher candidates take and study the Indicator prior to meeting with the students). Another example includes teacher candidates giving a survey to students on their knowledge and understanding of college and the application process. The purpose of this activity is to promote a college mindset and encourage students to think beyond high school.

Teacher candidates conducted research on their clinical experiences and their findings consistently showed the experience to be positive from both the high school student and the teacher candidate. Students’ research reveals that we are having a positive impact on students and that teacher candidates are being transformed. While these studies are not able to draw any conclusions due to the limitations, it has prompted a serious conversation among school administrations, candidates, and the professor on where we might have the greatest impact. Using anecdotal data, we are developing a quantitative survey to track the extent of transformations and the impact candidates have on high school students. A majority of our students are middle- to upper-class white students. Few of these students have any experiences with inner-city schools. Following are a few quotes that reveal the changed perceptions of teacher candidates over the course of a semester.

Being in Pearl-Cohn struck a very deep cord for me because of my past personal experiences with the area...when I was a junior in high school, my father was kidnapped at gun point at a gas station located literally blocks away from the school. The two men and women who kidnapped him drove him around all night forcing him to withdraw money from his bank account. When they had gotten all they needed from him they took him to a house close to the school to shoot him. My dad sat in the car as a group of guys discussed who would be the one to shoot him. The older guys didn't want to do it because they didn't want to go to prison- so they recruited a teenager to do it. My dad said the kid respected these guys and would have done anything they asked him to...he bolted out of the car and took off running... As I began walking through the halls of Pearl-Cohn, observing, and tutoring I changed the way I looked at my father's perpetrators. I wondered where they had gone to high school and if they had graduated. I then thought about all the kids I was seeing at the school here and what dilemmas they faced when not at school...It was inspiring in that it made me want to be a force in these young people's lives that could help them change the track that they were on and rise above any negatives they may be faced with. At the same time I became enraged at the unfairness so many children and young adolescence face.

Walking in to Pearl-Cohn for the first time I was nervous. I want to be K-6
licensed and I was worried that these high school students, not far from my own age, would be out of my helping reach and I would not be able to teach them anything. I had never tutored in a high school before. Soon I realized that this fear was not valid. Tutoring at Pearl-Cohn was a very rewarding situation.

Janea was very sweet. She loved to talk about home, school and her friends. She talked to me about her problems to see what input I had…We would always get the work done and then spend the rest of the time chatting. I think this was very important to her because she knew that she had someone there for her who would listen. Janea was very outgoing and had a personality just like mine. She always wanted to be out there with me and appreciated the help I was giving her. She was my student who looked forward to coming to tutoring. A or B day, she was ready to go when her name was called to come outside. She looked at me more like a mentor than a Belmont student that tutored her.

I have heard some bad things about Pearl Cohn. I tried not to be judgmental going into the school, but it was hard. I looked at reviews of the school and student test scores …my experience at Pearl Cohn was one of a kind. I know I would not have gotten this experience at any other school. It was a challenge, but also a very good experience…This experience will be one I will never forget and can learn from to apply learning strategies to my own classroom.

I’ve never really had much experience at an inner-city high school. I was homeschooled most of growing up, and then senior year I went to a private missionary academy, so this will be a very different environment for me. Through tutoring, I learned that is crucial that you meet students where they are. You cannot be an effective teacher without somehow finding a way of making information relevant to students. You have to be the person to bridge the gap between knowledge and the student and somehow make the student feel like what you are trying to teach is actually important.

Being in Pearl-Cohn helped me to recognize the value of engaged time. Realistically, you only have 15 minutes or so before you lose students’ attention even if you are having a great lesson at the time…I never imagined that the particular amount of time students were engaged on a particular task made a difference….As a teacher, you have to do your best to maximize learning time in the classroom for your students.

My initial thoughts before walking into Pearl Cohn were pretty skeptical since I was from the area and have only heard negative things about the student body and how discipline was handled there. All I could hear were talks of weapons and drugs and even student against student or even student against teacher fights that would break out at any possible second.
The first day when we were taken on the tour of the school I noticed that it was very clean and very updated so the students could obtain the very best education possible.

I was overridden with anxiety after my first day at Pearl Cohn and I was even more nervous after hearing unfavorable comments and negative talk about the high school from my peers who had grown up in the Nashville area. I was troubled and soon began second-guessing my desire to teach in Metro Nashville. I kept thinking to myself “What is this small country girl doing in a poverty stricken inner city high school? There is absolutely no way that I can relate to these kids!” … Now that the end of the year is coming to end, I have come to the realization that my time at Pearl Cohn was much needed. I observed a lot of good theories and philosophies being put into practice… Although it only appeared that the Belmont students were tutoring to help these “on the bubble” Pearl Cohn students, these students helped us in ways they will never know.

I was very surprised to read over my pre-practicum journal and realize that I really have come a long way in such a short time! I didn’t expect that I would feel so comfortable and empowered in such a short time, but I did. I had been concerned that I would not be a good observer, but would instead lose out on the riches of being a good listener by being an obstinant “doer”. Instead, I felt at Pearl Cohn that I did gain the trust of the students and that I was able to enhance not only their learning experiences but their knowledge content as well. This practicum has resulted in me taking a hard look on my direction and to whom I feel called to serve. The experience at Pearl Cohn was incredible, and I am so grateful that I had the opportunity to tutor and observe in an inner-city high school.

The school setting opened my eyes further to diversity and the impacts it can have on learning as well. This valuable, hands-on learning experience provided me with ample opportunities to apply what I have learned thus far, and explore best teaching practices by adapting to different learning styles in real situations with my assigned students.

The pride showcased throughout the school was really refreshing. In my time in high school, we had a similar pride, but theirs seemed more genuine. For some of them, the school and their friends there were the only things they had, while in my suburban upper-middle class high school, we had lots to fall back on. This experience really opened my eyes to inner city schools, and teaching in one is definitely an option for me, now that I’ve seen the need for teachers and the struggles that they’re having.

Overall, my experience at Pearl Cohn is one that will always stay with me. It got me out of my comfort zone and forced me to start interacting with students, even if I didn’t feel ready. This type of field experience is
invaluable. I really did feel a part of that school and their mission. To be an effective teacher, you can’t just learn from lectures in a classroom. Actually observing and working with students is the best way to prepare. Pearl Cohn has been an immense part of my preparation.

I am leaving with a wealth of knowledge through my experiences with the students I tutored, the class I observed, and the multiple speakers that offered their time and insight. Inexperienced in the world of high school, I came into this class anxious about starting. Over the course of these past three months, I have gotten to apply theories and concepts to real-life scenarios, ultimately enriching my learning experience. Along the way, I had never predicted that I would be drawn to teaching an older age group. So upon analyzing this class in its entirety, I credit it for my reconsideration of my licensure area.

I definitely did not expect to be working in a school like Pearl Cohn in my first semester of graduate school. The initial exposure was a bit of a shell shock in all honesty- I have never been in an environment like it before. But, I as grew more accustomed to Pearl Cohn and the people there, my eyes were opened to a life and a culture that I had been completely ignorant of. The faculty and staff are attempting to do what some would call the impossible at Pearl Cohn, and I would call the experience overall as exceptionally humbling.

Marian Wright Edelman, President of the Children’s Defense Fund, quoted students from Pearl-Cohn in a recent an article (The Huffington Post, August 14, 2015):

I have no friends that I grew up with and I lost my [first] friend. He got killed. Seventh grade, my friend killed somebody,, and he’s in jail for life…From my freshman year to now, I have been to 12 to 13 funerals. And I grew up with everybody that I went to those funerals with, and now they are gone. It’s hard to cope with it. It’s hard to—sometimes I cry all night, you know, and I ask God why.

I had a good friend that I grew up with…He ended up dying because he was robbed and he tried to fight back and they ended up shooting him in the chest. So they ended up killing him. And when I found this out, you know, I almost cried, but at the same time [you’ve] seen so many classmates and so many people…you just sort of say, ‘Man, I sort of knew that was going to happen.’

We live in the worst conditions where nobody helps you. And we live in a condition where you’ve got to watch your back every 30 seconds. You know, you don’t know when you’re going to get robbed, you don’t know [when] you’re going to get shot, you don’t even know [when] you’re going to get stabbed…For some of us that is our reality.
Wright goes on to ask, “Where are the adults?” “Where are schools and community organizations?” She urges people to simply speak to them and say hello and give them a sense of being seen and heard. We believe our move away from a cursory attempt to increase literacy skills to engaging students and teacher candidates in meaningful conversations may provide some additional support these students need.

These stories represent a small portion of our curriculum. There are equally powerful stories to be told for the transformational learning in the methods and clinical components of our teacher education program. Yes, our candidates still enjoy their “selfies” but we believe turning the camera around has transformed them to be teachers with “disciplined intelligence, compassion, courage and faith” (Belmont University’s Mission Statement).

Our weakest link is in telling our story. We are so busy going about “doing” our story that we often forget to “tell” our story. Throughout the community, however, people are talking about what we’re doing. This paper is our first step to get our story out.

“Given the great influence teacher education candidates and newly minted teachers have on literally millions of children every year we owe it to them and to ourselves… to examine our own practices, and take heartfelt actions to transform teacher education” (Jagla, et al, 2013, p. xii). It is with this goal in mind that we intentionally design experiences to foster development in content, pedagogy, and a deeper understanding of the social issues of learners and education. Through focused and critical reflections, our candidates have shown growth in knowledge and understanding, but have also been transformed through these engaged service learning experiences. Knowing they are capable of advocating for students, families, communities and the profession along with creating and developing content lessons based on standards, evidenced-based strategies, and effective forms of assessment has empowered their actions and mindsets. After participating in the service learning field experience in Foundations of Education, one student who matriculated through Metropolitan Nashville Public Schools reflected on her experience, “Personally, by viewing education through service learning it adds motivation to a greater cause. I am not only helping those in my community through my passion but by doing so I can inspire others to share their talents with our community as well. Ultimately, creating a better future for everyone because service learning is a powerful tool. It is an agent of change.”

Universities bring together learners from diverse backgrounds and life experiences in much the same way P-12 schools do. They work and learn together and create a body of knowledge that is unique and shared. A graduate student who had previously attended only private/independent schools marveled at how these field experiences changed her understanding of education and learning. “Coming into the MAT Program, I had very little insight into what “real” teaching looked like and these field experiences provided me with more knowledge than what you would learn in a traditional classroom setting. I had the opportunity to not only observe, but also assist in the classrooms and tutor one-on-one. As each of these schools differed in diversity, size, and demographics, I feel that
I was truly provided the opportunity to see culturally responsive teaching firsthand and learn how to teach based on the context of each student’s life. I believe it is crucial for me, as a future educator, to have seen different learning environments and understand how to plan and teach accordingly. The service learning aspect of Belmont’s Education Department has served as a wonderful eye-opening experience that I know will transfer to my future endeavors as a teacher.”

Reflections by students were unique to their life experiences as well as the program field experiences. A nontraditional student seeking an undergraduate degree in education was moved by the variety of experiences and collaboration that is required to make these opportunities impactful. She commented that, “These unique learning experiences helped me realize (through reflection) the changes that needed to be made for future lessons and the importance of being flexible with students…. Equally important were the observation placements where we observed students in various settings. I have observed students with special needs, students in high-risk areas, students in affluent communities, and students with varying learning abilities. Being aware of these diverse situations helps me to understand the challenges I will face with students, parents, and colleagues; the knowledge of watching the situation being handled by an experienced professional, and feeling equipped with the tools that I will need as a teacher to be successful has given me confidence.” She also added, “My favorite experience was working with elementary and high school students in Portland, Tennessee, on a joint venture learning opportunity for STEM. This opportunity (along with my Science Methods course which encouraged professional development opportunities) has ignited a spark to include science into everyday learning and pass this excitement and enthusiasm on to my students. We learned how to integrate literacy with science and hands-on applications to reinforce the lessons. I was so impressed with the community collaboration and support between the schools involved and community helpers like Farm Bureau. We were able to see first-hand the many opportunities that are available to teachers and the wonderful resources and willingness of others to support education in our schools. I feel incredibly blessed to have been afforded these opportunities through my education courses at Belmont and I feel ready and eager to engage students as I prepare on my new adventure.”

A graduate of the program reflected on his time at Belmont and how these transformational experiences prepared him to step into the classroom. “Belmont’s program goes beyond the mechanics of teaching, combining a challenging curriculum with real classroom experience and lessons that no textbook can teach.”

The positive changes we have seen in our teacher education candidates align with studies that have determined that teacher education candidates have positive experiences with service learning initiatives (Anderson, Swick, & Yff, 2001; Moguel, 2003; Lake, Winterbottom, Ethridge, & Kelly, 2015).

While we are thrilled that these experiences have brought about reflection, refinement of knowledge and skills, dispositional changes that reinforce the gifts of all learners, we cannot become complacent. Each semester we revisit field experiences to look for stronger and more effective ways to being about this transformation. Conversations among all stakeholders in the process must take place in order to bring multiple
perspectives to the table. Effective communication between community and university as well as teacher education candidates and faculty at the university and P-12 levels are a necessity. Learning from one another and listening to the voices of the children we serve is essential if we are to be truly responsive to the needs of our schools and the educators who are stepping out into them. Collaboration, communication, and listening are key.
References


*The Tennessean* (November 14, 2015) Nashville schools have thousands of EL students.


Makerspaces provide technology, equipment, and collaborative knowledge for hands-on idea exploration and prototyping within lab, shop, and conference spaces (ELI, 2013). Inquiry-based learning drives makerspace pedagogy and allows students to define and design projects, therefore allowing each to take ownership of their learning process (ELI, 2013). The integration of makerspaces into education has shown to contribute to learning and creative inquiry by providing students with authentic explorations of digitally fabricated 3D objects (Johnson, Adams, Cummins, Estrada, Freeman, & Ludgate, 2013).

Digital fabrication involves creating an object from a digital file through the use of additive and/or subtractive manufacturing processes (Pryor, 2014; Lipson & Kurman, 2013). Additive process machines (3D printers) extrude material that builds layers from the bottom up to create a finished 3D printed object. Subtractive process machines (laser and CNC machines) utilize flat sheet goods to cut 2D patterns that are assembled into 3D objects. Both additive and subtractive machines provide distinctly different approaches to designing, planning, and constructing objects for learning.

Background:

In recent years, Makerspaces have been growing popularity in academic, institutional and professional settings. Before this, access to digital fabrication technologies in higher education had been a previous “silo” experience, confined to specialized fields such as: architecture, industrial design, jewelry design, and civil engineering (Pryor, 2014). However, an exploratory report on the future of higher education technology projects significant increased use of digital fabrication tools over the next 4 years in cross-disciplinary projects (Johnson, et.al, 2013). The resulting increase in makerspaces on campuses across the country has been focused on interdisciplinary education. The campus makerspace strives to be a gathering place for people, ideas, and networking across majors and disciplines. Widespread adoption of digital fabrication technologies and the growth of makerspaces is also fueled by significant price reductions that make equipment easily available (Pryor, 2014; Eisenberg, 2013; Johnson, et.al., 2013; Lipson & Kurman, 2013). Further, the integration of technology and equipment is not only seen at the college and high school level, but is currently being implemented in primary school education for young children (Eisenberg, 2013). As the availability and integration of this equipment increases for current and future students, so do expectations of use and access to learning environments such as makerspaces with digital fabrication technologies.
Framework:

This presentation outlines the following strategies for educators on common issues and considerations of developing, maintaining, and teaching in a makerspace with digital fabrication technology and equipment. Strategies for developing a successful makerspace or adopting equipment range from selecting appropriate equipment and software, assessing infrastructure demands, planning a start-up and operation budget, overseeing equipment set-up, to understanding equipment opportunities and limitations. Further, guidelines for maintaining the space and equipment focus on keeping the lab and equipment in safe and reliable working order, providing supervision and training on equipment, understanding equipment maintenance needs, and planning a material and parts budget. The strategies presented for teaching with the assistance of digital fabrication technology and equipment include selecting equipment based on pedagogy needs, assessing student understanding of basic fabrication prior to digital fabrication interactions, providing training on equipment and software use, and inspiring innovative and meaningful social and learning experiences.

Results and Discussion:

Examples of digitally fabricated work will be paired with instructor and student experiences to uncover specific learning opportunities in the makerspace. The makerspace serves academia in a teaching and learning capacity, beyond that of a standard production facility. This designation places specific demands on the development and maintenance of the space and equipment. This presentation provides an discussion on issues and considerations along with strategies for successfully developing, maintaining, and teaching within a makerspace for student learning.

References:


1. Developing rubrics for problem-based learning: Enhancing critical thinking beyond the major.
2. Marlo Ransdell PhD
3. Florida State University
4. 1017 William Johnston Building, Florida State University, Tallahassee, FL 32302
5. mransdell@fsu.edu
6. abstract:
    Introduction:
    This presentation explains the pedagogical development of rubrics to assess and evaluate critical thinking in problem-based learning. Implementing rubrics in the teaching and learning process allows instructor and student discussions to remain focused, objective, and open to identify critical thinking benchmarks within the problem at hand. By identifying critical thinking within discipline specific problem solving, students will recognize aspects of critical thinking and be more prepared to apply critical thinking skills beyond their major.

   Background to the problem:

   A recent survey of new graduate employers in 2015 from the Association of American College and Universities revealed 91% of employers desired graduates who could think critically, communicate clearly, solve complex problems, and apply knowledge within and beyond their discipline and major course of study (HRA, 2015). Employers recognize the need for critical and creative thinking skills beyond the major, and project long-term career success for those who possess the capacity for continued learning and transferrable critical thinking skills (HRA, 2013). Being mindful of this, problem-based learning strategies can provide opportunities for students to recognize and evaluate critical thinking within their own problem solving process.

   Critical thinking is described as “a 'habit of mind' characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion” (AAC&U, 2010, ¶2). While programs seek to teach students critical thinking skills and cultivate this ‘habit of mind’, the delivery and assessment of critical thinking are many times difficult to objectively assess and discuss. Using rubrics in education can remove subjectivity when assessing student work and supporting student learning through meaningful discussions. Rubrics can also help blur the distinction between assessment of student work and instruction by providing a “roadmap” for success for the instructor and student to collaborate around (Andrade, 2000; AAC&U, 2010). While educational rubrics vary, common features are a list of criteria and gradations of quality with descriptive performance criteria that help instructors and students alike focus on enhancing the development of necessary skills (Andrade, 2000; AAC&U, 2010).

   Methodology:

   The rubrics presented here were developed within a larger university wide study that is explained here for context. The university adopted the VALUE critical thinking rubric in 2015 for a 2-year study of critical thinking of students in their last two years of baccalaureate degree programs. This rubric presents the aspects of critical thing as: explanation of issues, defining relevant evidence, using appropriate context and assumptions, defining a position, and assessing conclusions. Along with the VALUE rubric, The Critical Thinking Assessment Test (CAT) developed by Tennessee Technological University, was used as a pre and post
instrument to measure students ability to think critically beyond their major through real world problem solving. The CAT pre-test was administered to rising juniors enrolled in a problem-based curriculum in the spring of 2015 and post-test measures will be taken during spring of 2017. The CAT was also given to graduating seniors in spring of 2015 to represent a control group for the research design. Each of the 15 CAT questions was paired with the 5 critical thinking aspects in the VALUE rubric to uncover which aspects were opportunities for significant growth.

