

CITE

Critical Issues in Teacher Education

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FUNDING TEACHER PREPARATION PROGRAMS: RECRUITMENT AND REVENUE GENERATION

by
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Abstract

Faced with a shrinking number of teacher candidates and increasing numbers of teacher preparation programs, Colleges of Education must become more strategic in finding ways to maintain student enrollments. Given the many alternative routes to teacher licensure, traditional teacher preparation programs cannot count on drawing students by their mere presence at a college or university. Those programs that thrive are those that create a niche, causing teacher candidates to be excited to enroll in that particular program and generating a reason that potential donors will want to fund them. This paper describes five teacher preparation programs that have been successful at drawing in teacher candidates and sets out recommendations based on analysis of their characteristics.

Introduction

While many teacher education faculty would be ethically challenged if asked to view their teacher preparation program (TPP) through a purely financial lens, the burgeoning number of TPPs throughout the United States has necessitated that TPP faculty consider ways to work within a marketplace where a decreasing number of teacher candidates have more options to obtain teacher licensure than ever before. Teacher preparation programs and the pathways to teacher licensure vary greatly. For many teacher education faculty, it becomes an ethical imperative to find strategies that increase the recruitment pool to their program, where teacher candidates will be provided with high-quality educational and field experiences intentionally designed to develop well-qualified teachers.

In this paper, I describe the efforts of five TPPs that have been consistently successful at increasing enrollments of teacher candidates. In order to understand the particular dynamics that cause certain TPPs to prosper while others stagnate, semi-structured interviews were conducted with professionals who work in TPPs that are thriving. Through an analysis of the attributes that have enabled their success, I provide recommendations to teacher education programs.

Teacher Preparation Program Enrollment Trends

TPPs have seen a steady decline in student enrollment since 2009 (U.S. Department of Education, 2015). Whereas there has been a 3 percent decline of general post-secondary enrollments since 2009, TPPs have seen a decrease of 31 percent during the same time period (U.S. Department of Education, 2015). ACT data indicates that 16 percent less high school graduates report aspirations to go into the teaching profession (Higgins, 2015).

Various factors have been cited to explain the consistent drop in enrollment. Historically, careers fueled by women, such as the teaching, tend toward lower pay than other careers with similar post-secondary educational requirements. In the past, teacher demand was also supplied by educated minority men and women who were unable to cross the racial barrier to other professions (Sedlak, & Schlossman, 1986). As barriers continue to be broken, these groups have increasingly chosen career paths with greater pay-offs.

Among the main reasons for low admission numbers in TPPs, education advocates cite the low social status afforded teaching, the perception that teachers are blamed for societal ills, and low teacher pay relative to other professions requiring an equivalent degree. In addition, potential teacher candidates view current trends in public education as deterrents to entering the field. The University of North Carolina, holding the largest TPP in the state, experienced a 17% drop in enrollments from 2011-2013 at a time when the state also eliminated teacher tenure (Sawchuck, 2014). Across the United States, increased standardized testing and pressures of accountability tied to these tests have led some to view the new role of the teacher as that of “professional test proctor” (Kansier, 2015).

At the same time, there is greater competition among TPPs for the limited pool of teacher education students. The types of TPPs available to candidates has mushroomed within the last two decades. Prospective teachers can now choose to either enroll at an institution of higher education (IHE) in a traditional or alternative program. Alternative teacher programs (ATP) usually require accelerated coursework, more intensive teaching experiences in high-needs subject areas and/or high-needs schools, and a commitment to teach for a certain number of years within Title I schools in a particular district or state. However, a major selling point for entering an ATP is that the teacher candidate is usually paid for their student teaching hours as a teacher-intern. In traditional TPPs, student teachers generally fulfill their state required fieldwork hours without financial compensation, placing a tremendous burden on them to work without pay for six to nine months. Some ATPs that are connected to IHEs grant a degree and the coursework to obtain licensure through the state; others are stand-alone programs that provide the means for teacher candidates to obtain licensure without a degree.

All of these various pathways to licensure have increased competition among TPPs to recruit the few candidates available. According to a study conducted by the Center on International Education Benchmarking, the numbers of TPPs in the United States is proportionally much greater than top-performing educational systems such as Finland, Ontario, Shanghai, and Singapore (Craw & Driskell, 2015). To add to this plethora of teacher preparation options, the Every Student Succeeds Act (ESSA), signed by President Obama in December of 2015, contains a provision that would create a new kind of TPP, called the “teacher preparation academy.” ESSA will allow states to use federal teacher-quality monies to fund these teacher academies at the same time that it exempts them from the state teacher preparation licensure regulations and standards that other TPPs must meet. The teacher academies could either be housed inside or outside an IHE.

Research

I searched for TPPs that have found innovative ways to recruit and fund teacher candidates. Semi-structured interviews were conducted with a faculty member at each TPP, two directors of an ATP, and a former employee at a State Department of Education in order to gather descriptions of the recruitment strategies and creation of funding streams within these TPPs. I created composites of these TPPs and highlight their benefits over TPPs that continue to try to draw in candidates based on traditional models with fewer incentives.

TPP1 is a grant-funded program created to increase the numbers of bilingual teachers in schools (Carr, 2016). TPP1 faculty formed a partnership with a high-needs school in an urban area. Collaboration occurs across multiple departments, bringing together faculty from Arts Education, Multicultural Education, Literacy, and Mathematics Education to create a unique educational opportunity for K-5 students. At the school site, faculty have taken the lead in shaping an Arts-based

educational experience during which traditional subjects are learned through an emphasis on the Arts and student teachers are involved in shaping the curriculum.

The faculty found a donor who is interested in supporting the education of children living in economically distressed areas and was inspired by the innovative aspects of Arts-based education. The donor provided \$300,000 to maintain the program with the potential for further funding. Through the funding, student teachers at the site are paid a stipend to fulfill their state licensure field hours, thus decreasing the financial burden of their teacher candidates. In addition, COE faculty receive the benefits of conducting research at the site. This increases their volume of publications and presentations for tenure and promotion.

TPP2 created partnerships with a series of schools that are now considered to be collaborative co-teaching sites. As opposed to many traditional TPPs where student teachers sometimes spend months observing the mentor teacher before beginning to teach, in a co-teaching model, student teachers (called teacher interns) are engaged in teaching alongside the mentor teacher within the first week. One COE faculty member is designated as the liaison at each collaborative co-teaching site, spending at least one full-day there each week to observe and evaluate teacher interns, collaborate with school staff, and provide professional development.

The state recently developed a new teacher evaluation system, and teacher interns are evaluated based on this new system rather than using a separate evaluation framework created by the COE. Districts are always looking for high-quality teacher recruits. Because the TPP uses the state evaluation system to measure their teacher interns' performance, district and school employees feel comfortable hiring these graduates if their scores are high at program completion.

Teacher candidates are more likely to enter this program over traditional TPPs for a number of reasons. Teacher candidates are excited about getting into the classroom to teach, and this program presents them with the opportunity and support to co-teach from the very beginning of the year. This is a very different model than the traditional TPP that requires student teachers to stand up and teach alone after months of passive observations. Teacher interns receive direct support from a consistent COE faculty member who is on site at least one day a week and who knows the school staff well. In addition, teacher interns surmise that they will be more likely to be hired in the district, because their evaluations provide evidence of their effectiveness through the state evaluation system rather than just a TPP-created student teaching evaluation.

COE faculty have been able to document improved test scores at the collaborative co-teaching sites since the infusion of teacher interns. Because they have established a correlation between the TPP and student academic growth, TPP2 is in an excellent position to secure grant funding. In addition, the COE faculty can make a strong argument to districts that they would benefit by reallocating federal and state monies to fund teacher interns in order to secure a consistent flow of highly qualified new teachers. Funding teacher interns through these two streams will further increase the numbers who will enroll in this TPP over others.

TPP3 has created partnerships with urban and rural school districts throughout the state to fund a pipeline of paraprofessionals. Many rural districts and certain urban areas have chronically high rates of teacher attrition. Paraprofessionals in these areas are more likely to be invested in the communities where they work. Because they see what teachers do everyday, they also know exactly the kind of demands placed on teachers. For these reasons, many school districts view paraprofessionals as stable employees who, if developed as teachers, will stay in the profession on a long-term basis and remain employed in their district.

Paraprofessionals oftentimes work in positions, such as Special Education, that are highly needed in districts. They are also more likely to be bilingual and qualified to fill positions that meet the needs of students who speak a language other than English. It is, therefore, to the advantage of districts to support paraprofessionals in advancing their careers. Beyond the financial rewards of investing in paraprofessionals, districts are in the “business of education” and oftentimes feel a sense of mission to further the career aspirations of employees who have traditionally been economically marginalized.

TPP3 secured grants specifically to draw in and support paraprofessionals. It eventually partnered with community colleges and high schools to create a pathway for more recruits. As the COE faculty gained more experience and a reputation for expertise in this area, TPP3 was able to obtain larger federal grants to fund the program and pay paraprofessionals a stipend for student teaching. The number of districts that have joined with TPP3 has expanded. TPP3 also created partnerships with ATPs in rural areas to teach classes to their students and provide other services that the alternative programs need. All of these efforts have provided an ongoing pool of teacher candidates for TPP3 and funds to support their efforts.

Districts are in chronic need of science, technology, engineering, and mathematics (STEM) teachers at the middle and secondary level, mainly because college students who go into these majors can earn substantially more in jobs other than teaching. TPP4 has focused on the need for highly qualified STEM teachers by recruiting STEM majors during their freshman year and offering them a dual degree in a STEM field as well as in education. Originally funded by a grant from a local philanthropist and entrepreneur, the creation of this TPP model has required collaboration across the COE, College of Engineering and Applied Science, and the College of Letters, Arts, and Sciences.

Recently, TPP4 underwent a rigorous vetting process and was accepted to be in a national STEM educator network of businesses, foundations, nonprofits, and other IHEs. This will provide even more funding to continue their work. TPP4 has increased enrollment from 16 students in 2010 to 113 students in 2013. With the major infusion of funding, the program is projected to continue to grow exponentially.

The final TPP is different from the other models in that it is considered an alternative teacher program (ATP). However, this TPP requires teacher candidates to obtain a Master’s degree. The COE in partnership with this program, therefore, directly benefits from the revenue generated through course credit production. I include this ATP, because I believe that there are important lessons that COEs can learn from this program.

TPP5 was founded and continues to be partially funded through a generous and ongoing donation. The administrative leaders at TPP5 consider their “consumers” to be schools and their strategic partners to be both schools and districts. While some faculty in COEs may consider it controversial or inappropriate to refer to a market economy in relationship to teacher education, the educational leaders of TPP5 believe this attitude is a key to their success as it has put their reputation with schools/districts at the forefront of their success. Over the years, they have built a network that has enabled them both to continue their work and thrive.

Through these networks and the reputation of their “product” (high performing new teachers), TTP5 has secured funding from districts. They use a portion of their paraprofessional pipeline monies and pay a stipend to partially fund the student teaching of their interns. Beyond the ongoing donation of their main funder, TPP5 has obtained state and federal grants through the Teacher Quality Partnership Grant program. A stipend is paid to teacher interns from district monies

and grants, increasing the likelihood that individuals who want to go into teaching will choose TPP5 over traditional TPPs.