Based on results of the control group CAT scores, interventions were developed to enhance the 5 aspects of critical thinking (explanation, evidence, context, hypothesis, and conclusions) for implementation over the following two years of discipline specific problem-based curriculum for the test group. The critical thinking rubric for problem-based learning was modeled after the VALUE rubric and borrows from other rubrics in creative thinking, information literacy, inquiry and analysis, problem solving, and communication skills. The rubric outlines explicit and clear descriptions in a common language for students to go from simply understanding new knowledge to applying and generating new knowledge as they move from benchmark to capstone performance criteria within the rubric.

Results and Discussion:

Participants will be engaged through a short description of the larger university wide study and the role of the problem-based curriculum study presented here. The critical thinking VALUE rubric will be shared along with the adapted rubrics created for the research study in each of the areas of critical thinking including: explanation of issues, defining relevant evidence, using appropriate context and assumptions, defining a position, and assessing conclusions. The development of explicit and specific performance criteria will be discussed along with identifying relevant language to communicate effectively to students through the design of a meaningful rubric for problem-based learning. Results will also highlight deficiencies found in critical thinking from the CAT test and the way rubrics can enhance these skills for students, not only within domain specific problem solving, but as lifelong critical thinkers.

References:


Title: The Accidental Special Education Teacher (#1245)

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Abstract:

Although teacher education candidates often have what might be called a "myth-perception" of the profession, it is critical for teacher educators to recognize and value the energy while at the same time preparing candidates for complex teaching arrangements, under-sourced schools, unique student behaviors, political and economic challenges.

Novice teachers or those underprepared individuals who work with students with disabilities and their families are most at risk of missing opportunities to promote the practices known to be consistent with legal and ethical standards of the profession. Multiple narratives from young teachers and those in the trenches describe the juxtaposition of policy and practice. The individualized education of students with disabilities is not always a priority consideration and ultimately their achievement is impacted.

Data are clear. Within the first two years of teaching as many as 12 percent of the new teachers leave the profession (NCES, 2011). By year five of their career, upwards of 50 percent of new teaching recruits are gone (DeAngelis & Pressley, 2011). Competing agendas is clearly at work given the factors cited by those leaving the profession. Policies, practices, pedagogy, preparation, principals, and personal preferences have all been cited as influencing a teacher's departure.

Often the reality of a policy is that best practice becomes circumvented. Forty years after the passage of PL94-142, now IDEA, many of the principles that set the stage for creating educational opportunity and educational access have been challenged. With more and more educators entering the profession on the fast track as "accidental special educators" some of this history has been lost. With more and more diversity of students and families in communities some of the commonalities educators experienced in the past are being shaken up. With more and more inclusion, economic necessity, shortages, standards-based assessments, teacher evaluations, and an array of other social dynamics, best practices are at a premium in many schools. The intended cure (i.e. policy design and implementation) is, in many cases, a barrier to best practice.

How do teacher educators balance the reality of the profession? How do programs ensure those entering the profession as accidental special educators are given skills consistent with best practice aimed at ensure the success of students with disabilities? There is a sense of urgency related to reinvigorating the principles behind IDEA. It appears there is a tipping point. Comments from young teachers reflect the need to better advocate as professionals for the profession before the past becomes prologue.
Title of the Submission: East Asia & Pacific Principal Driven Philanthropy

21st Century Fully Equipped for Slaying Funding Dragons

Name of the Author: PM Azinga, Global Educator

Affiliation of the Author: Kappa Delta Pi International Education Honorary Society

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Abstract and or Full Paper: See Attached
Title: East Asia & Pacific Principal Driven Philanthropy

21st Century Fully Equipped for Slaying Funding Dragons

Area of Submission: Human Resource Development

Principal Leadership Curriculum

Presentation Format: Thru the medium of PowerPoint, personal interview

(television production OLELO Channel 54 and wed site linkage)

Abstract Summary: Would the members of your committee like to entertain a paper which discusses the impact of the global financial crisis funding on education internationally? Which ask what possible solutions to solving these funding gaps are? Then, it traces the rise of philanthropy in Asia. Followed by identifying what are some of the philanthropic road block within Asia. Next, it examines a devoid of philanthropic management leadership of principals. Finally what are the best practices in utilizing strategic philanthropy? If so, let’s talk.
The deadline for UNESCO’s Education for All by 2015 has come and gone. In pursuit of this lofty goal the Education for All 2010 Report brought to our attention the stark reality of our interconnectedness during a global financial crisis and its impact on education worldwide. EFA 2010 Report revealed a spike in poverty levels, worsening incidents of malnutrition and education budgets coming under intense scrutiny to the extent that donor pledge commitments stagnated.

In confronting this crisis in funding of global education head on was met with a gamete of traditional financial solutions ranging from increasing taxes, creation of levies, floating bonds and offering loans. However desperate times call for drastic unconventional measures. Venture philanthropy, entrepreneurial philanthropy, hybrid philanthropy, disruptive philanthropy may work had they not been introduced so late in the game. Although we did see a surge in Asia charitable giving’s from the Nuevo riche of Hong Kong, Guangzhou and Singapore infrastructural obstacles blocked the act of giving in Asia. Obstacles like limitations in resources management, sustainability, scalability and severity of issues. Lower developed countries were particularly challenged by transparency, cost prohibiting NGO entry fee, donor rights of privacy, archaic accounting systems, inconsistency in record keeping and data collection.
When and if educational funding did successfully filtered down to its lowest Common denominator ultimately received by the chief instructional executive ie. the school principal, they were ill-equipped to budget, manage and distribute funds equitably and efficiently for the vast majority of their principal education programs had no money management course work, no financial management, no philanthropic education, no wealth creation in principal leadership curriculum requirement in any of their educational training programs.
TEACHING AND ASSESSING THINKING DISPOSITIONS: A COMPREHENSIVE REVIEW OF LITERATURE

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ABSTRACT

Students’ thinking styles has become a hot topic over the last several years and is a priority for today’s educators as they determine how to best teach students the proper way to think. But if teachers want students to use learned thinking skills frequently and transfer these skills to feel committed to certain positive patterns of intellectual behavior, then the teaching of “dispositional thinking” is more powerful and long lasting (Tishman & Palmer, 2006). The purpose of this research was to provide a thorough review of the literature addressing research and theory related to the studies of thinking dispositions and assessment. A summary analysis of prominent themes and findings within the reviewed literature is presented at the end of the paper.

Key Words: Thinking dispositions

1. INTRODUCTION

Thinking is like breathing it is often taken for granted (Parlette & Rae, 1993). But how we think is vital to success in life just as breathing is to living. Thinking is defined as “a mental process in which the learner develops through mental interaction processes between the individual and the experiences that he or she acquires to develop structures of knowledge and access to new assumptions and expectations” (Turki, 2012, p. 140). Meanwhile “Disposition” is the “products of electrochemical activities within the neural networks of the genetic endowment of the human species” (Dickmann & Stanford-Blair, 2009, p. 174). Babies are born with dispositions, children are naturally disposed to construct understanding by forming hypotheses making predictions conducting experiments and formulating theories about how language work because dispositions are passed from parents to children. Dickmann and Stanford-Blair (2009) stated: even though dispositions originally installed, it is influenced by environmental
experiences. Therefore people are disposed to certain habits of mind by both nature and nurture. “The potential quality of course lies in nurture” (p. 175). A person’s multidimensional capacity for learning and achievements must be regularly exercised to realize its potential. Dispositions are frequently exercised and capacities are key to maximizing intelligence (Dickmann & Stanford-Blair, 2009). The literature suggests that thinking dispositions are fostered by nurture.

This paper creates paths for scholars and educators to choose from when teaching thinking dispositions.

2. DEFINITIONS OF THINKING DISPOSITIONS

Thinking dispositions are described as “styles, inclination, mindset, tendency, propensity, predilection, proneness, habit, characteristic, penchant, capability, aptness, potential, leaning, proclivity, urge, affinity, affection” (Costa & Kallick, 2014, p. 18).

Overall, researchers agreed on one broad definition of thinking disposition and that is the tendencies toward particular patterns of intellectual behavior (Tishman & Andrade, 1995). Ennis (1986), a philosopher of education, defines a thinking disposition as the tendency to do something given to certain conditions. While Norris (1992), another philosopher of education, described thinking dispositions as a tendency to think in certain way under certain circumstances. Tishman and Palmer (2006) stated, “traditionally, good thinking has been defined as a matter of cognitive skill. Therefore it is given the term, "thinking skills". Surely, good thinkers have skills, but, they also have more: Motivation, attitude, values, and habits of mind all play key roles in thinking, and, in large part, it is these element determine whether learners use their good thinking skills in situations” (p. 7). According to psychologist Salomon (1994), who agreed with Tishman and Palmer’s (2006) theory that thinking dispositions are more than just one described behavior or tendency; he urged that it is described as a cluster of preferences, attitudes, and intentions, plus a set of capabilities that allow the preferences to become realized in a particular way (Salomon, 1994). Facione and Facione (1992), authors of the California Critical Thinking Dispositions Inventory, also agree that thinking dispositions is a collection of attitudes, intellectual virtues, and habits of minds. While Stenberg (1997), defined a thinking style as a matter of preference. According to Stenberg (1997) thinking style is a person’s preference for a certain thinking process. He continued that thinking style is a specific reasoning and problem-solving strategy that helps to clarify why people respond in different ways to problems that need to be solved in the context of studies or work, or in social interactions with other people (Sternberg, 1997).
3. TYPES OF THINKING DISPOSITIONS

Some scholars described thinking dispositions and thinking styles from tendency perspectives, others defined them from state of mind or mindsets perspectives.

Langer (1989) doesn't use the term thinking dispositions, thinking styles, nor thinking skills. Instead she described thinking styles or dispositions as mindfulness. Langer (1989) focused on the view that good thinkers have towards mindfulness. Mindful thinkers tend to create new categories, or simply "pay attention" to given contexts; they tend to be open to new information, and they tend to cultivate an awareness of more than one perspective (Langer, 1989). Several scholars and educators, however, have proposed more precise definitions of thinking dispositions.

Dweck’s (2008), research and theory of Mindsets, distinguishes two specific perspectives that people hold about their abilities and adversity. She noted that people tend to have two different mindsets towards different aspects of their lives; the two specific mindsets suggested are fixed mindset and growth mindset. As stated in table 1, the theory of Mindsets explains thinking dispositions in two different ways, a preferred way (growth mindsets) and a distorted way (fixed mindset). It also detects actions and successful behaviors.

Table 1. The Theory of Mindsets

<table>
<thead>
<tr>
<th>Type of Thinking Disposition (Mindset)</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth mindset</td>
<td>Challenges are embraced rather than rejected. Effort is seen as worthwhile and a path to mastery. Getting things wrong and receiving feedback is positive—it guides further improvement.</td>
</tr>
<tr>
<td>Fixed Mindset</td>
<td>Thinking patterns are created in systematic fixed thinking in which challenges are avoided, as failures suggest lack of intelligence, and effort is seen as fruitless. Getting things wrong and receiving feedback is negative and it reveals limitations.</td>
</tr>
</tbody>
</table>

Source: (Dweck, 2008)

Burns (1999), however, specified and highlighted only distorted thinking patterns that work against a healthy outlook on life. The ten distorted thinking patterns are described in table 2.

Table 2. The 10 Distorted Thinking Patterns

<table>
<thead>
<tr>
<th>Type of Thinking Disposition</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>All-Or-Nothing thinking</em></td>
<td>Sees things in black-and-white categories</td>
</tr>
<tr>
<td>2. <em>Overgeneralization thinking</em></td>
<td>Sees a single negative event as a never-ending pattern of defeat.</td>
</tr>
<tr>
<td>3. <em>Mental Filter thinking</em></td>
<td>Picks out a single negative defeat and live on it exclusively so that the vision of reality becomes darkened, like the drop</td>
</tr>
</tbody>
</table>
4. **Disqualifying the positive thinking**
   Dismiss positive experiences by insisting they “don’t count” for some reason or other to maintain a negative belief that is contradicted by everyday experiences.

5. **Jumping to conclusions thinking**
   Make a negative interpretation even though there are no certain facts that convincingly support the conclusion.

6. **Magnification (Catastrophizing) or Minimization thinking**
   Exaggerate the importance of things or inappropriately shrink things until they appear insignificant. This is also called the “binocular trick.”

7. **Emotional Reasoning thinking**
   Assume that negative emotions necessarily reflect the way things really are: “I feel it, therefore it must be true”.

8. **Should statements thinking**
   Criticize self or others with should or shouldn’t statements.

9. **Labeling thinking**
   Identifying the shortcomings, instead of acknowledging mistakes. For example, Instead of saying “I made a mistake” one says, “I am not qualified”.

10. **Personalization and blame thinking**
   See self as the cause of a negative external event, and blame other people for actions that are related to outcome of self.

Source: (Burns, 1999)

Meanwhile some researchers pointed out negative thinking dispositions that creates unhealthy outlook in life, others highlighted the positive thinking dispositions that will allow flexibility, and healthy view of life. According to Tishman, Perkins, and Jay (1993), “Being a good thinker means having the right thinking disposition, because otherwise you'll never make full use of your abilities” (para 3). These Harvard education scholars argue that there are seven thinking dispositions that lead to successful outlook in life and that each disposition has its own set of tendencies, distinct abilities, and sensitivities. These seven dispositions are listed in table 3.

**Table 3. A list of the Seven Thinking Dispositions for Successful Outlook in Life**

<table>
<thead>
<tr>
<th>Type of Thinking Disposition</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The disposition to be broad and adventurous</td>
<td>The tendency to be open-minded, to explore alternative views; the ability to generate multiple options.</td>
</tr>
<tr>
<td>2. The disposition toward sustained intellectual curiosity</td>
<td>The tendency to wonder, investigate, identify problems, the ability to observe and formulate questions.</td>
</tr>
<tr>
<td>3. The disposition to clarify and seek understanding</td>
<td>A desire to understand clearly, to seek connections and explanations; an ability to build conceptualizations.</td>
</tr>
<tr>
<td>4. The disposition to be planful and strategic</td>
<td>The drive to set goals, to make and execute plans, to envision outcomes.</td>
</tr>
</tbody>
</table>
5. The disposition to be intellectually careful
   The urge for precision, organization, thoroughness, the ability to process information precisely.

6. The disposition to seek and evaluate reasons
   The tendency to question the given, to demand justification, the ability to weigh and assess reasons

7. The disposition to be metacognitive
   The tendency to be aware and monitor the flow of one's own thinking, the ability to exercise control of mental processes and to be reflective.

Source: Tishman et al.,(1993)

Costa and Kallick (2014) also emphasized the dispositions of good thinkers versus poor thinkers in times of dilemmas and hard situations. They refer to dispositions as "Passion of Mind" or "Habit of Mind." According to Costa and Kallick (2014) in their book *Dispositions: Reframing Teaching and Learning*, a habit of minds means having a disposition toward behaving intelligently when confronted with problems, or having the answers that are not immediately known. When humans are confused by dilemmas or with uncertainties, the effective actions require drawing forth certain patterns of intellectual behavior. When people draw upon these intellectual resources, the results that are produced are more powerful, of higher quality, and greater significance than if they fail to employ those patterns of intellectual behaviors.

Costa and Garmston (2002), the founders of Cognitive Coaching, define thinking dispositions as strategies, a way of thinking, and a way of working that invites self and others to shape and reshape their thinking and problem solving capacities. Costa and Garmston (2002) indicated the “key passions” that characterize a good thinker are: efficacy, flexibility, craftsmanship, consciousness, and interdependence. The description of each passion of or habit of mind is indicated in table 4.

**Table 4. “Key Passions” or Thinking Dispositions that Characterize a Good Thinker**

<table>
<thead>
<tr>
<th>Type of Thinking Disposition (Key Passion)</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>High efficacy</td>
<td>Exhibit internal locus of control, engage in cause-and-effect thinking, set challenging goals, and devote energy to challenging tasks. They also persevere in the face of barriers and occasional failure. High efficacy thinkers are optimistic, confident, and feel good about themselves.</td>
</tr>
<tr>
<td>Highly flexible</td>
<td>Hold multiple goals, consequences, and time frames simultaneously; they can shift among different points of views. In addition, highly</td>
</tr>
</tbody>
</table>
flexible thinkers can engage in the mechanics of a situation (novice focus) and underlying causes/effects (expert focus). They also seek novel solutions and they can be comfortable with ambiguity.

**Highly craftsmanship**
Set high standards for themselves. They create and hold clear visions and goals and continuously monitor progress toward those goals. They use data to assess and improve their own performance and results. They are personally driven to hone, refine, and constantly work for improvement.

**Highly conscious**
Aware of one’s thoughts, feelings, viewpoint, behaviors and the effect they have on oneself and others. They notice others’ verbal and nonverbal communications. They also monitor their values, thoughts, behaviors, and progress toward goals. Consider their own and others’ feelings when examining situations and events to their responses.

**Highly Interdependent**
Have a strong sense of community and contribute themselves to the common good. They value collective work and know when to integrate and when to assert. They see resources within the group. They see conflict as a resource of learning and moving forward. They learn from others’ feedback.

Source: Costa and Garmston (2002)

Harrison and Bramson (2002), through their research detailed in their book, *The Art of Thinking*, highlighted the most common thinking styles in Western society, not necessarily the preferred or the distorted thinking styles, instead the neutral thinking styles. According to Harrison and Bramson (2002), there are five distinct styles of thinking. Most people show a marked preference for one or two of the styles. These styles are referred to as “Inquiry Modes.” The five styles of thinking are listed in table 5.

**Table 5. A list of “Inquiry Modes” Thinking Dispositions that are Most Common in Western Society**

<table>
<thead>
<tr>
<th>Type of Thinking Disposition (Inquiry Mode)</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Synthesis thinking</em></td>
<td>Focuses on integration while their behavior is often viewed as challenging.</td>
</tr>
<tr>
<td><em>Idealists thinking</em></td>
<td>Focuses on the process, aspirations, and values.</td>
</tr>
<tr>
<td><em>Pragmatists thinking</em></td>
<td>Examining problems within their situational context. They are often focused on payoff while their behavior is often viewed as adaptive and</td>
</tr>
</tbody>
</table>
incremental.

**Analysts thinking**

This thinking is associated with abstracting facts into theories and problem solving approaches.

**Realists thinking**

Is associated with highlighting available resources and applicable facts. The realist thinkers focus on the task at hand while their behavior is often viewed as empirical and objective.

Source: Harrison and Bramson (2002)

Stenberg’s (1997) theory of self-government indicates that there are no “good” or “bad,” style of thinking it is a matter of fit between learner and situations. From the literature review, almost all the definitions of thinking dispositions underlies that people are disposed to certain habits of mind, and dispositions are tendencies rather than abilities. According to Sternberg (1997), styles pointed out in the theory are preferences they are not abilities. He noted that there are indeed differences between how creative a student is (ability) and how much the student has the tendency and would like to be creative (style).

According to Sternberg (1997), there are 13 different Self-Government thinking styles. The 13 different thinking styles come from the concept that people must govern themselves to have control on their lives (Sternberg, 1997). The way they do this corresponds to the kinds of governments and government branches that exist in the world; legislative, executive, judicial, monarchic, hierarchic, and oligarchic. These 13 government styles perform under five categories, and most people tend to lean toward one style or another within each category (Sternberg, 1997). The 13 suggested thinking styles are comprised in five dimensions, listed Table 6.

**Table 6. Self-Governing Thinking Styles of the MSG thinking styles**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Type of Thinking Disposition (Style)</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In Term of Form</strong></td>
<td><strong>Monarchic style</strong></td>
<td>Going towards a single goal at a time, and staying with that goal until it is complete, and able to analyze and think logically.</td>
</tr>
<tr>
<td><strong>Hierarchic style</strong></td>
<td></td>
<td>Do many things at one time. put goals in the form of hierarchy depending on their importance and priority</td>
</tr>
<tr>
<td>Style</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Anarchic style</strong></td>
<td>Tend to adopt a method of random and non-compliant in a particular order to solve the problems, they have great flexibility in approaches, they could try anything they want or please.</td>
<td></td>
</tr>
<tr>
<td><strong>Oligarchic style</strong></td>
<td>Have many conflicting goals, all of these goals are equally important for them</td>
<td></td>
</tr>
<tr>
<td><strong>In Term of Function</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Legislative style</strong></td>
<td>Prefer the problems that require diverse strategies and to create their own laws and they enjoy giving commands</td>
<td></td>
</tr>
<tr>
<td><strong>Executive style</strong></td>
<td>Prefer to use the ways that already exists to solve problems; they are good in application and implementation of laws</td>
<td></td>
</tr>
<tr>
<td><strong>Judicial style</strong></td>
<td>Care about the assessment of the stages of the work and the results. They often question existing ideas and strategies, and they often conduct compare and contrast</td>
<td></td>
</tr>
<tr>
<td><strong>In Term of Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Global style</strong></td>
<td>Prefer to deal with broad, abstract and relatively large and high-level concepts. People who hold global thinking style prefer change and innovation they often ignore the details.</td>
<td></td>
</tr>
<tr>
<td><strong>Local style</strong></td>
<td>Attracted by practical situations. They are described as people who put everything into account and they do not leave anything to chance or luck</td>
<td></td>
</tr>
</tbody>
</table>
### In Term of Trend

<table>
<thead>
<tr>
<th>Liberal style</th>
<th>Tend to go beyond the laws and measures, and have the tendency to seek through the tasks that is undertaken by them to pass laws that imposed upon they strive to bring the biggest possible change.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservative style</td>
<td>Prefer situations that are familiar in life, and they are persistent and in order, they follow the rules and procedures the way that it exist, and would prefer the least possible change.</td>
</tr>
</tbody>
</table>

### In Term of Scope

<table>
<thead>
<tr>
<th>External style</th>
<th>Followers of this method tend to work, interact and collaborate with others in groups, and they have a sense of social interactions with others comfortably and easily.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Style</td>
<td>Tend to prefer to work alone rather than working in groups and teams, they are mostly introverts. Prefers jobs and projects that require internal analytical yet creative solutions to problems.</td>
</tr>
</tbody>
</table>

Source: (Sternberg, 1997)

From the literature review it is notable that while some authors reviewed thinking disposition in one-line broad definitions (Costa & Kallick, 2013; Dickmann & Stanford-Blair, 2009; Tishman & Andrade, 1995; Ennis, 1962; Salomon, 1994; Facione & Facione, 1992; Langer, 1989), others specified them in lists of thinking disposition (Dweck, 2008; Burns, 1999); Tishman et al., 1993; Costa & Kallick, 2014). Burns (1999) highlighted negative thinking dispositions that influence life negatively such as the 10 distorted thinking patterns. Others highlighted the ideal thinking dispositions that should be taught and applied (Tishman et al., 1993; Costa & Kallick, 2014).

Harrison and Bramson (2002) described the neutral thinking dispositions that most people in western world holds and neutral dispositions that are detailed within dimensions such as
Sternberg’s (1997). Definitions of thinking dispositions were provided from multiple fields of studies, namely education, philosophy, psychology, and neuroscience. According to the reviewed literature, there are three ways scholars described thinking dispositions: cluster of neutral description of thinking dispositions. Cluster of good thinking dispositions that should be utilized “the good thinking dispositions”, and cluster of distorted thinking dispositions, or so called “bad thinking dispositions.

Figure 1 illustrates the major topics and themes found after reviewing the literature on thinking dispositions.

4. ASSESSMENTS OF THINKING DISPOSITIONS

In order to teach thinking dispositions there is a need to first identify which thinking disposition students do hold and there must be an appropriate assessments and measurements of thinking dispositions to do so.

According to Tishman and Andrade (1995), “The issue of assessment poses one of the greatest challenges to the concept of thinking dispositions” (p. 7). Most researchers measure thinking dispositions with multiple-choice questions, personality tests, and questionnaires to
participants to identify what types of thinking dispositions the participants are tend to lean towards. For example, Burns (1999), who highlight 10 distorted thinking patterns that work against a healthy outlook on life, assessment the 10 distorted thinking pattern with a tool called “The Dysfunctional Attitude Scale” (DAS). According to Burns (1999), DAS is a test that has been developed by Weissman who has compiled list of one hundred self-defending attitudes that create emotional disorders. Burns (1999) selected a list of 35 most common attitudes and added others in a test to help the reader identify which types of thinker are they. The questions in (DAS) are in forms of general statements that depict an attitude. The test taker must mark which attitude he or she agree strongly with, agree slightly, natural, disagree slightly, or disagree very much. After that the test taker evaluate their scores based on a given chart that represents areas of vulnerabilities or strengths.

According to Ennis (1996), a philosopher of education, the fundamental problem when assessing critical thinking dispositions is researchers want students to identify their thinking dispositions on their own without being pushed to choose it (Ennis, 1996). To solve this problem some researchers used practical observational methodologies instead of traditional questionnaire, and personality test. For example, the assessments based in theory of mindsets by Dweck (2008), are mainly based on experiments and structure observation. The author gave students experiments and observed them in settings that she called “the pressure cooker settings” (Dweck, 2008). In pressure cooker settings, the sample is observed while put into difficult situations. Experiments of students under pressure cookers help identify the two types of mindsets.

Another thinking disposition assessment tool is the California Critical Thinking Dispositions Inventory (CCTDI), developed by Facione and Facione (1992). This is a well-known assessment resource that examines individual's dispositions towards critical thinking. CCTDI measures one's intellectual curiosity and one's desire for learning even when the application of the knowledge is not readily apparent. CCTDI specifically examines the willingness of an individual to think critically rather than the ability of individuals to think critically. The CCTDI contains seven scales that measure the individual's dispositions towards the following: Seeking the truth or bias, anticipating consequences, proceeding in a systematic or non-systematic manner, open-mindedness or intolerance, inquisition or resistant to learning, mature judgment or simplistic thinking, and being confident in reasoning or mistrust of thinking. The test takers usually have 30 minutes to complete the test and most participants complete the test in less than 20 minutes (Facione & Facione, 1992).

Sternberg and Wagner (1991) developed the Thinking Styles Inventory (TSI). Sternberg (1997) mentioned that styles are measurable; they are measured by using various questionnaires.
TSI is a self-report test consisting of 65 statements. Each of the 13 thinking styles described in Sternberg and Wagner (1991) theory of mental self-government, is assessed by 5 statements. For each statement, the test takers rate themselves on a 7-point Likert-type scale, with 1 indicating that the statement does not describe the way they normally carry at all, while 7 implying that the statement characterizes extremely well the way they normally carry out tasks unlike the CCTDI, which measures the willingness of critical thinking, TSI measures only the 13 thinking styles that are noted under the light of Sternberg's theory of mental self-government.

5. DISCUSSION

According to the reviewed literature on thinking dispositions, people are disposed to certain habits of mind by both nature and nurture. Dickmann and Stanford-Blair (2009) urged, “The potential quality of “dispositions” lies in nurture” (p. 175). Also, people do not have one fixed disposition, dispositions are modifiable people are not “stuck” with certain disposition unless they want to (Sternberg, 1997). This indicates that thinking dispositions are teachable/learnable.

Meanwhile some people can easily switch among styles; others might find difficulty in doing so. That indicates educators might face some challenges in teaching thinking dispositions. However, according to Stenberg (1997), styles are not only modifiable they are also socialized; they can be learned through interactions with the environment. Styles of thinking can by change with age and time. There is no one fixed disposition that can lead to success, because styles or dispositions vary; the one style that leads to success in one school or one job, may lead to failure in another.

6. SUMMARY

The objective of this paper was to review the literature addressing research on the various thinking dispositions definitions from different schools of thoughts definitions, types of thinking dispositions, and measurements and assessments of thinking dispositions.

By reviewing the literature on different definitions thinking dispositions, it appears that some researchers named it “Thinking styles” “Thinking pattern”, “Passion of the mind” “Mindfulness”, “Mindsets”, or “Inquiry modes”. From the literature review it is notable that definitions of thinking dispositions were provided from multiple field of studies i.e., education, philosophy, psychology, and neuroscience.
By reviewing the literature types of thinking dispositions, it appeared that some researchers viewed thinking dispositions as one broad definition, while others defined them in detail. Thinking dispositions fall into three main areas of organization: distorted thinking dispositions, neutral thinking dispositions, and preferred thinking dispositions.

By reviewing measurements and assessments of thinking dispositions, it is notable that there is few of thinking disposition assessment tools scholars have used to measure thinking dispositions. Yet, there is no determined specified assessment that best measures all types of thinking dispositions. Scholars have yet to determine a categorized common definition of thinking dispositions and how to best teach and assess this construct.

REFERENCES


Effects of Visual Working Memory Training and Direct Instruction on Geometry Problem Solving in Students with Geometry Difficulties

Area: Special education.
Format: Poster Session

We examined the effectiveness of (a) a working memory (WM) training program and (b) a combination program involving both WM training and direct instruction for students with geometry difficulties (GD). Four students with GD participated. During the Phase 1, students received six sessions of computerized WM training; during Phase 2, they received both six sessions of computerized WM training and six sessions of human-delivered direct instruction on triangle congruence. Results were reported.

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Abstract

We examined the effectiveness of (a) a working memory (WM) training program and (b) a combination program involving both WM training and direct instruction for students with geometry difficulties (GD). Four students with GD participated. A multiple-baseline design across participants was employed. During the Phase 1, students received six sessions of computerized WM training (Jaeggi et al., 2011); during Phase 2, they received both six sessions of computerized WM training and six sessions of human-delivered direct instruction on triangle congruence. All four participants remarkably improved their WM. We also found some enhancement on the spatial rotation and general geometric problem-solving. However, the participants’ performance on specific triangle-congruence tasks did not improve until direct instruction was introduced. Practical recommendations were discussed.
Exploring the Experiences of Senior Enlisted Military Wives Seeking Higher Education Through Distance Learning

By

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Submission 1261
EXPLORING THE EXPERIENCES OF SENIOR ENLISTED MILITARY WIVES SEEKING HIGHER EDUCATION THROUGH DISTANCE LEARNING

Abstract

The purpose of my study was to explore the experiences of senior enlisted military wives and document how the military lifestyle has affected their ability to attain higher education while their servicemember was on active duty. Specifically, my study focused on senior enlisted military wives who have chosen to pursue their higher education through distance learning. The study portrayed experiences of those spouses who are an integral component of today’s military, yet who are often unseen not only in the military world and the civilian sector, but also in higher education. In the study, I explored four research questions:

1) How do the life experiences of a senior enlisted military wife align with the features of a Model Military Wife in the contemporary era as described by Enloe (2000)?

2) How do the challenges and demands of the role of a senior enlisted military wife affect fulfillment of their educational goals?

3) How has the experience of distance learning contributed to transformations for the senior enlisted military wife?

In my study, I documented the narratives of senior enlisted military wives and described their educational journeys. Narrative inquiry allowed the five participants in my study to share their stories of their educational journeys. Their narratives were restoried and two categories of themes emerged:
1) Challenges of the military lifestyle.

2) Opportunities of the military lifestyle.

From these themes, several findings were identified and recommendations determined for the military community and higher education. The experiences of the senior enlisted wives in my study point to a need for more support and a better understanding of the numerous opportunities that are available to help them along their educational journeys. I recommend that institutions of higher learning survey current military spouses to determine what types of programs, services, and support could better assist them with their educational journeys. I also recommended that university personnel be informed of the challenges that military spouses face and understand that this population does not often fit within the mold of a nontraditional student. In addition, I recommend that the military-provided services such as military education centers, libraries, and other offices that assist military spouses in relation to education make an extra effort to inform and discuss better the different education opportunities with the military spouses in their community. Meeting with military spouses to discuss their interests and educational goals is paramount. My study extends the existing literature available about military spouses and ignites interest in military spouse learners as a separate population of learners.
REFERENCES


Transformative Impact of Engaging Early Learners in Science and Literacy on Achievement Outcomes in Grades 1-2 and Beyond¹

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**Introduction and Objectives**

A daunting new challenge for educators is how to achieve the level of rigor for science learning and content-area reading comprehension and writing at early elementary grades as advocated by the Common Core State Standards –ELA (NGAC, 2010) and the Next Generation Science Standards [NGSS] (Achieve, 2012). In addressing the challenge, the present research project reports on the three-year findings of an initiative funded by the National Science Foundation (NSF DR-K12) that links core science concepts and common core English/Language Arts standards within an integrated instructional model implemented across grades 1-2 classrooms. The major objective of the study was to demonstrate the effectiveness of the integrated science/literacy model (Primary Science IDEAS) on early learners’ achievement outcomes in science and literacy. A secondary objective was to offer an evidence-based rationale for transforming elementary school curriculum policy to increase allocated instructional time for integrated science/literacy instruction in grades 1-2 as a way to support later learning in science and comprehension in grade 3 and beyond.

**Background and Theoretical Perspectives**

As an integrated instructional model, Primary Science IDEAS addresses two critical and persistent educational problems, namely student achievement in science learning and reading comprehension at the elementary school level (National Research Council [NRC], 2014; Institute of Education Sciences [IES], 2016; Institute of Medicine [IOM] and NRC, 2015; National Center Educational Statistics [NCES], 2012, 2013). In considering the NRC reports and the national statistics in science and reading achievement just cited as well as recommendations associated with Next Generation Science Standards [NGSS] (Achieve, 2013) and the Framework for K-12 Science Education (NRC, 2011), it is clear the decades of reform have done little to address desired student learning outcomes in science and literacy.

Beginning with NGSS and the Science Framework, there has been a resurgence of emphasis and a growing consensus suggesting the importance and far-reaching impact of early science learning on proximal and distal achievement outcomes and on student potential economic success resulting from early exposure to science. Specifically, NGSS and the National Science Teachers’ Association (NSTA) have suggested that “young children have the capacity for conceptual learning and the ability to use the skills of reasoning and inquiry as they investigate how the world works.” (NSTA, 2014 citing from NRC 2007, 2012). A recent publication sponsored by the National Science Foundation (NSF) - *Fostering STEM Trajectories* - (Cements, et al., 2016) strongly advocates for the importance of starting and continuing early (pre-K) experiences with STEM subjects. Others (e.g., Duschl et. al., 2007; IOM & NRC. 2015; Lee et al., 2016; Morgan et al, 2016; Tai et al., 2006) strongly suggest that not only are young learners capable of learning science, but that without such educational opportunities, achievement gaps will begin early and persist over the span of elementary school years, may impact educational achievement outcomes beyond elementary school and career-related opportunities.

What is not addressed by science educators is what happens when early learners have neither experienced science directly nor built the adequate background knowledge (i.e., vocabulary) or reasoning skills that result directly from science instruction. Further, lack of exposure to early science learning denies students opportunities to use scientifically-informed language that supports concept learning and the beginning development of scientific literacy and the practices of science. In turn, lack of development of rich and varied background knowledge which serves as prior knowledge, has a negative impact on reading.
comprehension, in general, and content-area reading comprehension, more specifically. Interestingly, large scale data analyses of STEM learning (IOM & NRC, 2015; Morgan et al., 2016; Romance & Vitale, 2016) reveals the direct impact and the importance of early preparation in science on later student learning and achievement in STEM and in reading, and in terms of economic factors and workforce readiness.

**National Standards in Science and English-Language Arts.** In science education, two highly-related and influential documents are providing both general guidance for and specific descriptions of the standards to be taught in science. First, the Framework for K-12 Science Education (National Research Council, 2012 [NRC]) calls for students to be actively engaged in exploring phenomena linked to a coherent set of disciplinary core ideas (DCI) and cross-cutting concepts (CCC) while using the practices of science (POS) (e.g., asking questions, constructing explanations, engaging in argument from evidence) (Banilower et al., 2013) to develop deeper, more meaningful understanding. Second, the NGSS places significant demands on science learning at every grade level (NRC, 2014, p. 45). In doing so, NGSS identifies then develops what can be described as a progression of understanding of DCI’s across each grade span (e.g., k-2, 3-5, 6-8, 9-12) resulting in students developing progressively more sophisticated ways of knowing and understanding the core ideas of science. Further, NGSS also identifies broadly-construed CCC (e.g., structure and function, energy, systems) which, when linked to the DCI’s and the POS, provide a newer vision of how to teach science. For example, as students explore phenomena, they need experiences enabling them to link the disciplines of science (e.g., energy serves as the explanation for phase change in matter, movement of the Earth’s crust, and atmospheric changes) in a manner that fosters coherence and depth of understanding. In supporting both the Framework and the NGSS, students need coherent curricular materials and forms of classroom instruction (including use of multiple science texts, opportunities to connect investigations to concept-based explanations) that support an interdisciplinary approach to both science teaching and learning (Harris, et al., 2015). Finally, active engagement of elementary students in science is supported by current views of learning (Duschl, et al., 2007) that suggest students have substantial knowledge of the natural world which, in turn, provides a strong foundation for science instruction and that what young children are capable of learning depends primarily on the combination of prior experiences brought to the classroom (i.e., not age- or grade-level) and the adequacy of the instructional approaches including students reading and writing more about what it is they already know (Romance & Vitale, 2010, 2011).

Similarly, in the reading education, the CCSS-ELA offer an interdisciplinary perspective in terms of what leads to and constitutes reading comprehension. The underlying rationale is suggestive of the importance of providing students with a rich array of reading materials and experiences with increasing emphasis on students reading with understanding progressively more sophisticated literary sources including an increase in time allocated to informational sources. When the general intent of NGSS is combined with CCSS-ELA, there results a synergy that supports advancing the learning outcomes for all students.