Recommendations

TPPs need to make themselves valuable to districts. Districts have federal and state funds available to them and, as ESSA is implemented, there will be particular aspects of this law that provide unique opportunities to create funding streams through district partnerships. TPP3 was able to leverage the shortage of teachers in high-needs subjects and schools, as well as the desire of districts to invest in a career ladder for paraprofessionals, to gain funding from districts. The reputation of the high-quality teachers produced through TPP5 has provided a leverage point to gain funding directly through districts that want the teachers they produce. In acquiring this funding, both TPP3 and TPP 5 have been able to use some of that funding to pay student teachers during their field experience. This is a major selling point for teacher recruits.

TPPs may find advantages in adopting the “less is more” mindset. Many traditional TPPs spread their student teachers across numerous sites with just a few student teachers at each site. In contrast, TPP1 and TPP2 focused on target schools where they housed a larger number of student teachers. This provides a rich experience for the cohort of student teachers at the site and a strong educational program that benefits the school through the intensive work of the cohort. Faculty can be more present at each placement school, because there is a smaller number of them. If the TPP designates a particular faculty member to each site, they can build strong relationships with the principal and teachers there. This can open up opportunities for unique educational initiatives such as the Arts-based model at TPP1 or the academic achievement focus of TPP2.

COEs need to view these sites as opportunities to showcase their work. Like TPP1, grants can be obtained based on the work at these sites. As with TPP2, the school site can provide a reason why teacher candidates decide to enroll in that TPP over others, given its co-teaching model and the hiring prospects it offers. COEs should bring potential recruits to these focal sites. Teacher candidates are excited about the prospect of working with kids in schools, so it makes sense to take teacher candidates to schools where TPPs are actually doing exciting work.

TPPs can begin small and increase the level of grant funding as the reputation of their program builds. TPP1 did not begin with any funding beyond their IHE, but by creating a program with a specific focus and moving forward on it, they were able to find a donor who was inspired by their work at a school site. TPP3 and TPP4 began with small grants, gained recognition for their work, and were able to acquire increasingly higher levels of funding.

TPPs need to recognize the importance of collaborating across programs and department. TPP1 has drawn faculty from different colleges across the campus and from various programs within the COE to create a unique experience for student teachers and children at a school. TPP4 has collaborated with faculty in science, technology, engineering, and mathematics in order to pool the necessary expertise to provide a dual degree program in STEM and education.

TPP5 highlights the importance of collaborating across schools and districts in order to create a network from which TPPs can draw support through the mutual enterprise of training highly-qualified beginning teachers. TPP5 built relationships over time with school districts and targeted the teaching skills of their candidates as a selling point to districts that need a steady supply of highly-qualified new teachers. TPP3 has networked with rural and urban districts, gaining an understanding of the needs of various districts in order to work with paraprofessionals who can fill those

needs. Both of these TPPs have been able to secure funding directly from districts based on the relationships they have created.

A major lesson is that TPP faculty need to network with a wide range of districts to find those districts that want to collaborate, because they see the usefulness of the TPP in filling district needs and supporting their educational mission. This will become even more important as ESSA is rolled out, given its focus on direct funding to local education agencies.

Unfortunately, there are few incentives in many COEs for faculty to do such district work. Networking is oftentimes valued and rewarded in colleges through conference attendance during which faculty discuss issues with other faculty in similar programs. This is, obviously, not where TPPs will find the audience to generate student recruits and revenue streams. COEs might be well-advised to include promotion policies directed at district and state visibility or create strategic plans that outline faculty responsibilities for certain networking sectors.

Conclusion

The current context of teacher education necessitates strategic thinking in order to create leverage points for bringing in teacher candidates and funding through sources external to the IHE. Five TPPs have been examined based on their ability to thrive in a difficult market. Commonalities indicate that there are certain combinations of strategies that provide a framework for successful TPPs in a challenging market. COE faculty may be well advised to begin looking to how thriving TPPs have found creative ways to restructure their programs and redefine their roles in order to increase marketability.

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UNIVERSAL PREVENTION FOR MIDDLE CHILDHOOD STUDENTS AND CANDIDATES

by

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Abstract

This study examines the effect of providing universal preventive intervention training with the PAX Good Behavior Game on the sense of efficacy of pre-service middle childhood teacher candidates when delivered as a part of their teacher education program. Numerous longitudinal studies have outlined the proximal and distal outcomes of PAX GBG on students including decreased disruptive behaviors, increased focused attention, increased test scores, increased graduation rates, and decreased AOD use among others. PAX GBG has also shown to increase the sense of efficacy in pre-service and in-service early childhood teachers. This randomized control study found that middle childhood teacher candidates reported significantly higher efficacy than the control group and significantly higher efficacy than before the training.

Introduction

Selecting effective engagement and management techniques for use in the middle school classroom has long been a challenging prospect for teachers. As schools focus on positive behavioral interventions and supports (PBIS) initiatives, teachers must consider issues beyond adolescent development including culture, language, and ethnic diversity in developing the most successful strategies and principles for the classroom (Cramer & Bennett, 2015). In most cases, the teacher with a history of evidence-based training in content area instruction is left to piece together a plan for student behavior based on a number of theories and behavioral foundations. As Bucher and Manning (2001) note, teachers often come away with a medley of strategies that they can recall from their teacher education or seem to make sense in the region or culture they are working in. This may include using operant conditioning by increasing or decreasing reinforcement to student behavior. Many lessons come from understanding the role of individuals and groups in the community at large. Also, understanding students' strengths and weaknesses can make adult responses to behavior more effective. What is certain is that the end result at execution in the classroom tends to lack the precision, scrutiny, and research base that the content area expert exerts in her content area instruction.