In addition, there is a plethora of related literatures that approach meaningful learning as a process that results in the building of age-appropriate conceptual understanding in areas such as science (Bransford et al., 2000) and that demonstrate how the integration of literacy (early reading fluency, comprehension, discourse, and argumentation) within science instruction increases science learning and reading comprehension development (Pearson et al., 2010; Romance & Vitale, 2012a). Further, both science and reading researchers are actively building a substantial evidence-base in support of an integrated model of instruction (Romance & Vitale, 1992, 2001, 2006, 2010; Vitale & Romance, 2011a, b, 2012; Duke, 2000a, 2000b, 2010; Guthrie et al., 2004; Pearson et al., 2010; Van den Broek, 2010; Yore et al., 2004).

Other interdisciplinary research involving an integrated approach to science and literacy suggests that rich hands-on learning experiences in science can impact science learning and literacy development (French, 2004; Romance & Vitale, 2001, 2012; Smith, et al., 2006). Specifically, research suggests that
reading helps build background information, close gaps in knowledge, and clarify what otherwise might not have been learned or understood (Cervetti & Pearson, 2009; Hapgood et al., 2004; Palincsar & Magnusson, 2001; Pearson et al., 2010). As conceptual knowledge deepens, student understanding of natural phenomena being studied through engagement in the practices of science also increases. In fact, literacy researchers have noted the similarities between the practices of science and literacy strategies such as observing, communicating through reporting data, and constructing evidenced-based arguments (Cervetti, et al., 2009). The growing body of interdisciplinary research offers promising ideas in support of the new recommendations from CCSS and NGSS.

**Instructional Model Overview**

The grade 1-2 Primary Science IDEAS Model is composed of six, interactive instructional elements: (a) hands-on, science investigations, (b) a reading comprehension strategy, (c) writing/journaling, (d) propositional concept mapping, (e) applications, and (f) accessing prior knowledge/cumulative review strategies. The Model is implemented across the school year and involves using daily, 45-minute time segments organized around core science concept clusters (matter, its phases and properties, force and motion [push/pull], forms/transfer of energy, changes in matters; living things, earth science). In turn, addressing these core concepts through hands-on activities serves as a meaningful context for integrating key aspects of literacy within science instruction (e.g., teacher read-alouds, teacher-guided student reading, student reading of age-appropriate science materials, writing/journaling, summarization, cause/effect relationships) which focus on and deepen student understanding of science concepts (French, 2004).

**Reading in Science.** Primary Science IDEAS describes reading comprehension as meaningful understanding. The instructional model employs a multi-part reading comprehension approach in which teachers (a) first read and reflect upon what students will be reading, and then teachers (b) think about and identify what they know about the topic that might be helpful in guiding conversation/questions with the students, (c) employ a guided reading, whole group approach in which a paragraph is read aloud (depending on levels of fluency) and each sentence is discussed for meaning and linked to the previous sentence and to any relevant student prior knowledge, (d) link the ideas across each paragraph, and (e) finally engage students in summarizing the page. The focus of reading within this model is upon student understanding of the concepts to be learned. Across multi-day lessons, students have additional opportunities to read across multiple sources, thus learning more about what it is they already know. In supporting comprehension, the Primary Science IDEAS model links all aspects of instruction (e.g., 6 elements of the model) to the core ideas (DCI’s).

**Writing/Journaling in Science.** Within the Primary Science IDEAS Model, students engage in a variety forms of writing in science which are added to their science journals, science folders, or become elaborate classroom displays. For example, in exploring phenomena, students may first create a picture of their investigation, then they discuss what they observed followed by learning how to link their observations to the underlying core science concept (e.g., we observed how drops of water on the wax paper remained as droplets, how when the string was wet, the water was able to slide down the string moving from drop to drop). The evidence shows that water droplets are attracted to each other because of cohesion.

Another important form of writing emphasized in Science IDEAS is student use of a concept map as a blueprint to guide more coherent forms of student writing. Students are guided by the teacher in creating a concept map as a summary for a series of lessons. Then, depending upon grade-level appropriateness, teachers can model for the students how to use the map to write sentences, and eventually paragraphs.

**Method/Data Sources**

The primary objective of this three-year NSF/DRK-12 project was (a) to replicate the direct
effects of the model in grades 1-2 in years 1-2-3 and then, in year 3, (b) to assess the transfer of the grade 1-2 effects to grade 3 in year 3.

The specific project research questions were:

- Was the model able to demonstrate direct effect on student achievement in science and reading (vs demographically comparable controls)?
- Was the model able to demonstrate transfer of effects in science and reading from grades 1-2 to grade 3 paralleling previous transfer found from grades 3-5 to grades 6-8?

Reported here are the results of the 3-year National Science Foundation project in terms of the direct effects of the Primary Science IDEAS model versus traditional reading and science instruction on the Iowa Test of Basic Skills Subtests (ITBS – Reading and Science) and, in Year 2, also on an objective-referenced science test.

**Sample and Setting.** The research involved 21 demographically similar elementary schools (9 experimental, 12 control) with N=168 classrooms in a large (185,000), diverse (African American: 29%, Hispanic: 19%, White: 45%, Free Lunch: 40%) school district in Florida.

**Research Design/Instruments.** Using a quasi-experimental design, year 1 of the project assessed the impact of the Model on learning in science and reading, while documenting teacher classroom fidelity. Both experimental and control schools followed the same District-adopted Reading/ Language Arts and Science curricula. Multilevel analyses (Level 3: schools, Level 2: teachers/classrooms, Level 1: students) using HLM 7 tested the effects of the model on student performance outcomes using ITBS Science and Reading. In addition, in years 2 and 3, project-constructed objectives-based science tests were administered in grades 1 and 2.

**Results**

Table 1 summarizes the results of the year 1 and year 2 project findings. In year 1, findings from a six-month implementation found significant differences in adjusted means between students in experimental and control schools (+0.51 Grade Equivalent (GE) in science, +0.26 GE in reading). Observational data indicated that the majority of experimental teachers (92%) implemented the Model with fidelity on a consistent basis.

In year 2, findings from a year-long implementation again found significant differences in adjusted means between students in experimental and control schools (+0.53 GE in science, +0.11 GE in reading). Observational data across 2-3 years indicated that a majority of experimental teachers (81%) implemented the Model with fidelity on a consistent basis. One possible factor explaining the differences in the level of fidelity is that many of the best grade 1-2 experimental teachers were moved to grades 3-5 and replaced with teachers transferred from grades 3-5 to grades 1-2. Year 2 analyses of the objective-referenced science tests showed that students in experimental schools performed significantly better, although the differences were not large (+4%). Year 3 findings again found significant differences in
adjusted means between students in experimental and control schools (+0.54 GE in science, +0.11 GE in reading). Finally, the project will report at the time of the conference the degree to which the positive achievement effects were transferred to grade 3 students without any further project intervention.

Discussion/Implications

The engagement of primary children in meaningful science learning linked to reading and writing is a synergistic approach that in the present project accelerated student achievement in both reading comprehension and content-area learning in science. Project findings align with a growing body of research evidence that early learners have reasoning abilities and can develop core concept learning abilities that impact future science learning, reading comprehension, and career opportunities. Further, the transfer of direct effects to students in grade 3 provides an evidence-based rationale for transforming present approaches that teach science and literacy as separate subjects in primary grades. The Model is also feasible to implement in regular classrooms settings across a wide range of student demographics, thus addressing another key issue in standards-based reform.

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References


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Magnet Schools: Current Research and Planning for the Future

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3. Abstract

This panel plans to include four presentations with the first two presentations covered in the first proposal.

Magnet Schools: Factors That Contribute to Diverse Student Enrollment and Academic Success
Gladys Park and Robert Brooks (40 minutes)

Magnet Schools, as the first major form of public schools choice in the United States based on racial, ethnic and socio-economic equity and excellence, have provided the landscape for excellence schools, and incubators of educational change throughout our county since the 1960’s. This is a time in our nation when division by race, ethnicity and socio-economic status is on the front page of every newspaper throughout the country. It is a time when racial and economic biases lead to deaths
and protests. It is a time when demographics of our county are changing rapidly and when we desperately need constructive ways to meet the challenges of a changing society and to celebrate our diversity rather than revert to re-segregation in our everyday lives and in our schools.

Public schools of choice, and magnet schools in particular, provide a strong incentive towards achieving a cohesive diverse society. Magnet school goals go beyond test scores or even high school graduations! The experiences of children from diverse schools go with them into adulthood, to where they live, the jobs they take and their success in a multiracial society. Magnet schools have attracted and sustained students through interest, motivation, relevant curriculum, and improved achievement.

Based on interviewing magnet school students, teachers and alumni, this presentation will discuss why magnet schools are needed, why they work and specific factors of successful magnet school districts including policies, innovative themes, sustainability/student retention, and Magnet School Standards of Excellence. Factors discussed include the importance of fidelity of theme implementation throughout the school, and inter-district desegregation plans including the merging of city and county schools.

The following is a list of methods/data and theoretical issues that will be addressed:

- Magnet School factors that enable successful magnet schools to achieve the goals of attracting, supporting and retaining students to achieve racial, ethnic and socio-economic integration.
- Academic improvement, narrowing the achievement gap for all subgroups, and innovation and theme integration in magnet school development.
- Factors of successful magnet school districts such as policies, innovative themes and insights of magnet school students, teachers and alumni will be discussed. Reviews of policies, themes, sustainability and student retention based on research and data from exemplary magnet districts including inter-district desegregation plans: Hartford CT, merging of city and county schools and magnet schools in Chattanooga TN, and METCO in Boston, in which minority students attend suburban mainly white and middle income schools.
- Data on how themes have attracted and sustained students and programs long term reflecting the importance of fidelity of implementation of the theme throughout the school. Magnet schools have been called "incubators of innovation." Through innovative themes such as STEM; Museum studies; etc. magnet schools have attracted and sustained students through interest, motivation, relevant curriculum, and improved achievement.
- Sustainability and Student Retention: A framework for sustaining school-wide diversity and student retention will be presented from the perspective of "stakeholders’ commitments.” Six levels of commitment are offered to define “key indicators” of long-term success. A “systems approach” will be offered defining Student Success and Supports; Student
and Family Engagement; Recruitment; Teaching and Learning; Magnet Pathways; Stakeholder Commitments; and Retention Foci—recruitment, relationships, relevance.

- The National Magnet School Certification Program, created by Magnet Schools of America, is a process to recognize the most exemplary magnet schools in the nation based on five pillars of magnet schools and ten National Magnet School Standards of Excellence. The standards define the essential elements and characteristics of high-quality magnet programs and offer assistance to schools with professional development.

Recent research and the data regarding successful magnet schools and districts help us to identify those factors that enable magnet schools to develop integrated learning environments for all students, and implement unique and successful themes that motivate students from different racial, ethnic and socioeconomic backgrounds. These magnet schools promote high achievement for students.

In light of the re-segregation of schools throughout our country, the changes in our nation’s demographics, and racially motivated incidents in our society, this magnet symposium is significant for policymakers as well as practitioners as the presenters explore those factors that lead to successful magnet schools and successful magnet students. In addition, these sessions open possibilities for further research to enable researchers to delve more deeply into those factors that make excellent magnet schools work.

A Rigorous Analysis of Magnet Schools through a Quasi-Experimental Lens: Desegregation, Integration and Student Achievement
Jia Wang and Kate Riedell (20 minutes)

Student diversity and academic achievement are two goals that are grounded in educational reform of magnet schools originating as a response to court-ordered urban school desegregation efforts. Characterized by a thematic curriculum, or instructional approach, as well as voluntary enrollment from both the local and outlying neighborhoods, magnet schools are often the result of a neighborhood school conversion in an effort to increase racial integration and academic achievement (Betts et al., 2015). With the continued expansion of magnet schools across the country, it is critical that all stakeholders be provided with a comprehensive review of the impact of magnet schools on school desegregation and integration, as well as student achievement.

Reviewing the existing literature found that both descriptive and lottery-based studies on magnet schools showed positive results, while the vast number of magnet studies fall in the middle of these two extremes, these quasi-experimental studies. These latter studies show very mixed results – in some cases positive, in others no effects and still in others negative effects relative to control students and schools.

This current analysis of the literature will provide an in-depth analysis of all quasi-experimental studies of magnet schools to date, with a particular emphasis on the evaluative criteria employed, along with the requisite results. Additionally, a critical examination of the remaining components of each study (e.g. geographic
location, number of magnet schools, and grade level) will be undertaken in conjunction with the evaluative criteria and results.

Researchers and policy makers will be able to capitalize on this rigorous analysis by clearly understanding not only what has not been addressed in the literature to date, but also gaining critical information on what needs to be attended to in greater detail, particularly in regards to the evaluative criteria used. Analysis of each component of the methodology of each study will lend critical dialogue to how the results should be interpreted and their potential impact on current and future school reforms. Thus, this study will serve as a critical, and comprehensive tool for multiple stakeholders who serve to shape the field of education and magnet schools.

What should be the Future Directions of Magnet School Research?
Joan Herman (20 minutes)

Magnet schools have evolved since they first were instituted nearly 50 years ago as a response to civil rights concerns for school desegregation. From an exclusive focus on promoting the racial integration of schools, the mission of magnet schools has grown. The accumulated research evidence shows mixed results whether the issue be effects on desegregation or effects on student outcomes. Likewise, studies on magnet school implementation are noticeably absent. Available research leaves a number of issues needing attention.

Future research might explore the continuing evolution of magnet schools’ goals in light of legal mandates and new MSAP requirements (e.g. Goldring, 2009). How effective are magnet schools relative to these new goals?

In this new era of school choice, it also seems important to examine how parents are responding. How and why do parents choose magnet schools? Do they differentiate magnet schools from other choice options? Do race-neutral admission policies affect choice (Smrekar, 2009a & 2009b)? Why has there been a reduction of White parents choosing city magnet schools compared to past years (Grooms & Williams, 2015).

Siegel-Hawley & Frankenberg (2013) observe the limited outcome measures that are used to evaluate magnet schools, ignoring those that relate to specific magnet school themes and objectives (Blank, 1989)? Does magnet school effectiveness vary by magnet program type and/or choice of outcome measure?

Additionally, follow-up studies are needed to examine the long-term effects of magnet school experiences, for example to follow up on findings related to career magnets’ effects on career planning (Flaxman, Guerrero, & Gretchen, 1997) and future educational goals (Bank & Spencer, 1997).

Our earlier study on magnet implementation (Wang et al., 2014) raises a number of implementation considerations. What aspects of magnet school implementation relate to the observed variability in outcomes? Extensive professional development and a sustained commitment to magnet theme integration appear to be key strategies for success, as also demonstrated by the broader professional development literature (Bryk, 2010; Bryk, Camburn, & Louis, 1999). Grounding federal programs in effective magnet school models seems
essential to future success, particularly for schools that serve high concentrations of segregated racial minorities.
References


Title of the submission: Avoiding the “inexorable push toward homogenization” in school choice: Education savings accounts as hedges against institutional isomorphism

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Abstract:
The assumption that rational choice dynamics will lead to diversity of school supply is at the heart of K-12 school choice arrangements. Yet as the field of school choice becomes more established, there will be the “inexorable push toward homogenization” as a result of the coercive isomorphism created through regulations, and as parents become pulled toward a standard model of schooling as a result of the unwritten normative ideas of school structure and function. If vouchers, tuition tax credit scholarships, and education savings accounts become more significant players in the education market in the years to come, isomorphism, if it occurs, will limit the utility of school choice. Using an organization theory framework and drawing on experiences from the charter sector and the Louisiana Scholarship Program, this paper considers whether education savings accounts might encourage less isomorphism of practice among participating private schools than school choice options such as vouchers and tuition tax credit scholarships.
Private school choice programs in the form of vouchers, opportunity scholarships, and tax-credit scholarships are expanding rapidly across the U.S. and the design of recently enacted programs expand access to a greater number of students than ever before. The success of the educational marketplaces created by such programs depends on the quality and diversity of school providers, yet little is known about school leaders’ concerns about participating in state-funded programs of this nature. This four-state survey of private school leaders offers insight into operators’ perceptions of large-scale school choice programs with broad-based eligibility. School administrators, headmasters, principals, and founders share the challenges they face when attempting to maintain private school autonomy and independence in a school choice environment, document which program regulations are particularly tricky to accommodate, and share insights on program design to enhance participation by high-quality operators. Subgroup analyses investigate differences in concerns shared by religious and secular providers, school age, and principal tenure.
TEACHERS’ DISPOSITION TO INCLUSIVE EDUCATION PRACTICE AT THE PRIMARY SCHOOL LEVEL IN OSUN STATE

BY

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Abstract

Inclusive education is a practice in education in which special needs pupils learn together with their non-special needs peers. The practice is yet uncommon in Africa although Nigerian teachers are gradually being prepared for its implementation. This study employed a survey research design to investigate teachers’ disposition to the practice of inclusive education at the primary school level. The sample was 225 primary school teachers, with adequate qualification and gender representation and varied year of teaching experience. The results showed that the teachers were 54.5 percent positive and 45.5 negative to the practice of inclusive education. A 2x3x3 factorial analysis of variance showed that the grouping (gender, teaching experience, qualification) was significant \( F_{(17, 224)} = 1.737; P < .05 \). Neither of the three factors nor their interactions was significant. The results were fully discussed and the recommendation that teachers should be further trained on the philosophy and strategies for implementing inclusive education.

Key words: Inclusive education, primary schools, teachers, disposition, gender

Introduction

All over the world, there is a general move by different nations to improve on the state of their systems of education in order to achieve improved learning and other learning outcomes. The move has the general objective of providing education that will benefit every citizen with ability or disability; boy or girl, from rich or poor home; from majority or minority community. The search for systems of education that will provide for the nations desirable educational outputs precipitated the ongoing educational reforms that is being witnessed all over the world since the last two to three decades (Evans and Lunt, 2010). This educational reform has brought to the fore an educational approach or system that is regarded today as inclusive education (Ferguson, 2008). The system has been embrace mainly in the developed world, by countries like the United States of America, Canada, Australia, and New Zealand (Wah, 2010)

The term inclusive education is difficult to define but various scholars have made attempts to synthesize definitions that could be used to attain an understanding of what the term means. Wanjoji (2013) summarized the definition as: the full integration of learners with and without special needs into the same classrooms and schools with their peers, thereby exposing them to the same learning opportunities. A comprehensive definition has been taken from the works of Stainback and Stainback, (1996): Inclusive education is a practice in education that is employed in some countries to educate students with special needs alongside their peers without special needs. The practice is not common in the developing countries but it is practiced in some developed countries such as the United States of America and Sweden. In this model of
instruction, students with special needs spend most of their time with non-disabled students (Stainback and Stainback, 1996). These authors further observed that inclusion rejects the use of special schools or classrooms to separate students with disabilities from students without disabilities.

PSBparents.org (2003-2017) opined that inclusive education happens when children with and without disabilities participate and learn together in the same classroom, and in the same neighborhood schools. PSBparents.org observed that research report has revealed that when a child with disability attends classes alongside peers who do not have disability, good things happen. They strongly emphasized that when children are educated together, positive academic and social outcomes occur for the children involved. The organization posited that inclusive education is based on the idea that every child and family is valued equally and deserve the same opportunities and experiences.