However, selecting appropriate engagement and management instruction is vital in dictating the efficacy of the teacher in general. This sense of efficacy has also shown to be a determining factor in teacher, and thus, student success. After pre-service training, a lack of experience leaves new teachers with still lower sense of efficacy than their more experienced peers (Tschannen-Moran & Hoy, 2007). However, it is vital to mediate and increase this sense of efficacy in new teachers, as it has shown to determine teacher performance and retention as well as student performance (Klassen & Chiu, 2010). Research also shows that mediation of this variable ought to happen quickly as a full one third of teachers leave the profession within their first three years of service (Brill & McCartney, 2008). Thus, finding, cataloging, and disseminating interventions that increase a teacher's sense of efficacy quickly and significantly would have a dramatic impact on teacher and student outcomes.

The PAX Good Behavior Game (PAX GBG) is a universal preventive intervention identified in the 2009 Institute of Medicine Report on Mental, Emotional and Behavior Disorders as the most effective classroom-based prevention program (IOM, 2009) and also appears on the Substance Abuse and Mental Health Services Administration's National Registry of Evidence-based Programs and Practices (NREPP, 2015). This intervention subscribes to the nurturing environment framework that predicts positive lifetime outcomes for youth regardless of variables such as race, ethnicity, socioeconomic status and other variables with lower correlation to success than the framework (Biglan, 2015). PAX GBG is made up of a number of research-based strategies and principles that become part of the teacher's classroom management repertoire for creating a nurturing environment that predicts fewer behavioral problems and also dealing with behavior disruptions when they do occur.

These strategies subscribe to the nurturing environments framework that dictates that to increase student behavioral, academic, and lifetime outcomes, four general principles must be in place for adults who work with children. 1.) Pro-social behaviors and choices must be identified and reinforced. 2.) Problematic, anti-social, and unsafe behavior must be limited. 3.) Psychological flexibility must be increased through teaching the steps and building blocks to constructs society holds dear such as respect, achievement and accountability. 4.) Children must be protected from toxic influences from the environment including diet, the physical environment, or even physical, sexual, or emotional abuse (Biglan, Flay, Embry, & Sandler, 2012). PAX GBG subscribes to each aspect of this framework to establish the classroom as a nurturing environment for children to develop skills and habits that predict lifetime success.

Evidence-based kernels are the fundamental units of behavioral change or the irreducible signals that demonstrate a behavior change by the subject in a single-subject design study (Embry, 2004). PAX GBG includes a number of these research-based behavioral interventions or mini-strategies for the teacher to adopt to augment her classroom management skills. According to Embry (2004), these kernels come at low or no cost, produce immediate benefits, prove easily replicable with fidelity, meet competing demands, easily marketable, and alter risk/protective factors. Each of these aspects makes evidence-based kernels a natural fit for teachers charged with managing the behaviors of numerous children with disparate skill sets all at once.

Once mastered with fidelity, these evidence-based practices allow the teacher create a nurturing environment by preventing behavior problems before they begin and addressing them in effective ways when they do occur. Upon review these kernels would prove quite recognizable to psychologists, behavior therapists, and doctors; as each of the kernels have their origins in research-based behavioral change. Stop signs, speeding tickets, seat-belt chimes are all behavioral interventions for car safety with rather simple origins but subscribe completely to Embry's definition of behavioral kernels and all produce results that everyone can enjoy and behavioral experts could quite easily explain.

PAX GBG has infused these evidence-based kernels into the classroom-based prevention program. With input from educators, these fundamental units of behavioral influence have been wrapped and augmented for appropriateness for the classroom. These kernels all involve behavioral principles and include reduced allocated time to speed up transitions and reduce dawdling, procrastinating, and disruptive behavior (Wurtele & Drabman, 1984). Unified and non-verbal cues allow teachers to avoid confusion in delivering clear, consistent requests and expectations (Rosenkoetter & Fowler, 1986). Praise notes and public posting of performance

promote the identification and reinforcement of pro-social behavior by both students and teachers (Parsons, 1982, Kelley, et al., 1990 & Skinner, Cashwell, & Skinner, 2000). Random calling and other active student engagement procedures help to engage hyperactive and shy students while calming nervous and distressed students (Embry, Flannery, Vazonyi, Powell, & Atha, 1996, Rogers, 1997). Randomized reinforcers along with interdependent group contingencies increase teamwork, cooperation, and jumpstart low incidence behaviors (Murphy, Theodore, Alric-Edwards, & Hughes, 2007). PAX GBG also includes relational frame kernels allowing students and the teacher to get on the same page quickly and effectively in regards to boundaries and expectations for both parties (Abramowitz, Cote, & Berry, 1987, Embry, et al., 1996). These relational frame kernels allow for tremendous generalizability and cultural responsiveness for the intervention. For example, creating a unified vision of expectations for a given activity may focus on distinct strengths, weaknesses, temptations, and guidelines that may vary with respect to age, culture, or even geography. Embedding this flexibility is key to its universal effectiveness. When these evidence-based kernels are carried out in concert, the classroom becomes a more nurturing environment created by the students and the teacher alike. This produces increased attention and pro-social behavior and decreased disruptive and problematic behavior (Embry, 2002).

PAX GBG also incorporates the Good Behavior Game. This classroom-based intervention involves setting up interdependent group contingencies for rewards based on the students' behavioral performance in the everyday classroom activities. This helps the students to reinforce each other's appropriate behavior and limit problematic behavior through positive peer pressure and soft team competition. This teamwork and opportunity to celebrate group success continues to develop the classroom as a nurturing environment as each student becomes invested in the success of the others (Embry, 2002).