Inclusive education is viewed by some organizations and researchers as important including Haigh (2010), PSBparents.org (2003-2017). They put forward a long list containing the benefits of inclusive education. These include the making of meaningful friendship, increased academic and social interaction, increased appreciation and acceptance of individual differences, greater access to general curriculum, increased achievement, respect for all, opportunity to master activities by practicing and by teaching others, and greater academic outcomes. Haigh, (2010) proposed an international curriculum that will suit all learners both local and international whether at school or elsewhere.

The original practice in educational setting, which still remains current in Nigeria today is that physically able students and those with disabilities are put in separate schools; the physically able pupils go to the regular schools and those with disabilities go to special education institutions. Available primary schools today in Nigeria are too few to take up all children of primary school age. Moreover, as a consequence of the insurgency in the north-eastern part of the country, many communities remain displaced along with thousands of children. Both the children and their parents are afraid to return to their villages and schools for the fear of insurgents and their practice of abducting school girls. The need to find school places for thousands of those children displaced by the insurgence, and also others with special needs who are not in school or abandoned in special education institutions without resources, make the need for inclusive education attractive.

Inclusive education has been regarded by many researchers as being important. This position is evidenced by numerous researches that had been conducted in the area and published in reputable journals in Europe, America and Australia. Some of these include: Stainback and Stainback, (1996); Biklen (2000); Ferguson, (2008)); Miles and Singal (2009); Anke de Boer, Piji, &Minnaert (2010), Evans and Lunt, (2010), and many others. The central issue is inclusive education: attitudes, outcomes, curriculums and the reviews of empirical research literature. The conclusion that can be drawn from the various research reports seem to lead to the position that
inclusive education is worth practicing. There is however a strong view the teachers’ attitudes play a significant role in determining the eventual outcomes of inclusive education programme (Avramides, Bayliss and Burden, 2000; Anderson, Klasson & Georgiou 2007).

There are some researchers who oppose inclusive education practice on the ground that “without specialized instruction, disabled students would simply not learn and their futures would be sacrificed”. Ferguson, (2008) credited this assertion to Funch and Funch, (1994); Kauffman, (1999); and Sasso, (2000). There is some truth in that assertion that special needs pupils require specialized instructional aid for any meaningful learning in schools. However, if such needs are provided in regular schools, the practice of separating young school children on the basis of needs will then be unnecessary. Evans and Lunt (2010) asserted that the numerous school reforms and restructuring has not changed much. The authors believe that what the reforms and restructuring managed to change is “what things are called”. They further opined that what really changes are the old assumptions and practices that have governed schools for a century or more.

Nigeria ranks high among the nations of the world with low literacy levels. This problem is now compounded by the large numbers of children who are out of school for various man-made problems which are beyond the capacities of individual families to contain. The need therefore to search for “quick fixes” in the interim, for this educational problem becomes urgent. It is for this reason and other attributes of inclusive education which abound in literature that this study is premised.

**Statement of the problem**

There is urgency today, to find school places for all Nigerian primary school age children who are out of school in various parts of the country. Since funds are scarce, as Nigerian economy is in depression, the cost of building sufficient number of new schools to make up for the short fall is impossible for the nation to fund. The need arises to put together in available neighborhood schools as many children (with or without special needs), as each of the schools can contain and deploy available teachers and resources to these schools so that the children can start learning in a situation of inclusive education. The problem of this study therefore is to investigate primary school teachers’ disposition to the practice of inclusive education in Nigerian primary schools.

**Research questions**

In this study, three research questions were employed to explore the dispositions of primary school teachers to the practice of inclusive education in Nigerian primary schools. The research questions are as follows:

1. What is the nature of teachers’ dispositions to the practice of inclusive education at the primary school level?
2. Do male and female teachers have the same or different disposition to inclusive education practice?
3. Does the educational qualification of teachers affect their disposition to inclusive education practice?

Methodology

This study is a descriptive survey involving primary school teachers from two senatorial districts in Osun state, Nigeria. A 2x3x3 factorial matrix was adopted for matching the variables (gender, qualification and years of teaching experience). The sample size was 225 teachers who willingly completed and returned the research instrument. The sample consisted of 116 males and 109 females. The distribution of respondents according to their qualifications is: National Certificate in Education (NCE) contributed 62 teachers; BEd/BA/HND provided 103 teachers; MEd/MA/PhD contributed 30 teachers for the study. For years of teaching experience, the distribution is: Inexperienced teacher (0 - 5 years) had 62 teachers; moderately experienced teachers (6 – 10 years) contributed 109 teachers; and very experienced teachers (11 year and above) contributed 55 teachers. This design was influenced by the study of Anke de Boer et al. (2010) that reviewed 26 most important empirical studies on the subject of this study.

The instrument was a 22 item questionnaire of the Likerts’-format with four options of: Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD). The instrument was scored as follows: for positively worded stem, mark distribution was SA= 4, A=3, D=2, SD=1. Negatively worded stem was scored in the reverse (Gall, Borg & Gall, 2007). The instrument measured teachers’ disposition to the practice of inclusive education and has Cronbach’s alpha coefficient of .71.

Method of data analysis

Teachers’ disposition was analyzed by computing simple percentages after collapsing the scale into two, positive and negative responses. The total numbers of positive or negative items were then counted. Finally, the percentage of the total number of questionnaire items that were positive or negative was computed. The effect of gender, qualifications of teachers and years of teaching experience on disposition of teachers to inclusive education was evaluated by employing analysis of variance technique.
Result:

Research question 1 states: What is the nature of teachers’ dispositions to the practice of inclusive education at the primary school level?

The frequency of teachers responses to questionnaire items as collapsed in Table 1 are displayed in the Table below.

Table 1: Teachers disposition to questionnaire items (N = 225)

<table>
<thead>
<tr>
<th>S/No</th>
<th>Item Statement</th>
<th>Agree(+) F</th>
<th>%</th>
<th>Disagree(-) F</th>
<th>%</th>
<th>Ps</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am trained for inclusive education practice</td>
<td>52</td>
<td>23</td>
<td>173</td>
<td>77</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>I need additional training to be relevant for inclusive education practice</td>
<td>165</td>
<td>73</td>
<td>60</td>
<td>27</td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>Most primary school teachers do not have the essential skills for inclusive education practice.</td>
<td>121</td>
<td>54</td>
<td>104</td>
<td>46</td>
<td>+</td>
</tr>
<tr>
<td>4</td>
<td>Most practicing teachers are yet to acquire competence in executing inclusive education.</td>
<td>153</td>
<td>68</td>
<td>72</td>
<td>32</td>
<td>+</td>
</tr>
<tr>
<td>5</td>
<td>Inclusive education is not part of current teacher training curriculum in Nigeria.</td>
<td>111</td>
<td>49</td>
<td>114</td>
<td>51</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>I cannot cope with teaching children with special needs.</td>
<td>96</td>
<td>43</td>
<td>129</td>
<td>57</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Nigerian classrooms are not suitable for the practice of inclusive education</td>
<td>153</td>
<td>68</td>
<td>72</td>
<td>32</td>
<td>+</td>
</tr>
<tr>
<td>8</td>
<td>My school is equipped for inclusive education.</td>
<td>44</td>
<td>20</td>
<td>181</td>
<td>80</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>This country is not ripe for inclusive educational practice.</td>
<td>63</td>
<td>28</td>
<td>162</td>
<td>72</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>Admitting children with special needs in regular schools will bring down educational standards</td>
<td>131</td>
<td>58</td>
<td>94</td>
<td>42</td>
<td>+</td>
</tr>
<tr>
<td>11</td>
<td>I prefer teaching children with special needs.</td>
<td>47</td>
<td>21</td>
<td>178</td>
<td>79</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>I prefer teaching in regular schools to teaching in special education schools</td>
<td>179</td>
<td>80</td>
<td>46</td>
<td>20</td>
<td>+</td>
</tr>
<tr>
<td>13</td>
<td>I prefer sending my children to regular schools to inclusive education schools</td>
<td>169</td>
<td>75</td>
<td>56</td>
<td>25</td>
<td>+</td>
</tr>
<tr>
<td>14</td>
<td>I have little regard for teachers in special education schools</td>
<td>45</td>
<td>20</td>
<td>180</td>
<td>80</td>
<td>-</td>
</tr>
<tr>
<td>15</td>
<td>Inclusive education should not be practiced in my community</td>
<td>156</td>
<td>69</td>
<td>69</td>
<td>31</td>
<td>+</td>
</tr>
<tr>
<td>16</td>
<td>I am efficient in teaching both normal and special needs children</td>
<td>58</td>
<td>26</td>
<td>167</td>
<td>74</td>
<td>-</td>
</tr>
<tr>
<td>17</td>
<td>Both teachers and pupils cannot provide the moral support that inclusive education requires</td>
<td>113</td>
<td>50.2</td>
<td>112</td>
<td>49.8</td>
<td>-</td>
</tr>
<tr>
<td>18</td>
<td>Most school teachers do not believe that normal and special needs pupils can learn together</td>
<td>78</td>
<td>35</td>
<td>147</td>
<td>65</td>
<td>-</td>
</tr>
<tr>
<td>19</td>
<td>I believe that Nigerian primary schools today are not suitable for inclusive education</td>
<td>150</td>
<td>67</td>
<td>75</td>
<td>33</td>
<td>+</td>
</tr>
<tr>
<td>20</td>
<td>My school has no facilities for introducing inclusive education</td>
<td>114</td>
<td>51</td>
<td>111</td>
<td>49</td>
<td>+</td>
</tr>
<tr>
<td>21</td>
<td>Most primary school teachers in schools at present have no competence and skills for executing inclusive education</td>
<td>162</td>
<td>72</td>
<td>63</td>
<td>28</td>
<td>+</td>
</tr>
<tr>
<td>22</td>
<td>Inclusive education is alien to our culture</td>
<td>87</td>
<td>39</td>
<td>138</td>
<td>61</td>
<td>-</td>
</tr>
</tbody>
</table>

Summary: 12+ve 54.5 10-ve 45.5

Key: Ps = Nature of majority disposition, positive (+) or negative (-)
The data in Table 1 show that the teachers were positively disposed to twelve items on the questionnaire or 54.5 percent of the whole, while they were negative to ten items or 45.5 percent. This result has revealed that teachers’ dispositions to the practice of inclusive education are more positive than negative if this instrument is used as the measure.

**Research question 2:** Do male and female teachers have the same or different disposition to inclusive education practice? The answer to this research question is contained in Table 2 which contains the analysis of variance according to gender, teaching experience and years of teaching.

Table 2: Analysis of teachers’ disposition according to gender, teaching experience and years of teaching qualification

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>906.439a</td>
<td>17</td>
<td>53.320</td>
<td>1.737*</td>
<td>.039</td>
</tr>
<tr>
<td>Intercept</td>
<td>371941.566</td>
<td>1</td>
<td>371941.566</td>
<td>12114.491</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>32.251</td>
<td>1</td>
<td>32.251</td>
<td>1.050</td>
<td>.307</td>
</tr>
<tr>
<td>Experience</td>
<td>27.733</td>
<td>2</td>
<td>13.867</td>
<td>.452</td>
<td>.637</td>
</tr>
<tr>
<td>QUALIFICATION</td>
<td>99.228</td>
<td>2</td>
<td>49.614</td>
<td>1.616</td>
<td>.201</td>
</tr>
<tr>
<td>Gender * Experience</td>
<td>36.779</td>
<td>2</td>
<td>18.389</td>
<td>.599</td>
<td>.550</td>
</tr>
<tr>
<td>Gender * QUALIFICATION</td>
<td>130.294</td>
<td>2</td>
<td>65.147</td>
<td>2.122</td>
<td>.122</td>
</tr>
<tr>
<td>Experience * QUALIFICATION</td>
<td>72.974</td>
<td>4</td>
<td>18.243</td>
<td>.594</td>
<td>.667</td>
</tr>
<tr>
<td>Gender * Experience * QUALIFICATION</td>
<td>235.913</td>
<td>4</td>
<td>58.978</td>
<td>1.921</td>
<td>.108</td>
</tr>
<tr>
<td>Error</td>
<td>6355.356</td>
<td>207</td>
<td>30.702</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>678132.000</td>
<td>225</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>7261.796</td>
<td>224</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
a. R Squared = .125 (Adjusted R Squared = .053); *=significant, P < .05

The result in Table 2 shows that the three factor model employed in this analysis is significant \( F_{(17,224)} = 1.737; \ P < .05 \). However gender of the subject was not significant \( F_{(1,224)} = 1.050; \ P > .05 \). This result implies that men and female teachers have similar dispositions to the practice of inclusive education at the primary school level.

Research question 3 asks: Does the educational qualification of teachers affect their disposition to inclusive education practice? The answer to this research question is to be found in Table 2. The data in Table 2 show that years of teaching experience of teachers did not produce a significant effect on teachers’ dispositions to inclusive education practice at the primary school level \( F(2, 224) = 2.12, \ P > .05 \).

Discussion: This study was conducted to find out what the likely disposition (attitude) of primary school teachers would be if the current situation in the country necessitates the introduction of inclusive education at the primary school level. The results of the study reveal that male and female teachers have similar dispositions. Further analysis showed that their dispositions were not significantly different. This finding is similar to the findings of Anke de Boer et al. (2010).

The data from research question 1 showed that the level of positivity (54%) for this sample to inclusive education was higher than the level of negativity (46%). This result is slightly better than that reported by Anke de Boer et al. (2010) from the review of 26 empirical studies where it was reported that no study reviewed produced clear positive results.

The results from the data analysis of research questions 2 and 3 showed gender had no significant effect on teachers’ disposition to inclusive education practice; so also teaching experience and teachers’ qualification.

Conclusion: Inclusive education is theoretically in practice in many countries around the globe (Haigh, 2010) but practically Evans and Lunt (2010) submit that there are substantial obstacles in the way of full inclusion everywhere. Evans and Lunt (2010) reveal that schools as currently organized are frequently unable to meet the wide range of individual needs. The situation reported here referred to England and Wales where priorities are accorded to human needs of citizens. That being the case it will be unreasonable for us in Nigeria to implement inclusive education in haste. Appropriately trained teachers constitute a major factor in the successful implementation of inclusive education (Ferguson, 2008; PSBparents.org 2013-2017; Anke de Boer, 2010). Nigeria requires engaging in extensive and intensive teacher training for many years before consideration for installing inclusive education can be plausible.

Recommendation: More research work is required now on the nature, requirements, and attitudes of teachers, pupils and society to the establishment of inclusive education in the country. Anke de Boer et al (2010) summarized the requirements for success in implementing inclusive education as training, resources, legislation and teachers.
References


Fuchs, D., & Fuchs, L. S. (1994) Inclusive schools movement and the radicalization of special education reform: *Exceptional Children; 60,* no. 4, 294-309


Haigh, M. J. (2010) Internationalization of curriculum: Designing Inclusive education for a


Demotivating factors of Korean EFL Freshmen Students

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MieAe Jung
(Geumgang University, Korea. majung@ggu.ac.kr)

1. Introduction

According to Dörnyei (2001), demotivation can be defined as “specific external forces that reduce or diminish the motivational basis of a behavioral intention or an ongoing action” (p.143). Demotivation is dynamic and remotivated if external changes are changed. If the demotivation factors are affected by external factors, the external factors should be identified and changed for remotivation to study English (Kim and Kim, 2016, p. 130). The purpose of this study is to investigate which educational factors caused EFL freshman students’ motivation to be reduced while learning English before entering the university in Korea. It can finally provide an English teaching model for improving motivation in learning English in universities. For the research purpose, the research questions are as follows.
(1) What are the main demotivating factors of Korean EFL university students?
(2) Are there significant correlations between the English proficiencies- high, intermediate, low- and demotivating factors?
(3) What factors affect English proficiency scores?

2. Research Methods

2.1 Participants

A total of 224 freshman students participated in this study, with 111 female students and 113 male ones, from two private universities in Korea. One hundred twenty five students were majoring in Liberal Arts and Social Sciences and ninety nine ones belonged to Engineering.

2.2 Demotivation questionnaire

In order to identify the demotivating factors in English learning, the questionnaire developed by Kikuchi and Sakai (2009) was used to ask participants to what degree they felt demotivated in the given situations. The questionnaire developed by them consisted of 35 5-point-Likert type question items. Only 27 out of 35 questions were used for the current study after excluding the 7 ones which were excluded in the analysis for their study.

2.3 Procedure

The study was done during the 1st week of the 1st year in the university before experiencing English classes in the university. The students were asked to answer the background information including gender and majors. The EF standard English test was conducted in order to measure their English proficiency levels. The test consisted of listening,
vocabulary, and reading sections. The participants were then asked to answer the demotivation questionnaire.

2.4 Analysis

To figure out the most affective factors which made the learners reduce their English learning motivation, the descriptive statistics analysis was performed. Furthermore, a confirmatory factor analysis was carried out in order to explore the factor structure of the questionnaire items.

3. Results

3.1 Salient Demotivation Factors

The participants reported that Item 4 (entrance examination oriented lessons) was the most affective factor which reduced their motivation in English learning. Item 3 (grammar focused lessons) was the second most affective factor for their demotivation in learning English. Item 6 (memorization of sentences) and Item 7 (words and phrases) were ranked the third and fifth most affective factor reduced the students’ motivation, respectively. However, the learning equipments were reported the least affective factor for demotivation. Item 20 (lack of computer equipment) was the least affective demotivation factor and Item 22 (lack of the Internet) was the fourth least affective factor of demotivation for the participants.