This intervention was initially developed to reduce unwanted behavior in a 4th grade classroom in the late 1960s. Dr. Muriel Saunders worked with the University of Kansas to develop a system in which the children were divided into teams and competed against each other to have as few anti-social, problematic behaviors as possible during the activity. The result was an intervention in which students became the agents of change for their own environment. This also resulted in dramatically reduced problematic behaviors. This reduction in problematic behaviors decreased teacher stress and increased students' feeling of safety in the classroom. It also reduced outside support necessary to handle behavior infractions (Barrish, Saunders, & Wolf, 1969).

The current iteration of PAX GBG incorporates a modified version of the Good Behavior Game as well as the evidence-based kernels for effective classroom management by the teacher. For a PAX Good Behavior Game, the teacher selects an everyday task that the students would normally take part in such as a spelling test, partner work, or reading on the carpet. Then, the teacher leads an interactive discussion with the class about pro-social behavior and anti-social behavior for this particular activity to establish clear behavioral expectations to be followed throughout the game. Then, while the students carry out the activity, the teacher carries out her normal activities as well while monitoring student behavior against the framework they established before the game by announcing and recording infractions. After the pre-determined time has elapsed, teams who meet expectations for behavior get to take part in a group reinforce while those teams that did not meet expectations have to sit out. (Embry, et al., 2010).

The immediate effects of exposure to PAX GBG have been demonstrated and replicated in multiple cohorts in multiple randomized control trials (Embry, et al.,

2010, Embry 2002). One of these that become immediately noticeable is a decrease of 75-85% in disruptive behaviors in the classroom. These are anything distracting to the teacher, the class, or even to the student exhibiting the behavior (Poduska et al., 2008, Wilson, Hayes, Biglan, & Embry, 2014). Fewer student disruptions during the school day represent a limit on problematic behavior for the potential perpetrators, but also a reduction on toxic influences for the rest of the students involved who may have become distracted or even victimized by the problematic behavior. This reduction in problematic behavior is an indicator that the classroom is becoming a more nurturing environment. Further, fewer disruptions by students in the classroom also means more time by teachers spent teaching and fewer stoppages in instruction to address behavior issues. Greater instructional time each day has led to academic increases in PAX GBG classrooms compared to their non-PAX GBG counterparts (Fruth, 2014, Ialongo, et al., 1999). This reduction in problematic behavior warranting teacher intervention resulted in a change in the balance in student/teacher interactions. This greatly increased the pro-social interactions compared to the anti-social interactions (Smith, et al., 2013). This increase in positive interactions among teachers has helped to establish a transactional relationship that results in an increase in pro-social behaviors from both teachers and students (Fruth & Huber, 2015). This reinforcement and identification of pro-social behaviors is another example of the intervention subscribing to the four aspects of the nurturing environments framework (Biglan, 2015).

Beyond changing the proportion of interactions, reducing problematic behavior produces has shown to decrease aggressive behavior and depressive symptoms (Kellam, Rebok, Ialongo, & Mayer, 1994, Kellam, Ling, Merisca, Brown, & Ialongo, 1998, Kellam, Rebok, Mayer, Ialongo, & Kalodner, 1994). The decrease in problematic behavior has shown to increase the number of identified friendships among students and a decrease in bullying behavior even without containing specific anti-bullying initiatives or curriculum (Ialongo, et al., 1999). PAX GBG has also shown to decrease school injuries related to violence (Embry, et al., 1996, Brener, Krug, Dahlberg, & Powell, 1997). This nurturing environment has created an improved classroom climate even independent of the overall school building climate (Domitrovich, et al., 2015). Further, the effects of PAX GBG have been demonstrated outside the classroom through improved relationships in the home (Ialongo, Poduska, Werthamer, & Kellam, 2001).

Further, PAX GBG also has embedded ways of allowing the teacher and the students to record, track, and report the progress on proximal data. The decrease in problematic behavior (Wilson et al., 2014) and increase in focused attention (Dolan et al., 1993) are measurable and can become a point of pride and pro-social progress on the part of the entire class. Additionally, this data can be used as a part of school-wide initiatives and are useful in speaking with administrators and local government officials in the progress made by their students.

However, the outcomes that have garnered PAX GBG such notoriety and recognition in the IOM and NREPP include the lifetime outcomes that have been tracked for nearly three decades by Johns Hopkins University. Multiple cohorts have demonstrated that the reduction in problematic behaviors last beyond the application of the intervention even without further exposure (Ialongo, et al., 1999, Petras, Masyn, & Ialongo (2011). The multiple long-term effects of the intervention demonstrate the lasting protection and prevention created by exposure for even one year. Some of these outcomes include 68% fewer men using tobacco products, 35% fewer students developing alcohol addictions, 32% fewer men involved in criminal behavior, 50% fewer men dependent on illicit drugs, 40% fewer men requiring public service use for the treatment of mental, emotional, or behavioral disorders, 50%

fewer suicidal thoughts in women and significant increases in graduation rates and college entrance in both men and women (Kellam et al., 2011, Kellam et al., 2012).

In previous studies, PAX GBG has shown to increase the TSE of teachers and teacher candidates. Whether delivered as a part of a pre-service teacher education program or in-service teacher professional development, PAX GBG training includes classroom management, social/emotional, and group dynamics skill modeling. This experience caused an overall increase in TSE as well as an increase in student engagement in in-service early childhood teachers (Huber, Fruth, Avila-John & Rodriguez, 2016) and also an increase in overall TSE as well as increases in student engagement, instructional strategies, and classroom management in pre-service early childhood educators (Fruth & Huber, 2015). There is little more indication on how a modified iteration of PAX GBG training targeted at middle childhood classrooms would affect the TSE of pre-service middle childhood teacher candidates.

With the numerous immediate and lifetime outcomes for students who receive PAX GBG as a classroom-based universal preventive intervention, and the effect PAX GBG has shown on the TSE of in-service early childhood teachers and pre-service early childhood teacher candidates, the purpose of this study was to determine the effect of teaching a modified iteration of PAX GBG for pre-service middle childhood teacher candidates. The prior research indicates and the researchers hypothesized that pre-service middle childhood teacher candidates who received PAX GBG training as a part of their pre-service teacher education program would report higher levels of efficacy on the TSES in overall total scores as well as on each of the subtests (instructional strategies, student engagement, and classroom management) after receiving PAX GBG training and higher levels compared to the “business-as-usual” control group.

Methods

The participants in this study were members of a four-year undergraduate middle childhood education program. This program also included a fifth year of optional study in order to receive a Master’s degree and satisfy state requirements to apply for licensure as a middle childhood teacher for 4th through 9th grades in two of four content areas (Language Arts, Mathematics, Science, and Social Studies). This teacher education program was one of several residing within the College of Education and Human Services at a public Midwestern University serving around 17,000 students from nearby urban, rural, and suburban areas.

The middle childhood education program required a classroom management course as a part of the undergraduate educational study for pre-service teacher candidates. The 2014-2015 academic year provided 41 pre-service middle childhood teacher candidates for the study. By the end of the study, 31 students met the final criteria for evaluation including completing the course and taking part in both the pre- and post-test. Ten students did not meet these criteria due to common circumstances and their incomplete data was not factored into the final analysis. Thus, the final number of participants involved in the study was N=31.

This randomized control study allowed students to populate two sections of the middle childhood classroom management course required for their program. Then, at the closing of registration, one section was chosen at random to receive the control, “business-as-usual” treatment in which teacher candidates received traditional classroom management instruction as had been provided by the program in the past. University staff and faculty taught this control course with readings, materials, and experiences as it had been in the past for teacher candidates in the program. The other section of classroom management was randomly selected to receive the

treatment or PAX GBG training as a part of its instruction. No preference was given to teacher candidates or course sections.

PAX GBG has been traditionally distributed as in-service professional development training for in-service teachers through 1-3-day workshops. These workshops have provided teachers with the training and materials necessary to implement PAX GBG in their own classrooms with their students. According to Huber, Fruth, Avila-John & Rodriguez (2016), the additional skillsets these trainings provide has shown to increase the sense of efficacy these practicing teachers have for their craft. However, this specific Midwestern Institution has also incorporated the evidence-based kernels, nurturing environment, and GBG strategies of PAX GBG into a pre-service format for delivery in its teacher education program. Its first iteration was designed for early childhood teacher candidates and showed remarkable benefits to the teacher candidates (Fruth & Huber, 2015). This is consistent with the original intent of the nationally available in-service PAX GBG training, which targets elementary classrooms. However, for this study, minor modifications were made to the evidence-based kernels, instructional strategies, and delivery of PAX GBG to make it appropriate and useful for application in the 4th through 9th grades for middle childhood teacher candidates. The developer of the course is an assistant professor of education that teaches classroom management special education courses in the Department of Teacher Education. This course adapted a similar format to the prior PAX GBG course for early childhood teacher candidates including classroom field experiences, candidate research and presentation, online learning and inquiry projects, and in-class instruction and modeling. A full-time instructor who teaches classroom management and other courses in the middle childhood program for the Department of Teacher Education taught the control classroom management course for this study.

The Teachers' Sense of Efficacy Scale (TSES) is a questionnaire made up of 24 items with Likert-style answer choices. The TSES was designed to collect data from teachers and teacher candidates. The questionnaire asks participants to, "Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position." The scale measures overall sense of efficacy in teaching as well as specified efficacy in three areas: student engagement, instructional strategies, and classroom management (Tschannen-Moran & Woolfolk-Hoy, 2001). The items ask teachers and candidates questions such as, "How much can you do to get children to follow classroom rules?" The TSES provides a 9-point Likert scale for responses including 1-Nothing, 3-Very Little, 5-Some Influence, 7-Quite A Bit, and 9-A Great Deal. The latest iteration of the TSES has demonstrated reliability of .93 for overall teacher efficacy and .84-.88 for the subtests of student engagement, instructional strategies, and classroom management (Tschannen-Moran & Woolfolk-Hoy, 2007).

Results

Independent *t*-tests were used to determine the difference in efficacy scores between the treatment PAX GBG group and the control "business-as-usual" group. Paired *t*-tests were also used to determine the difference in efficacy scores before and after full PAX GBG training throughout the semester for the treatment PAX GBG group. This analysis was carried out for the overall efficacy scores provided by the TSES as well as the scores in the three individual subtests for efficacy instructional strategies, student engagement, and classroom management. This analysis shows any difference detected in the TSE of the PAX GBG group over time and the degree of confidence this difference can be attributed to the treatment as opposed to chance.

Independent *t*-tests on pre-score measures between the two groups showed no differences at baseline. At the conclusion of the study, statistically significant differences were detected between the TSE of the PAX GBG group and the control group on overall TSE scores as well as efficacy in each of the three subtests areas. The post-test means and standard deviations for the TSE scores for the two groups appear in Table 1. The independent *t*-tests indicated that teacher candidates in the PAX GBG group scored significantly higher on overall TSE (202.3 vs. 183.4) as well as on the three subtests: Instructional strategies (62.3 vs. 67.2), student engagement (60.6 vs. 67.2) and classroom management (60.5 vs. 67.9) when compared to the control group. These scores and their statistical significance appear in Table 1 below.

Table 1. TSES post-test for treatment and control groups

	Control group (N=22)		Treatment group (N=9)	
	Mean	SD	Mean	SD
Total score	183.4	19.4	202.3*	13.3
Instructional strategies	62.3	6.0	67.2*	3.9
Student engagement	60.6	7.5	67.2*	5.1
Classroom management	60.5	7.8	67.9*	5.1

Note: The higher the score, the greater the sense of efficacy. **p*<.05.