<Table 1> Ranks of Demotivation Items

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item Number</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>1(%)</th>
<th>2(%)</th>
<th>3(%)</th>
<th>4(%)</th>
<th>5(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>3.61</td>
<td>1.058</td>
<td>3.6</td>
<td>12.1</td>
<td>25.4</td>
<td>37.9</td>
<td>21.0</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3.43</td>
<td>1.086</td>
<td>5.4</td>
<td>17.0</td>
<td>20.5</td>
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<td>13.4</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>3.23</td>
<td>1.140</td>
<td>5.8</td>
<td>23.2</td>
<td>28.1</td>
<td>27.7</td>
<td>15.2</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>3.07</td>
<td>1.126</td>
<td>6.3</td>
<td>29.5</td>
<td>26.8</td>
<td>25.9</td>
<td>11.6</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>3.03</td>
<td>1.118</td>
<td>7.6</td>
<td>27.7</td>
<td>29.0</td>
<td>25.4</td>
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</tr>
<tr>
<td>6</td>
<td>17</td>
<td>2.91</td>
<td>1.063</td>
<td>8.9</td>
<td>29.5</td>
<td>28.1</td>
<td>28.6</td>
<td>4.9</td>
</tr>
<tr>
<td>7</td>
<td>9</td>
<td>2.87</td>
<td>1.139</td>
<td>12.9</td>
<td>27.2</td>
<td>25.4</td>
<td>28.6</td>
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</tr>
<tr>
<td>8</td>
<td>2</td>
<td>2.85</td>
<td>1.072</td>
<td>8.5</td>
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<td>29.0</td>
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<td>6.7</td>
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<tr>
<td>9</td>
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<td>1.11</td>
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<td>25.9</td>
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<td>4.5</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
<td>2.81</td>
<td>1.11</td>
<td>13.4</td>
<td>26.8</td>
<td>30.8</td>
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<td>5.4</td>
</tr>
<tr>
<td>11</td>
<td>18</td>
<td>2.81</td>
<td>1.03</td>
<td>8.5</td>
<td>33.9</td>
<td>30.8</td>
<td>21.9</td>
<td>4.9</td>
</tr>
<tr>
<td>12</td>
<td>16</td>
<td>2.67</td>
<td>1.01</td>
<td>11.2</td>
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<td>34.4</td>
<td>15.2</td>
<td>4.5</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>2.66</td>
<td>0.99</td>
<td>11.6</td>
<td>34.8</td>
<td>32.6</td>
<td>18.3</td>
<td>2.7</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
<td>2.63</td>
<td>1.02</td>
<td>14.3</td>
<td>30.4</td>
<td>37.1</td>
<td>14.7</td>
<td>3.6</td>
</tr>
<tr>
<td>15</td>
<td>25</td>
<td>2.63</td>
<td>1.15</td>
<td>20.5</td>
<td>25.0</td>
<td>31.3</td>
<td>17.9</td>
<td>5.4</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
<td>2.57</td>
<td>1.12</td>
<td>17.4</td>
<td>34.4</td>
<td>28.1</td>
<td>13.8</td>
<td>6.3</td>
</tr>
<tr>
<td>17</td>
<td>10</td>
<td>2.48</td>
<td>0.93</td>
<td>11.6</td>
<td>44.6</td>
<td>30.4</td>
<td>10.7</td>
<td>2.7</td>
</tr>
<tr>
<td>18</td>
<td>27</td>
<td>2.45</td>
<td>1.04</td>
<td>18.3</td>
<td>37.9</td>
<td>28.1</td>
<td>12.1</td>
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</tr>
<tr>
<td>19</td>
<td>24</td>
<td>2.29</td>
<td>0.99</td>
<td>21.0</td>
<td>44.2</td>
<td>21.4</td>
<td>11.2</td>
<td>2.2</td>
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<tr>
<td>20</td>
<td>21</td>
<td>2.25</td>
<td>1.01</td>
<td>25.4</td>
<td>37.5</td>
<td>25.0</td>
<td>10.3</td>
<td>1.8</td>
</tr>
</tbody>
</table>
To figure out the factors constructing the demotivation to study English, a confirmatory factor analysis was conducted using a Varimax rotation analysis. Among 27 question items, 26 ones were examined because the question item 12 was excluded because of the floor effect showing, after examining the mean scores minus one standard deviation fell outside of the range of Likert scale (Kikuchi & Sakai, 2009). Using a confirmatory factor analysis, six factors were extracted and a total of factor loading was 60.702% as shown in Table 2. The reliability coefficients were measured by Cronbach’s alpha. The reliability coefficients ranged from .554 to .863 indicating reasonable internal consistencies.

3.2 Factor Analysis

<table>
<thead>
<tr>
<th>Number</th>
<th>Question Items</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>I could not do as well on tests as my friends.</td>
<td>0.724</td>
</tr>
<tr>
<td>8</td>
<td>I got low scores on tests (such as mid-term and final examinations).</td>
<td>0.701</td>
</tr>
<tr>
<td>10</td>
<td>The pace of lessons was not appropriate.</td>
<td>0.674</td>
</tr>
<tr>
<td>9</td>
<td>I got lost in how to self-study for English lessons.</td>
<td>0.673</td>
</tr>
<tr>
<td>17</td>
<td>English sentences dealt with in the lessons were difficult to interpret.</td>
<td>0.65</td>
</tr>
<tr>
<td>14</td>
<td>Teachers’ explanations were not easy to understand.</td>
<td>0.626</td>
</tr>
<tr>
<td>Factor1</td>
<td>Cronbach α=.834  M:2.72 SD: 0.79</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>The Internet was not used.</td>
<td>0.85</td>
</tr>
<tr>
<td>21</td>
<td>Visual materials (such as videos and DVDs) were not used.</td>
<td>0.827</td>
</tr>
<tr>
<td>20</td>
<td>Computer equipment was not used.</td>
<td>0.784</td>
</tr>
<tr>
<td>23</td>
<td>Teachers made one-way explanations too often.</td>
<td>0.689</td>
</tr>
<tr>
<td>Factor2</td>
<td>Cronbach α=.863  M:2.05 SD:0.76</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Teachers’ pronunciation of English was poor.</td>
<td>0.332</td>
</tr>
<tr>
<td>4</td>
<td>Most of the lessons were entrance examination oriented.</td>
<td>0.79</td>
</tr>
<tr>
<td>3</td>
<td>Most of the lessons focused on grammar.</td>
<td>0.766</td>
</tr>
<tr>
<td>5</td>
<td>I was expected to use (or speak and write) grammatically correct English.</td>
<td>0.727</td>
</tr>
<tr>
<td>2</td>
<td>Most of the lessons focused on translation.</td>
<td>0.604</td>
</tr>
<tr>
<td>6</td>
<td>I was forced to memorize the sentences in the textbooks too often.</td>
<td>0.554</td>
</tr>
<tr>
<td>13</td>
<td>Teachers made one-way explanations too often.</td>
<td>0.547</td>
</tr>
</tbody>
</table>
Factor 3
Cronbach α = .809  M: 3.02 SD: 0.74
15 Topics of the English passages used in lessons were not interesting. 0.805
19 Topics of the English passages used in lessons were old. 0.623
24 Audio materials (such as CDs and tapes) were not used. 0.579
16 English passages in the textbooks were too long. 0.388

Factor 4
Cronbach α = .683  M: 2.44 SD: 0.72
18 A great number of textbooks and supplementary readers were assigned 0.658
27 English questions did not have clear answers. 0.646

Factor 5
Cronbach α = .554  M: 2.63 SD: 0.86
7 I had difficulty in memorizing words and phrases. 0.59
26 Teachers ridiculed students’ mistakes. 0.558
1 I seldom had chances to communicate in English. 0.542

Factor 6
Cronbach α = .582  M: 2.64 SD: 0.78

3.3 A Correlation Analysis between Factors and the Overall English Proficiency

To figure out the correlation between the six factors and the overall English proficiencies, a correlation analysis was conducted. The result is shown in Table 3.

<table>
<thead>
<tr>
<th>Proficiency Levels</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>-.368**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td>-.069</td>
<td>.351**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td>-.088</td>
<td>.463**</td>
<td>.394**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td>-.141*</td>
<td>.422**</td>
<td>.497**</td>
<td>.444**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>F5</td>
<td>-.164*</td>
<td>.417**</td>
<td>.317**</td>
<td>.416**</td>
<td>.386**</td>
<td>1</td>
</tr>
<tr>
<td>F6</td>
<td>-.289*</td>
<td>.555**</td>
<td>.324**</td>
<td>.473**</td>
<td>.358**</td>
<td>.382**</td>
</tr>
</tbody>
</table>

**. p<.01, *. p<.05

As shown in Table 3, there were statistically relationship between English proficiency levels and factors 1(r= -.368), 4(r= -.141), 5(r= -.164), or 6(r= -.289). And also all the six factors have negative correlations with English proficiency levels, which implied that the lower the English proficiencies were, the higher the demotivation factors were.

3.4 Regression Analysis between Factors and the Overall English Proficiency
To estimate how the English proficiency scores were affected by the factors, regression analysis was conducted. The independent variables were six factors and the dependent variable was the English proficiency scores and the results are shown in Table 4.

<Table 4> Regression Analysis Result

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variables</th>
<th>B</th>
<th>β</th>
<th>t-value</th>
<th>p-value</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Proficiency Scores</td>
<td>(constant)</td>
<td>60.898</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 1</td>
<td>-7.562</td>
<td>-.436</td>
<td>-5.697***</td>
<td>.000</td>
<td>.625</td>
<td>1.599</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>3.578</td>
<td>.193</td>
<td>2.619**</td>
<td>.009</td>
<td>.675</td>
<td>1.481</td>
<td></td>
</tr>
</tbody>
</table>

R=.447, R²=.199, adjusted R²=.185, F=13.635, p=.000, Durbin-Watson=1.787

The results showed that factor 1 (t=-5.697, p<.001) and factor 3 (t=2.619, p<.01) affected English proficiency scores. To figure out the importance level of effects of factors on English proficiency scores, the standardized regression coefficient β values of factor 1 and 3 were compared. It showed that factor 1 (β=-.436) was more effective than factor 3 (β=.193). Therefore, it implied that the higher Factor 1 among the six factors was, the lower English proficiency scores were. However, the higher the mean scores of factor 3 were, the higher English proficiency scores were.

References

ABSTRACT

This essay discusses how students participating in two interdisciplinary courses (offered in the summer of 2012 and of 2013 at Boise State University) were able to produce two documentaries on the Latino and Refugee communities in Treasure Valley, Idaho. The investigative component of these classes allowed students to engage in verifying their global knowledge while exploring the Latino and Refugee communities. Our hope, as authors of this informative essay, is that a project like this one could inspire educators to carry out similar endeavours to explore global issues in their local communities.

KEYWORDS:
Interdisciplinary, Film, Documentary, Latinos, Refugees, Communities, Global, Local.
Visual Literacy: Creating Documentaries that Address GloCal Issues

This essay explores how Bilingual Education and Communication students from Boise State University, Idaho, combined their linguistic, cultural and social knowledge to understand and address issues of immigration and migration, under the guidance of two educators and a filmmaker during two team-taught film course seminars in the Summer of 2012 and 2013. These two courses provided students with a unique opportunity to explore global issues through the lenses of the local community of Boise, Idaho’s capital. In 2012, students were asked to broaden their knowledge and understanding of the impact that the Latino community has in Idaho; while in 2013 they were asked to expand their awareness of (and, often, test their prejudices on) the local Refugee community. As we will explain in more detail later, this more traditional and content-based part of the courses took place while students were also asked to learn the basics of documentary filmmaking.

Both Film Production Seminars provided a hands-on learning experience, a unique opportunity not often granted to students in undergraduate and even graduate programs. In this case, however, the hands-on learning experience was twofold because, thanks to their being ontologically interdisciplinary, these courses had students learning about the Latino and Refugee Communities, while also learning the basics of documentary making (fig. 1). Indeed, both courses had a multidisciplinary approach which combined content based on Dr. Claudia Peralta’s research in the field of Bilingual Studies, with a form grounded in Dr. Orsitto’s expertise in the field of Film Studies (both Peralta and Orsitto supervised the course). Another unique facet of these courses was their investigative component, which resulted in great empowering
consequences for students. Indeed, even though students were asked to learn new information and were constantly solicited to juxtapose their previous knowledge about the Latino and the Refugee communities (through the assigned readings and the interviews that constituted the raw data of the two documentaries that came out of these two seminars), students also became dynamic actors in the documentary-making process.

![Fig. 1 - Farmers Market, Boise, ID](image)

In both summer of 2012 and of 2013, during the course of three weeks, students were encouraged to seek out informants, become familiar with the agencies that work with the Latino and the refugee communities, and with the social actors representing these communities as well (fig. 2 and fig. 3). Students were also encouraged to recognize the importance of using the right tools in collecting the data (i.e., type of interview questions, focus groups) (fig. 4). Moreover, they were engaged in analyzing and organizing the data.
As educators, one of the first choices we had to make was choosing which pedagogical approach would inform these courses. It may be useful here to recap that there are five primary
pedagogies that one may follow in the field of Education: Traditional, Progressive, Transformative, Critical and Enlightened. Only some of these pedagogies allow actors working in the field of Education to truly educate students, while others only permit them to impart instruction, making them teachers (or instructors) rather than educators. Indeed, the fact that students might or might-not be allowed to be actively involved in the learning process truly differentiates educators from teachers.

Fig. 4 - Interviews in the Classroom, Boise State University, ID

For these two film production seminars we chose to use Enlightened pedagogy. This term was coined by Dr. Patricia Wang and Dr. Claudia Peralta in 2005\(^1\) in an effort to bridge the distance between the cultural, economic and linguistic experiences of educators and students. Enlightened pedagogy is informed by Buddhist teachings and practices. Wang and Peralta do not claim to be experts in Buddhism, but they use Buddhist teaching and practices because they

\(^1\) This pedagogy was developed when both Wang and Peralta were working at California State University, Monterey Bay, in the 5th year teacher preparation program.
provide concrete advice for nurturing and sustaining caring relationships. Furthermore, Buddhism provides concrete tools for achieving a greater awareness and pensiveness, and for freeing oneself from physical, cognitive or emotional (re)actions. *Enlightened* pedagogy prepares educators to educate effectively across differences, and in ways that actively resist perpetuating the injustices or indignities that commonly oppress too many people. *Enlightened* pedagogy is grounded in the belief that “the method is mindfulness, the expression is compassion and the essence is wisdom” (Goldstein, 2002). Hence, in an effort to provide students with the opportunity to question and, at some level, face or hear the realities of Latinos and Refugees in Idaho, *Enlightened* pedagogy was the pedagogical approach of choice also because we deemed it most appropriate in highlighting the injustices suffered by these two communities. This pedagogy effectively engaged students in questioning and understanding how these injustices are often perpetuated in silent and invisible ways in the host communities. Finally, thanks to *Enlightened* pedagogy, students were compelled to reflect upon the purpose of their involvement in researching the Latino and the Refugee communities, while they were also asked to confront their own ignorance or inner fears and prejudices these two groups.

In 2012, only a small percentage of students were Latinos, and very few of them had a diverse cultural, historical and linguistic background. Three out of the eleven course participants were foreign born: two Latinas (a Guatemalan, and an Ecuadorian) and one Asian (a Taiwanese). In 2013, the situation was very similar. Three out of the thirteen participants were Refugees themselves, two Bosnians and one Iranian. As a consequence, even in terms of class demographics, Latinos and Refugees were in both occurrences an actual minority. Hence, it was important to elicit from students who did not have a Latino background or that were not Refugees (or foreign born) a certain level of empathy, for them to be able to answer the key-question of *Enlightened* pedagogy: “Why do we care?”
The second very important decision we had to make was about which supervising filmmaker would guide our students through the making of a didactic documentary in only three weeks. To guide students on this journey of discovery and, ultimately, empathy towards the Latino and Refugee communities, we chose Fabio Caramaschi, a well-known documentary director from Italy who has worked extensively with the Tuareg community living in Rome, Italy, and directed the documentary *One Way, a Tuareg Journey* (2010), an inspiring film that represents his understanding of working with Refugees.

The third choice we had to make was about the class structure. Both seminars lasted three weeks, and were structured almost identically as workshops. Students were divided into three integrated groups, with at least one representative from the Bilingual Studies department and one from the Communication Studies department in each one of them. This kind of assemblage allowed students to work collaboratively for the entire length of the courses.

On week one, the class met five times. The first half of every session was used to show students various news reports and clips from documentary films directed by Caramaschi, and also by other directors. Afterwards, students were asked to discuss the material screened. The group discussion was followed by a team-building exercise and a hands-on experience.

During week two, after a list of prospective interviewers was created with the help of students and faculty, the search began to take shape. Supervisors and students alike worked hard to get a wide array of members of the Latino and the Refugees communities to participate in the project. The main purpose was to involve people representing various experiences of migration. In 2012 we focused on newcomers, immigrants that had been in the community for several years, first generation Mexican Americans, and Mexicans (born and raised in Mexico, but who had immigrated to the United States, and also students who were born in the United States but defined themselves Mexicans). In 2013, we focused on people representing various refugee
experiences and various countries. A secondary goal was to create some sort of historical timeline of the experiences of Latinos and Refugees in the Boise area.

Before conducting interviews, students were asked to do an in-depth research on the interviewee, and to bring to class questions that they deemed appropriate to ask (including justification of why the specific questions were to be used). The exchange of information was done a day or two before the interview was to occur, providing members of the class plenty of time to select the best questions. These questions were then used as a framework that helped students realize that (as ethnographic tools) interviews can lead to very different kinds of inquiries and/or discussions. During this process, students also became aware of the number of questions they should ask. In fact, it also became clear that, if interviews were too long, the time allocated for transcription during the third week would not be sufficient (since a 30 minute interview can require a two-hour transcription, it was important to remind students to focus on the topic at hand).

Various responsibilities (i.e.: interviewers, students holding the microphone and lights, etc.) were assigned every day of this week and shifted as much as possible among students. After every interview, students and supervisors met on campus to debrief on what had taken place, and to label the tapes and assign tasks. On campus, students were also responsible for: loading batteries for the next shooting, checking and labeling the tapes, watching and discussing with the supervisors the shooting, and learning how to transcribe an interview. They were also responsible for discussing problems experienced during the shootings, and evaluating the results of the shootings and getting organized for the editing.

**Week three** was mainly devoted to the editing process. In class, students explored the meaning of off-line editing and learned how to build a structure on paper before entering an editing suite. Students also examined some of the footage they had done the week before. They
worked on building a narrative structure on paper, and tried to establish if extra shooting was needed to fully achieve the potential of the abovementioned structure. Moreover, during this final week, individual students were interviewed to learn about their take on the experience of the course. The groups entered (one at the time) the editing suite with Caramaschi to make the first selection of the interviews and the classification of the generic video shots. Finally, students began editing the final cut of the documentary (working also on audio editing and color correction).

As previously mentioned, these two film production seminars brought about two different areas of expertise, filmmaking and bilingual education. The two educators and the filmmaker supervising these two projects wanted all students to have the opportunity to be involved in a hands-on experience in documentary filmmaking (which included fundraising, commissioning editors, selecting locations, casting interviews, shooting audio and video, and editing - as well as learning about the history of the Latino and the Refugee communities in Boise). From an organizational perspective this could have been a daring challenge, because some of the students enrolled were graduates and some undergraduates, some were novice to filmmaking and its equipment, while some brought to the table a lot of practical experience in terms of filming. At the end, however, the intrinsic variety of students’ backgrounds made this interdisciplinary course ontologically diverse, and it became one of its strengths. Having to relate to something unfamiliar on a daily basis (the Latino and Refugee experience for the Communication students, and the filming process for the Bilingual students) pushed everyone out of his/her comfort zone, and made students more accepting of their own limitations and, consequently, more predisposed to accept the limitations of others. This ideal combination of theory and practice also proved to be effective for students willing to challenge what they knew about global and local issues, while learning from the readings and intactions with community members.
Students shared that the two documentaries *Latino Community in Treasure Valley Idaho* (https://www.youtube.com/watch?v=C_q90k_51e4) and *Starting Over Again: The Refugee Experience in Boise, Idaho* (https://thebluereview.org/starting-over-again-the-refugee-experience-in-boise-idaho/) changed them in different ways. They learned to listen deeply to stories and the power and potency in sharing and analyzing stories because of the ways stories can raise awareness, bridge distance and create community. The documentaries confronted the students with a reality that demanded a response. The documentaries reminded them to continue to envision a just world where everyone is respected and honored.
Pre-service Teachers’ Competency in Division of Fractions before an Intervention

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Abstract

This study investigated the influence of mathematical dispositions toward elementary pre-service teachers’ competency in learning division of fractions. This study is the first portion of a larger study being conducted to investigate how fostering elementary pre-service teachers’ mathematical dispositions can enhance students’ learning division of fractions. This study reveals the pre-test data of thirty-six participants majoring in elementary education; of them, there were 5 minors in mathematics, 15 minors in science, and 16 in other subject minors. The study found there were some factors which caused problematic issues for the elementary pre-service teachers to conceptualize the concept of division of fractions: limited capacity in conveying concept with creating figures, inflexible and insufficient procedural knowledge, ineffective descriptions on illustrating concepts and procedures, and deficient connection between different representations. Further, the data leaves room to believe that an intervention fostering elementary pre-service teachers’ mathematical dispositions and competency could be a way to increase elementary pre-service teachers’ understanding in the division of fractions.