The pre- and posttest means and standard deviations for the within group changes for the PAX GBG group are presented in Table 2. Paired *t*-tests indicated that teacher candidates in the PAX GBG group scored significantly higher on overall TSE (202.3 vs. 165.0) as well as on the three subscales: Instructional strategies (67.2 vs. 54.8), student engagement (67.2 vs. 56.3) and classroom management (67.9 vs. 54.8) at the conclusion of the course compared to before the course.

Table 2. Means and standard deviations for TSES of treatment group

	Control group (N=9)		Treatment group (N=9)	
	Mean	SD	Mean	SD
Total score	165.0	19.8	202.3**	13.3
Instructional strategies	54.8	7.6	67.2**	3.9
Student engagement	56.3	8.1	67.2**	5.1
Classroom management	54.8	6.5	67.9**	5.1

Note: The higher the score, the greater the sense of efficacy. **p*<.05.

Discussion

PAX GBG is a universal preventive intervention with longitudinal evidence over 25 years of multiple cohorts showing significant effect on multiple lifetime outcomes for children when they are exposed to the intervention for at least one year (Kellam et. al, 2011). By increasing children’s compliance, teamwork, and self-regulation, students are better prepared to make good choices on their own as children and on into adulthood. This intervention is delivered universally by using the classroom teacher as a vehicle for its delivery. This universal application not only ensures that children exposed to risk factors for mental, emotional, and behavioral disorders before or at the time of application incur strategies and protection from these

debilitating conditions, but also ensures that students have skills and strategies in place in the event of future exposure to such risk factors.

The application of this universal preventive intervention aligns nicely as a classroom-based intervention; as the skills and strategies necessary to increase long-term self-regulation are consistent with good student behavior and performance in schools. PAX GBG has shown to decrease the disruptive and even aggressive behaviors in the classroom almost immediately (Ialongo et. al, 1999). That is, students who demonstrate a great deal of self-regulation, can delay gratification, and decrease their levels of impulsivity get a long better, socially, behaviorally, and even academically in school (Fruth, 2014). Further, this self-regulation that is developed in students at a young age, has predictive qualities for lifetime outcomes. Such to say, the child who can self-regulate grows into the adult who can also self-regulate when the stakes and consequences for impulsivity are more dire – including AOD addiction, violence, and overall service use. Further, PAX GBG provides additional teacher strategies in the form of evidence-based kernels based on familiar psychological and behavioral principles. The teacher's use of these research-based strategies and their replacement of poor or problematic approaches to problems and classroom management helps to create a nurturing environment in the classroom that comes as a result of not only the teacher's increased skills, but the students and their newfound skills of extended self-regulation as well as trust and cooperation with each other and the teacher.

This particular study involved tracking the effect of PAX GBG training on the TSE of pre-service middle childhood teachers compared to their non-trained peers when delivered as a part of their pre-service teacher education program. This delivery mechanism is unique in that teachers have traditionally only been trained in PAX GBG through in-service professional development. This poses several problems. First, it increases the exposure of students to ineffective or harmful behavioral practices. It decreases the effectiveness of the teacher up until she receives training. It ingrains bad habits or coping mechanisms that the teacher develops that may be harmful for the students or the teacher or both. For example, if a teacher has poor interactions with a particular student and has few student engagement strategies to positively interact with that student, their relationship and instances of engagement over time will decrease. Her avoidance behavior is negatively reinforced in this instance, as ignoring or not engaging the student saves her the trouble, embarrassment, or bad feelings that come from attempting to engage the student. Over time, this student's academic and social outcomes would be predictably impacted.

Thus, this study incorporated PAX GBG training into the pre-service teacher education of teacher candidates before any of these trajectories had an opportunity to begin. They will be allowed to begin their teaching and interactions with children with a repertoire of evidence-based behavioral strategies for improving engagement, instruction, and management. Further, these candidates received PAX GBG training over the course of a 15-week semester as the training was embedded into their classroom management requirement. This contrasts with the one-day training that in-service teachers receive from the workshop-style training. This extended exposure to evidence-based principles along with experiences with PAX GBG in the field, student-directed literature reviews, group research projects, and in-class and online instruction allowed teacher candidates tremendous depth to their study and understanding of prevention, self-regulation, and behavior.

These trajectories and interactions between students and teachers can be modeled after Sameroff's (1983) transactional model. That is, teacher and student interactions are, indeed, transactional. The teacher's behaviors, choices,

performance and adherence to practices are affected by how the students receive them and interact with the teacher. This idea is captured in Sutherland and Oswald's (2005) view of educational practices. Thus, teachers' sense of efficacy is not a constant, but a dynamic variable. This variable proves malleable by positive forces such as strong pre-service training as well as peer and administrative support. Negative forces such as inadequate pre-service preparation, a lack of support, or mismatched skillsets, can also affect the sense of efficacy. This relationship is explained in much greater detail in Huber, Fruth, Avila-John, & Rodriguez (2015).

PAX GBG has been discussed as a sort of behavioral vaccine for protection from long-term mental, emotional, and behavioral problems and their tertiary effects (Embry 2011). That is, children exposed to PAX GBG have such dramatically different outcomes based merely on their exposure to PAX GBG that it serves a function with similar outcomes as a vaccine in the medical field serves as protection from illness (Embry, 2002). Using prevention practices, especially universal prevention practices such as PAX GBG, subscribes to the public health model that is in use in other areas of illness and medicine (Embry & Biglan, 2008). Utilizing positive behavior health strategies as prevention represent a stark change in the approach to dealing with mental, emotional, and behavioral disorders – namely preventing them as opposed to treating them and paying for their tertiary damage to individuals, families, and communities. However, utilizing a behavioral health model requires the assistance of society members never before charged with contributing in such a way (Fruth, Mayer, & Finnegan, 2015).