Keywords: Division of fractions, Mathematical dispositions, Elementary pre-service teachers
Introduction

There are problematic issues among elementary pre-service teachers when they are learning division of fractions. Research indicates that elementary pre-service teachers were taught the procedural algorithms of division of fractions without receiving meaningful instruction when they were elementary school students (Cluff, 2005; Isik & Kar, 2012; Niemi, 1996). This has caused elementary pre-service teachers to have misconceptions about the division of fractions and has led to low success rates on tasks related to the concept (Tirosh, 2000; Utley & Redmond, 2008). Therefore, teaching division of fractions is considered a challenging content area in the elementary mathematics curriculum for the pre-service teachers (Ma, 1999; Redmond, 2009). In addition, many elementary pre-service teachers often consider division of fractions to be the most difficult content area of number operations (Ball, 1990; Huang, Lui, & Lin, 2009). If future elementary teachers have a thorough understanding of division of fractions, they can avoid misconceptions and help their students learn and understand division of fractions.

Because interaction between mathematical competency and mathematical dispositions may influence the pre-service teachers’ conceptualization of division of fractions, it is important to understand how mathematical dispositions affect pre-service teachers’ mathematical competency in learning division of fractions. Therefore, this study aims to investigate the following research question: What is the status of elementary pre-service teachers’ mathematical competency in learning division of fractions before they receive an intervention of incorporating mathematical disposition into learning processes?

Related Research

Learning and teaching division of fractions has been one of the most problematic areas for elementary pre-service teachers (Ball, 1990; Huang, et al., 2009; Simon, 1993; Triosh, 2000). In order to better understand this study’s participants pre-test data the literature review will focus on the following inquiries: (a) What issues do elementary pre-service teachers have while learning division of fractions that might be problematic? (b) What mathematical capabilities do elementary pre-service teachers need toward division of fractions?
Problematic Issues Related to Learning Division of Fractions

The fundamental problem in learning division of fractions among elementary pre-service teachers is the nature of division of fractions. When learners encounter division of fractions word problems, it becomes obvious that the division of fractions is division of division. The fractional learning confuses students and makes learning concepts difficult (Schwartz, 2008). For example, Ball (1990) investigated elementary pre-service teachers’ understanding of division of fractions and found that it was difficult for elementary pre-service teachers to come up with real world situations or story problems to show the meaning of division of fractions. In addition, the nature of division of division makes the concept of “a unit” difficult for pre-service teachers to understand (Behr, Khoury, Harel, Post, & Lesh, 1997). Several studies found that this concept of “a unit” not only confused elementary school students but also caused a challenge among elementary pre-service teachers (Gregg & Gregg, 2007; Perlwitz, 2005; Zaleta, 2006). In other words, pre-service teachers might not be able to explain the concept and assist their students in figuring it out.

Also problematic is how elementary pre-service teachers tend to approach or work with division of fraction problems. Graeber, Tirosh, and Glover (1986) found that pre-service teachers tended to think “the divisor must be a whole number.” However, it is more difficult to make models (e.g., figures or manipulatives), which is necessary when using partitive division, as compared to using measurement division, which allows students to use repeated subtraction (Simon, 1993; Sharp & Adams, 2002). In other words, applying the concept of partitive division for dealing with the division of fractions limits elementary pre-service teachers’ conceptualization during the learning processes. In addition, elementary pre-service teachers exclusively using invert-multiply algorithms to deal with division of fractions problems instead of understanding and explaining the concept with meanings, which also impacts their learning of division of fractions in a negative way (Redmond, 2009; Tirosh, 2000). Students (including elementary pre-service teachers) solve division of fractions problems by using the invert-multiply algorithm, which has been taught for decades (Alkhatteb & Nicholls, 2001; Ball, 1990; Redmond, 2009).
Teachers tell their students to simply follow the procedural directions to find the correct answer (Lubinski, Thomason, & Fox, 1998; Mewborn, 2001). Therefore, the learning and teaching toward division of fractions is based on memorization rather than conceptual understanding.

**Mathematical Capabilities for Learning Division of Fractions**

In order to help pre-service teachers conceptualize the knowledge of division of fractions easily, Schwartz (2008) categorized division problems of fractions as four types of problems. This made division of fractions problems more manageable. The four categories are: (a) Type I problems—Problems that have a whole number divided by a fraction and a whole number answer; (b) Type II problems—Problems that have a fraction divided by a fraction and a whole number answer; (c) Type III problems—Problems that have a fraction divided by a fraction, with a mixed number answer; (d) Type IV problems—Problems that have fractions divided by fractions with answers that are fractions. These four types of problems represent increasing levels of difficulty and complexity. Once the pre-service teachers have passed through the first two stages, pre-service teachers are ready to step into the third stage, the stage of algebraic operation. In this stage, the definition and function of reciprocal will be introduced and how it applies in an invert-multiplication algorithm. Invert-multiplication and complex fractions are introduced with the algebraic operations (Li, 2008; Perlwitz, 2005; Schwartz, 2008; Yetkiner & Capraro, 2009).

Developing pre-service teachers’ mathematical competency is one of the key capabilities to help pre-service teachers learn division of fractions effectively. Mathematical competency is a set of abilities for the pre-service teacher to develop for their mathematical literacy. The more pre-service teachers retain and activate their mathematical competency, the more the pre-service teachers will be able to solve mathematical problems effectively (Zollman, 2012). Mathematical competency includes: (a) communication, (b) mathematizing, (c) representation, (d) reasoning and argument, (e) strategic thinking, and (f) using symbolic, formal, and technical language and operations (Turner, 2011). Mathematical competency can be operated and expressed with the conceptual understanding and procedural fluency when learners construct any content knowledge in mathematics, such as division of fractions (Livy & Vale, 2011; Turner, 2011).
Methods

Participants

The participants in this study were enrolled at a four-year public university in the Midwest in the United States. They had finished two-years of general coursework before they were admitted to a teacher-education program. The participants were beginning their first semester in a teacher-education program while the study was conducted during the fall of 2010. The sample consisted of 36 pre-service teachers who were being prepared for teaching at K-6 levels. Moreover, the sample was composed of three groups: Five were elementary education majors with mathematics minor, 15 were elementary majors with a science minor, and 16 were elementary majors with another subject minor.

Research Design

A one-group pre-test design was used to identify pre-service teachers’ understanding of division of fractions before an intervention. Results from the pre-test specifically addressed the research question: What is the status of elementary pre-service teachers’ mathematical competency in learning division of fractions before they receive an intervention of incorporating mathematical disposition into learning processes? During the pre-test, pre-service teachers were asked to complete four division of fractions problems. The pre-test took 40 minutes.

Instrumentation and Data Analysis

A developed analysis framework of conceptual understanding (Niemi, 1996; Wu, 1999) led to the use of the pre-test instruments for this study. Four types of division problems of fractions were used in the pre-test for evaluating the components of the mathematical competency among participants (see Appendix A). The components included figure representation, symbolic representation, language-describing representation, and connecting different representations. Varying figures and conveying concepts were used to determine participants’ abilities in the aspect of figure representation. Participants’ abilities of operating mathematical sentence with accuracy, flexibility, and efficiency were defined as symbolic representation. In the aspect of language-describing representation, it mainly examined how
participants describe problem understanding, problem-solving processes, and result interpretation. For the aspect of making connections between different representations, this study focused on examining participants’ capacity to make connections between models, symbols, and language descriptions. Participants’ work in each evaluated item was scaled as sufficient (2), mildly sufficient (1), and insufficient (0) based on the descriptions of an evaluating rubric (see Appendix B). Statistical procedures selected for the analysis included descriptive statistics of frequency distributions, means, and percent.

Results

This study is one part of a larger experimental study investigating the dynamic relations between division of fractions and mathematical competency. It focuses on examining what strategies elementary pre-service teachers used for solving division of fractions problems by looking at students’ thinking habits and problem-solving skills before they received an intervention. Based on the data analysis, this study found the following phenomena:

**Limited Ability in Conveying Concept with Created Model.**

Participants used area models, length models, set models, and other figures to represent their understanding and problem-solving abilities when they solved type I, II, III, & IV division of fractions problems, but each model (figure) did not effectively conveyed the concept of division of fractions. When examining figure representation, 24% of the participants’ work exhibited no figure representation, 30% of the participants’ work was of an area model, 34% of participants’ work was of a length model, 8% of the participants’ work was of a set model, and 4% of the participants’ work fell into the category of “others” (see Table 1). Although participants could create various models or figures, each figure was not able to help participants construct meaning when they dealt with the problems of fractions in the pre-test. By looking at the participants’ work in Table 2, 80% of the participants’ work earned a score of zero, which meant that the participants’ work could not convey adequate meanings. There were 5% of the participants’ work at the score level of one, which meant their work somewhat could construct the meaning. There was 15% of the participants’ work at the score level of two, which meant their figures could correctly and accurately convey the concept.
Inflexible and Insufficient Procedural Knowledge.

According to the Table 1, some symbolic representations, such as invert-multiplication algorithm and common denominator algorithm, were used for expressing participants’ procedural knowledge when participants solved division of fractions problems in the pre-test. When examining symbolic representation, 50% of participants’ work showed that they used invert-multiplication algorithm to solve the problems, 6% of participants’ work demonstrated common denominator algorithm, and 2% of participants’ work used other methods. Remarkably, 42% of participants’ work was in the category of none. That means participants did not know how to solve the problems. Examining participants’ work with the validity of scores (see Table 2), the study finds that 25% was at the score level of two, 27% was at the score level of one, and 48% was at the score level of zero. This information implies that half of participants somewhat knew how to use symbolic representations to convey their understanding and resolve problems when they solved division of fractions problems before they received the intervention. However, around half of the participants’ work was invalid. Based on the above descriptions, this study found: (a) Participants were inflexible in conducting procedural knowledge toward division of fractions problems. In other words, most participants did not use alternative ways to solve division of fractions problems other than invert-multiplication algorithm; (b) Participants did not have sufficient procedural knowledge toward the division of fractions problems, to include the knowledge of invert-multiplication.
Table 1:
Participants Pre-test Data about Mathematical Competency toward Different Types of Division of Fraction Problems

<table>
<thead>
<tr>
<th>Representation</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>FQ</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure representation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>11</td>
<td>7</td>
<td>15</td>
<td>35</td>
<td>24</td>
</tr>
<tr>
<td>Area model</td>
<td>12</td>
<td>10</td>
<td>13</td>
<td>8</td>
<td>43</td>
<td>30</td>
</tr>
<tr>
<td>Length model</td>
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<td>13</td>
<td>13</td>
<td>11</td>
<td>49</td>
<td>34</td>
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<td>Set model</td>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>11</td>
<td>8</td>
</tr>
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<td>Others</td>
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<tr>
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<td>17</td>
<td>11</td>
<td>14</td>
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<td>Invert-multiplication</td>
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<td>16</td>
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<td>2</td>
<td>2</td>
<td>8</td>
<td>6</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>18</td>
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<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
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<td>28</td>
<td>28</td>
<td>31</td>
<td>97</td>
<td>68</td>
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<tr>
<td>F &amp; L</td>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>23</td>
<td>16</td>
</tr>
<tr>
<td>F &amp; S</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>S &amp; L</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>17</td>
<td>12</td>
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<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Note:
1. The total responses for each representation are 144 times.
2. I, II, III, & IV represent different types of division problems of fractions.
3. FQ = Frequency; IM = Invert-multiplication; CD = Common denominator
4. F = Figure representation; S = Symbolic representation; L = Language representation
Table 2.
Participants’ Pre-Test Validity of Scores in Mathematical Competency toward Different Types of Division of Fractions

<table>
<thead>
<tr>
<th>Valid of Score</th>
<th>Mathematical competency in different types of division of fractions</th>
<th>Figure Representation</th>
<th>Symbolic Representation</th>
<th>Describing Representation</th>
<th>Connecting different Representations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(I) (II) (III) (IV) %</td>
<td>(I) (II) (III) (IV) %</td>
<td>(I) (II) (III) (IV) %</td>
<td>(I) (II) (III) (IV) %</td>
<td>(I) (II) (III) (IV) %</td>
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<tr>
<td>Pre</td>
<td>0 12 34 33 36 80 19 15 14 20 48 12 25 26 31 66 10 31 29 33 72</td>
<td>1 5 2 2 0 5 4 15 15 6 27 10 11 9 5 24 20 5 6 3 23</td>
<td>2 19 0 1 0 15 13 6 7 10 25 14 0 1 0 10 6 0 1 0 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Pre = Pre-test

Deficient Connections between Different Representations.

Participants’ work of making connections between different representations in the pre-test can be seen in the following categories: no connection between different representations (None), a connection between figure representation and language representation (F & L), a connection between figure representation and symbolic representation (F & S), a connection between symbolic representation and language representation (S & L), and a connection between figure representation, symbolic representation, & language representation (F, S, & L). This study found that 68% of the participants’ work was in the category of None, 16% was in the category of F & L, 1% was in the category of F & S, 12% was in the category of S & L, and 3% was in the category of F, S, & L. This implies that participants’ work shows limited capacity in connecting different representations. In addition, looking at the validity of their scores, 72% of participants’ work was at the score level of zero, 23% of participants work was at the score level of one, and 5% of participants work was at the score level of two. This shows that participants were not properly equipped with the ability to connect various representations in order to construct comprehensive meaning toward the division of fractions before the intervention.

Discussion

This study reveals that there are four possible factors, which explain why pre-service teachers do not come equipped with adequate mathematical competency to conceptualize the knowledge in this
content area. First, conveying mathematical concepts by creating figures is related to participants’ ability of using visual materials to help them perceive problems and express the path of solving problems, but elementary pre-service teachers lack this ability (Nillas, 2003). This study found that participants had limited capacity in conveying concepts by creating figures before the intervention. Second, elementary pre-service teachers were taught with invert-multiply algorithm when they were elementary school students with non-meaningful procedural knowledge transferred from their teachers. This may cause a problem in reconstructing the concept after they have forget the procedural knowledge (Cluff, 2005; Isik & Kar, 2012). Based on the data analysis, the study found that participants had inflexible and insufficient procedural knowledge to support them in solving division of fractions problems. Third, elementary pre-service teachers are rarely guided to portray their mathematical work in constructing descriptions, so they describe and interpret problem-solving approaches and processes ineffectively (Gregg & Gregg 2007). Fourth, this study found that there were deficient connections between different representations while they were dealing with the division of fractions problems. This corresponds to Lo and Luo’s study (2012) about how connecting different representations to express a complete thinking picture has not been totally implemented among elementary pre-service teachers. The current study suggests that fostering elementary pre-service teachers’ mathematical dispositions may be a way to increase students’ competency in division of fractions.

In sum, this study has echoed the findings from previous studies. Meanwhile, it also contributes some new findings toward the body of knowledge regarding the competency elementary pre-service teachers need to have when learning division of fractions. However, the data gained in this study is just a start and the bigger picture involves what mathematics educators can do to help elementary pre-service teachers better understand the concept of division of fractions. This will be addressed in a further study.
References


Appendix A: Test Instruments

Q1: What does $4 \div \frac{2}{3}$ mean? Support your answer by: 1) drawing a model; 2) using a mathematical sentence (numbers) to describe your model; 3) using words to describe your problem-solving processes.

Q2: What does $\frac{3}{4} \div \frac{3}{8}$ mean? Support your answer by: 1) drawing a model; 2) using a mathematical sentence (numbers) to describe your model; 3) using words to describe your problem-solving processes.

Q3: What does $\frac{5}{7} \div \frac{1}{2}$ mean? Support your answer by: 1) drawing a model; 2) using a mathematical sentence (numbers) to describe your model; 3) using words to describe your problem-solving processes.

Q4: What does $\frac{2}{3} \div \frac{3}{4}$ mean? Support your answer by: 1) drawing a model; 2) using a mathematical sentence (numbers) to describe your model; 3) using words to describe your problem-solving processes.
Appendix B: Rubric for Pre-Test

Figure representation:
1. The figures display the concept of division of fractions completely and accurately (2)
2. The figures display the concept of division of fractions incompletely or inaccurately (1)
3. The figures do not display the concept of division at all (0)

Symbolic representation:
1. The math sentences show efficiency (concise and coherent steps) and accuracy (issue in the right answer)—(2)
2. The math sentences show inefficiency or inaccuracy (1)
3. The math sentences do not show efficiency and accuracy at all (0)

Language representation:
1. The word descriptions of solving the problem of division of fractions are complete and accurate (2)
2. The word descriptions of solving the problem of division of fractions are incomplete or inaccurate (1)
3. The word descriptions of solving the problem of division of fractions are incomplete and inaccurate (0)

Connecting different representations:
1. The clear and complete connections between symbols, graphic representations (figures), and situational knowledge expressed in language (word descriptions) (2)
2. The unclear or incomplete connections between symbols, graphic representations, and situational knowledge expressed in language (1)
3. No connections between symbols, graphic representations, and situational knowledge expressed in language (0)
Best Practices in STEM Outreach, Recruitment and Retention Programs Across Multiple Institutions

STEM Education

Poster Session

Our poster presentation will show the collaborative potential for outreach, recruitment, retention, and academic excellence programs across several universities with a focus on underrepresented minority populations. Institutions are members of the National Association of Multicultural Engineering Program Advocates (NAMEPA, Inc.).

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Abstract

African Americans, American Indians/Alaska Natives, and Latinos have historically been underrepresented in Science, Technology, Engineering and Mathematics skills, yet these populations will become the majority over the next 20 years. The percentage of students from these populations that are interested in and/or entering into STEM fields is not adequate to fuel the engineering, technology and innovation required to sustain current technology and bring economic innovation and universities across the country are revisiting strategies to move the needle of pre-college preparation, math readiness, and persistence towards STEM careers.

The National Association of Multicultural Engineering Program Advocates consists of program directors across the country that focus on student access and success in engineering and STEM Fields. We will be presenting a collaborative poster session to illustrate best practices and the potential for national impact in communicating opportunities and achievements in driving a focused effort to prepare students for STEM careers. This poster session will illustrate several programs in outreach, recruitment, retention and academic excellences across several universities, including Purdue University, Georgia Institute of Technology, Clemson University, and The University of California, Irvine. Highlights of the poster session from NAMEPA will include:

- The Summer Engineering Institute – for rising 11th and 12th grade students
  - Metric results: 90% of participants’ matriculate to college and pursue STEM degrees
- PEER 2 PEER Mentoring program – tiered mentoring of undergraduate ethnic minorities majoring in STEM
  - Metric Results: 98% retention rate to degree attainment
- Engineering Academic Boot Camp – for incoming freshman engineering students
  - Metric results: 95% first year retention rate in engineering
- Algebra by 7th Grade Initiative – Initiative to improve math proficiency beginning with second graders so that they are algebra proficient by the end of the 7th grade.
- Bridge from Community College to four year institutions
- Successful recruiting of women and minorities in engineering and STEM fields
  - 200% increase in women students
  - 400% increase in minority students
- The BOLD Center
  - recruiting and retaining underrepresented students
  - enhanced recruitment contacting
  - participation scholarships
  - a model next-tier program and in-house, drop-in tutoring.
- Access Summer Program to Inspire Recruit and Enrich (ASPIRE) - Experiential learning program to teach high school and community college students how to code, design, build, and test innovative prototypes.
TITLE: Hidden Features of Literacy in Academic Journals’ Guidelines: a Real Challenge for Non-Native Graduate Students to Publish in English

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ABSTRACT: This presentation aims to present an analysis of texts of Authors’ Guidelines from six computer science journals in English. The research, supported by São Paulo Research Foundation (FAPESP – process numbers 2015/11088-1 and 2016/06589-4), aims to verify the existence of “hidden” features of academic literacy in the texts, which may hide relevant information about the production of papers according to what is expected by the journals. Through a discursive ethnographic analysis (Corrêa, 2011), which enabled us to understand the concepts of language, text and genre that grounds the literacy practices of the journals, some “hidden” features were identified and related to social assumptions of the genre research article. The analysis showed, among other things, that the journals, based on a concept of language, text and genre, which is very similar to the academic socialization approach to teaching writing (Lea & Street, 1998), mostly center the guidelines in formal and structural aspects of the text, failing to approach some literacy features, such as content, rhetoric and ideology. Although these themes are not approached in the guidelines, the journals tend to take them into account when evaluating the manuscripts, as evidenced by some editors through an email inquiry. Thus, they count on some type of knowledge from the authors, which inexperienced researchers may not have yet, making it more difficult for these novices to engage in academic discussion in their field, especially for non-native speakers, who also have to struggle with the difficulties of English.
You Did *What* in School Today?:
Co-Opting Video Games to Teach Educational Concepts

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**Topic Area:** STEM Education

**Presentation Format:** Paper Session

**Description:** Come learn about how you can use popular video games - including Minecraft, Scrap Mechanic, and Universe Sandbox² - in physics classrooms to engage students in meaningful problem-solving as they learn valuable physics concepts. We will discuss the three games’ applicability to physics curricula by walking you through relevant game mechanics. Come prepared to share your own successes and challenges of using video games in the classroom.

**Introduction**

In the United States, video games are a ubiquitous pastime amongst teenagers, with 97% playing on a regular basis (Lenhart, Kahne, Middaugh, Macgill, Evans, & Vitak, 2008). Within that age group, the average amount of time spent playing per day is approximately 1 hour and 13 minutes, an almost 50% increase from the average daily time spent playing in 2004 (Rideout, Foehr, & Roberts, 2010). And while this shift is often cast as a threat to teenagers’ academic success and physical well-being, the benefits of gaming on a regular basis have been established. Dramatic boosts to spatial skills (Uttal, Meadow, Tipton, Hand, Alden, Warren, & Newcombe, 2013), more efficient allocation of attentional resources (Bavelier, Achtman, Mani, & Föcker, 2012), and improvements in problem solving ability (Adachi & Willoughby, 2013) have all been causally tied to the amount of time participants spent in front of the screen. Additionally,
correlations have been established between gaming and creativity (Jackson, Witt, Games, Fitzgerald, von Eye, & Zhao, 2012), persistence in the face of real-world challenges (Ventura, Shute, & Zhao, 2013), civic engagement (Lenhart et al., 2008) and prosocial behaviors (Ewoldsen, Eno, Okdie, Velez, Guadagno, & DeCoster, 2012; Gentile et al., 2009).

More significantly, video games have the power to engage students, (Anetta, Minogue, Holmes, & Cheng, 2009; Ke, 2008; Malone, 1981; Papastergiou, 2008; Prensky, 2001; Rieber, 1996) especially those who are difficult to reach through more traditional instructional methods (Barab & Dede, 2007; Klawe, 1994; Squire, 2008). Because of this, educators have increasingly aimed to incorporate them into the classroom. In recent years, a growing body of evidence has begun to suggest that supplementing traditional instruction with video games can boost academic achievement or encourage deeper learning (Coller & Scott, 2009; Corsi, Boyson, Verbraeck, Van Houten, Han, & Macdonald, 2006; Dempsey, Rasmussen, & Lucassen, 1994; Ke & Grabowski, 2007; Kebritchi, Hirumi, & Bai, 2010; Klawe, 1998; Lopez-Morteo & Lopez, 2007; McClean, Saini-Eidukat, Schwert, Slator, White, 2001; Moreno, 2002; Owston, Wideman, Ronda, & Brown, 2009; Papastergiou, 2008; Rosas et al., 2003; Squire, Barnett, Grant, Higginbotham, 2004; Vogel, Vogel, Cannon-Bowers, Bowers, Muse, & Wright, 2006; Yip & Kwan, 2006).

Commercial Off The Shelf Games

However, it appears that not all games are created equal. Within the literature, frequent mention is made of the “chocolate-covered broccoli” phenomenon, where games designed from the on-set to be educational wind up “[missing] the most essential mechanism of engagement in games -- the fun” (Granic, Lobel, & Engels, 2013). When a game is thought of as nothing more than a fancy way of dressing up content, a core component of the experience is lost. This has led many in the field to instead turn towards “Commercial Off the Shelf” (COTS) games with the
goal of co-opting them for educational purposes (Baek, 2006; Boyle et al., 2015; Kim & Kim, 2005). Using existing software is advantageous because designing games from the ground-up is expensive and time-consuming, especially for educators who may lack the know-how or infrastructure necessary to create a polished product, and because games created for the market are first and foremost engaging, which appears to be necessary in order to access the benefits that video games stand to bring to the classroom (Kim, Park & Baek, 2008).

COTS games have been used to supplement instruction in a variety of fields, including language arts (deHaan, Reed, & Kuwada, 2010), urban planning (Minnery & Searle, 2014), world history (Squire, 2004), and economics (Kim, Park, & Baek, 2008; Yang, 2012). However, many of the efforts to utilize video games in educational contexts have focused on STEM subjects, and for good reason (Boyle et al., 2015). Success in STEM subjects is often contingent on students’ ability to construct mental models of concepts that are difficult to visualize (Barnett, Keating, Barab, & Hay, 2000; Chi, Feltovich, & Glaser, 1991; Redish, 1993). Physics is especially prone to this, as being able to picture the distribution of forces in a field or those acting on an object is, for many students, unintuitive. Therefore, there is a particular need to apply video games’ interactivity and ability to display graphical representations of abstract concepts to physics classes.

A number of COTS games have been released in recent years that offer themselves as plausible candidates for use in a physics class, with three games in particular holding exceptional promise for use in a high school physics classrooms. The first, Universe Sandbox², gives players the ability to experiment with a high-fidelity simulation of our solar system, where gravity and the properties of planetary bodies are infinitely modifiable. The second, Scrap Mechanic, challenges players to survive on a deserted planet using only their engineering prowess to
construct intricate moving machines. The final game, *Minecraft*, presents a sprawling
environment for players to explore and develop, while providing the tools needed to build nearly
anything imaginable. Due to time constraints, only the first game, *Universe Sandbox*², will be
discussed in detail for this conference proceeding. All three games will be discussed in detail
during the conference presentation.

**Physics Curricula**

There are a number of modern standards that each make recommendations regarding the
style or content for physics instruction in US schools. One such set of standards are the Next
Generation Science Standards (NGSS), the final version of which were released in April 2013.
As explained by the American Association Of Physics Teachers, the NGSS does not divide
standards on the basis of subject (AAPT, 2015). Physics concepts can therefore be found within
the Physical Science set of standards, as well as the Earth and Space Science, Life Sciences, and
Engineering portions of the NGSS. Of particular relevance to educators interested in
incorporating the game *Universe Sandbox*² in their classrooms are the following standards:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HS-PS2-4</strong></td>
<td>Use mathematical representations of Newton’s Law of Gravitation...to describe and predict the gravitational...forces between objects</td>
</tr>
<tr>
<td><strong>HS-ESS1-4</strong></td>
<td>Use mathematical or computational representations to predict the motion of orbiting objects in the solar system</td>
</tr>
<tr>
<td><strong>HS-ESS2-4</strong></td>
<td>Use a model to describe how variations in the flow of energy into and out of Earth’s systems result in changes in climate</td>
</tr>
</tbody>
</table>

(NGSS, 2013)
The “Physics First” (PF) movement is another attempt to structure physics education. Standing in contrast to the NGSS, which offers examples of competencies while eschewing specific suggestions on the order or pacing of instruction, PF focuses primarily on when students are exposed to scientific disciplines. While the majority of high school students in the US today progress along a biology-chemistry-physics (BCP) sequence, PF emphasizes the value of an inverted PCB progression (Hetzner, 2002). This model does not conflict with the NGSS; rather, PF has been suggested as a model curriculum for meeting the NGSS (Bouma, 2013). When physics is taught earlier in high school students’ careers, specifically before they have been exposed to more advanced mathematics, there is a shift towards more conceptual coverage of topics. This further aligns with the push towards “conceptual” or “qualitative physics,” which argues for a more naturalistic or conceptual, rather than mathematical, method for teaching the subject (diSessa, 2000; Forbus, 1997; Hewitt, 2002). To this end, physics educators are encouraged to incorporate “experiments, labs, demonstrations, and visualizations” to build students’ understanding (Squire, Barnett, Grant, & Higginbotham, 2004). Because video games, especially simulations like Universe Sandbox, enable for experiments or demonstrations that would otherwise be logistically infeasible (Berson, 1996), the combination of PF and conceptual physics provides a premier opportunity for the integration of video games into the classroom.

A final model for physics instruction, which is entirely consistent with and has in some cases been co-implemented alongside the aforementioned standards and approaches, is Problem-Based Learning (PBL). It has been argued that science education is most impactful when presented as an inquiry-based framework, and that video games can serve as valuable tools in this endeavor to contextualize scientific knowledge by offering intricate and authentic problems towards which students can apply their newly-acquired knowledge. (Barab & Dede, 2007; Coller
There has already been at least one attempt to co-opt COTS games for use in PBL-oriented physics courses, from Dr. David Rosengrant and Berkil Alexander of Kennesaw State University (Rosengrant, 2015). Their project demonstrated the feasibility of modifying games for use in a PBL setting by creating exogenous problems that are not an intrinsic part of the game. However, the lessons involved students watching video clips of games being played and then applying physics concepts to explain what they saw occurring. While this model certainly has logistical advantages in terms of reducing the hardware and class time needed for the lesson, the full benefits of incorporating video games into the classroom are only realized when students are given the opportunity to engage with the game for themselves. Furthermore, the games used were in several cases outdated, and were not representative of the complexity of games that are currently on the market. Modern simulation games such as Universe Sandbox² offer a more immersive experience and a more comprehensive model of a physical system, and therefore afford the possibility for a wider range of more complex problems when seeking to tie the game into a PBL curriculum. Thus, Universe Sandbox² has the potential to be a valuable resource for physics education in courses abiding by the NGSS, the “Physics First” model of instruction, and curricula based around “conceptual physics” as well as Problem-Based Learning.

Universe Sandbox²

According to the Universe Sandbox² website (http://universesandbox.com), the game “merges gravity, climate, collision, and material interactions to reveal the beauty of our universe and the fragility of our planet.” Gamers are invited to “create, destroy, and interact on a scale you've never before imagined.” The game retails for $24.99 and is available as a digital download from the distribution platform “Steam.”
Universe Sandbox\(^2\), published by the studio “Giant Army,” seemingly straddles the line between entertainment game and high-fidelity simulation. Upon opening the game, players are greeted by a god’s-eye view of our solar system, with planetary bodies circling the sun at a rate proportional to their actual orbits. From this point, the options for experimentation are endless. Over 50,000 unique objects can be inserted into the simulation, ranging in size from comets to entire galaxies, and in obscurity from the familiar north star Polaris and our very own planet Earth to the mostly unheard of exoplanets PSR B1620-26 b and 91 Aquarii b. Nearly 200 pre-loaded simulations besides that of our solar system can be queued up, including both simple models containing only the Earth and moon along with intricate representations involving dozens of planets, moons, and various minor objects. Density, mass, chemical composition, rotational period, surface temperature, magnetic field strength and orbital radius can each be modified for any body within the simulation. Interactions between entities can be mediated by adjusting the universal gravitational constant “G” or the effect of tidal forces. In short, players have the ability to manipulate and investigate visually many of the variables that students often work with mathematically.

For example, introductory physics courses almost invariably involve equations such as the one describing Newton’s law of universal gravitation or the orbital velocity formula. If a student uses the latter equation, presented here: \( v = \sqrt{\frac{G M_e}{r}} \) to calculate the radius of the orbit of a satellite traveling 6,400 m/s around a hypothetical planet with three times the mass of Earth, and determines the answer to be approximately 29,000 km, do they have the ability to assess whether that answer is reasonable given the context of the problem? Traditionally, this inability to critically assess the plausibility of a solution would be remedied through repetition; if a student has completed enough of these problems, they should be able to remember what a likely
answer looks like. The drawback is that memorization is always transient in comparison to understanding. The problem then is how to encourage understanding of a subject with which students have little to no experience. Universe Sandbox\textsuperscript{2} offers a solution by enabling students to place objects in stable orbits, modify variables such as the orbital velocity or the universal gravitational constant, and then visually observe the results of their alteration in real-time. As well as reinforcing the relationships between the variables in the equation, this also allows students to develop a sense of the order of magnitude in which the values reside. Universe Sandbox\textsuperscript{2} is thus able to assist students in overcoming at least one major obstacle standing in the way of full comprehension of the orbital mechanics covered in a high school physics setting.

What follows is an example of how the game could be used in a high school physics class. It is important to note that the greatest educational strength of video games, and sandbox (open-ended simulation) games specifically, lies in their potential to act as low-risk environments for experimentation and hypothesis-testing, rather than vehicles for delivering content (Coller & Scott, 2009; Gee, 2005; Herrero, Castillo, Monjelat, García-Varela, Checa, & Gómez, 2014; Kapp, 2007; Kirriemuir, 2002). This is especially advantageous when working with a large, diverse pool of students as the user-driven manner in which players progress through sandbox games naturally allows students of different learning styles and academic abilities to engage according to their interests and learn at an appropriate pace (Kirriemuir, 2002; Sedighian, 1994; Squire, 2008). Therefore, educators should remember that giving students the time to adequately explore concepts through the game is among the most significant aspects for efficaciously incorporating games into the classroom. The significance of offering students time to investigate is supported by Dr. Peter Rillero at Arizona State University (personal communication, July 27, 2016), who suggests that providing students with a challenge (such as
launching one small particle in such a way that it enters a circular orbit around another object) and then allowing them to experiment with various methods of accomplishing the goal can serve as an effective introduction to a more comprehensive lecture on the topic.

**Prerequisite Knowledge**

While the background knowledge that students must possess in order to explore *Universe Sandbox*² to its full potential will vary greatly depending on how the teacher chooses to employ the game, the way in which it is described here assumes familiarity with the following concepts:

- Newton’s gravitational constant (G)
- Newton’s law of universal gravitation: \( F_1 = F_2 = G \frac{m_1 m_2}{r^2} \)
- Orbital velocity equation: \( v = \sqrt{\frac{GM_e}{r}} \)

The role played by the Earth’s axial tilt in determining seasons

**Single-player or Pairings**

Your school may have the resources to provide each student with the opportunity to play the game individually. However, concerns over the cost or digital rights management (DRM) of games have the potential to impede teachers from securing enough machines or copies of the game for this to be possible (Poli, Berenotto, Blankenship, Piatkowski, Bader, & Poore, 2012). In this case, placing students in pairs or small groups can be highly advantageous, not only because of the established benefits of cooperative learning more generally (Johnson, Johnson, & Karl, 1998) but because discussing gameplay with peers has been identified as a much more effective metacognitive strategy than individual self-recording activities for cementing the learning gains made through video games. (Kim, Park, & Baek, 2008).

**Playthrough**

I first began by opening the game and was greeted by the following scene:
From here, I decided to begin by experimenting with how varying Newton’s gravitational constant affects planets’ orbits around the sun.
Modifying the value for G is as simple as moving a sliding scale or entering a new value in place of 1.00. Increasing G predictably caused planets to have significantly tighter orbits, while decreasing G caused planets to have wider orbits. The next step was to alter the mass of the sun.
Again, the results were predictable in that a more massive sun caused planets to orbit more closely. Finally, the masses for each planet could be modified in the same way.

In order to engage students in class-level discussions, it is critical that students take notes about what worked and what didn’t work during their game play. Multiple attempts are encouraged and will enrich the classroom discussions. As mentioned before, it is beneficial for peers to discuss as they are playing (Kim, Park, & Baek, 2008). In addition, it can be helpful for students to have an opportunity to have a second opportunity to explore their game after having time to discuss game play and patterns noted as a whole class.

Further information and examples will be provided in the HICE 2017 conference presentation.
Conclusion

While *Universe Sandbox*² is an unusually accurate simulation game, it still fails as a perfect depiction of the system it models. *Universe Sandbox*² cannot incorporate gravitational waves, and gravity propagates instantaneously rather than at the speed of light within the simulation (Seiler, 2016). Furthermore, since n-body problems are notoriously computationally intensive, the simulation is condensed down to a series of 2-body problems when running at high-time steps (“Working through the n-body problem,” 2016). This enables the game to run more smoothly at the cost of accuracy. However, this is not surprising as all models of real-world phenomena are inevitably incomplete (Jonassen, 2006). This is not to suggest that simulations are therefore devoid of pedagogical value; in fact, the inaccuracy of COTS games can often be an educational asset. One leading example of a COTS game that incorporated the notion of biological evolution with significant flaws managed to bolster students’ understanding of the topic when educators challenged the class to articulate how the game’s depiction of evolution contrasted with the academic consensus (Poli, et al., 2012). Additional examinations of the same game, called Spore, further supported the benefits of tasking students with refuting inaccuracies, especially those that have the potential to reinforce pre-existing misconceptions (Bean, Sinatra, & Schrader, 2010; Cavanagh, 2008; Herrero, et al., 2014). Therefore, when paired with instructional techniques that highlight and refute the biases or inaccuracies that are embedded in the game, even flawed simulations possess the ability to enhance students’ educational experience.


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Squire, Kurt. “Open-Ended Video Games: A Model for Developing Learning for the Interactive


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2017 Conference Proceedings

We would like to thank all those who attended the 2017 Hawaii International Conference on Education. We look forward to seeing you at the 16th Annual Conference to be held in January 2018. Please check the website this February for dates and further details.

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