Teachers implementing PAX GBG as universal prevention in our communities is a step toward this model. In this study, and the prior study on early childhood teacher candidate efficacy (Fruth & Huber, 2015), PAX GBG increased teacher efficacy above that of their non-trained peers. At the conclusion of the study, a major difference in the two groups was the total behavioral strategies that were a part of each teacher candidates overall teaching skill set. Other tools in their teaching toolbox were identical. This includes their math skills, their ability to teach reading, and their understanding of scientific inquiry.

This disparity in behavioral understanding and classroom application of behavioral strategies and skills to establish a nurturing environment in the classroom that prevents behavior problems among the students and the teachers that exists between the two groups in this study is prevalent throughout the nation among teachers. That is, research has indicated the most effective, evidence-based approaches to content area instruction. Reading, writing, and other content area instruction has been executed, researched, evaluated, scrutinized and modified such that the profession has a general understanding of the evidence-based techniques necessary to ensure children acquire those content area skill sets with acceptable proficiency. However, PAX GBG stands as the sole evidence-based approach to behavior, self-regulation, and nurturing environments with demonstrated impact on not only proximal classroom outcomes but also the generalizable adult outcomes. Schools currently administer roughly similar approaches to the content areas but may vary widely on their approach to behavior. Bucher and Manning (2001) state that teachers typically select an eclectic approach to classroom management by picking strategies that make sense to them. While, often valid, their selections and final product will then be demonstrably less research-based and exact than the approach that same teacher selects for administering content area instruction. Adopting an evidence-based approach filled with appropriately proportioned research-based strategies proven to increase student performance and evidence of increasing teacher efficacy and performance should be a priority for local, state, and

national departments of education to increase the behavioral, academic, and lifetime outcomes for children and communities.

Future study should include expansion of evidence-based practice and universal prevention training as a part of teacher candidates' pre-service teacher education instruction and field experience. Further, longitudinal tracking of teacher performance and retention of teacher candidates trained in PAX GBG during their pre-service experience is warranted. Also, longitudinal tracking of students' proximal and distal outcomes when exposed to teachers who were trained in PAX GBG as a part of their pre-service training to compare to that shown in Kellam, et al. (2011) of teachers trained during as a part of in-service professional development is warranted as well. This integration of PAX GBG into pre-service training represents an opportunity for a vehicle for state and nationwide expansion of evidence-based practices and the public health approach to behavioral health.

Replicating the efficacy trials (Kellam, et al., 2011) on a state or nationwide scale could have a dramatic impact on community, state, nationwide outcomes (Aos et al, 2011). Extrapolating those results would mean that a pre-service teacher trained in PAX GBG and teaches 25 students a year for 30 years would see 109 additional students graduate from high school, 102 additional students enter college, 72 fewer students develop illicit drug addictions and 7 fewer students committing violent crimes. The Washington State Institute for Public Policy report (Aos et al, 2011) predicts that affecting these outcomes so dramatically means that the PAX GBG teacher will save local, state, and federal governments a total of \$3,577,000 over her career compared to her peers who did not receive PAX GBG training. Further replication of pre-service instruction and outcomes are necessary for immediate policy change.

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DIVERSITY MINDSETS: AN INVESTIGATION OF ILLINOIS EARLY CHILDHOOD TEACHERS

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Abstract

Student populations in school buildings are becoming increasingly diverse, however the teaching population is not (Gollnick & Chin, 2009). Therefore, this qualitative research study focused on five Central Illinois preschool teachers' mindsets and implementation of diversity concepts. The researcher used Paine's (1989) framework to describe teachers' understanding of diversity. The findings from this study add to the limited scholarship regarding teacher mindsets and implementation practices focused on diversity, especially as the cultural gap continues to grow between students and teachers in the United States. The researcher found that the participants in the study discussed diversity, however apparent stereotypes and biases were present.

Introduction

A trend in our society is the discomfort or nervousness around discussing differences, especially in school environments (Tatum, 1992). The consequence of these uneasy feelings, specifically from educators and administrators, results in classroom environments that are unwelcoming to students. This then creates situations where students do not feel accepted and successful (Lee, Ramsey, and Sweeney, 2008). One such word that encompasses many of the taboo topics in our society is diversity.

Diversity has a variety of meanings and includes many topics such as socioeconomics, race, culture, sexuality, family demographics, and religion (Banks, 1997). The U.S. Department of Education, in collaboration with the U.S. Department of Justice, has defined diversity as, "avoiding racial isolation" (2013). Additionally, the Merriam-Webster (n.d.) dictionary defines diversity as, "the state of having people who are different races or who have different cultures in a group or organization." Overall, the idea of diversity incorporates many definitions and topics, which were used as a reference for this research study.

Interestingly, race and diversity are often used interchangeably in society (Silverman, 2010). This interchangeability is evident in the U.S. Department of Education's definition of diversity. Technically, race is a visible social construct, developed over the centuries as a means to identify individuals based on skin color (Silverman, 2010). The American Anthropology Association (1998) agrees that race is not a biological category but rather a social and cultural category. Due to the fact that race is often visible, individuals may experience increased levels of self-awareness around others of different racial heritage or skin tones (Silverman).

While diversity or the topic of race enters many aspects of students', administrators', and teachers' lives, the most prominent diversity concept in school environments is the identifiable cultural gap. The cultural gap, as defined by Laughter (2011), describes the demographics of teachers remaining stagnantly White, female, and Christian, while the student population is continually evolving (Gollnick & Chin, 2009). This constant change in the student body is not reflected in the teaching staff or administration. Therefore, a cultural gap grows in schools between students and teachers. In response to the recognition of a growing cultural

gap, researchers and educators are looking at and discovering concepts related to the term diversity as a way to best serve student populations.

For that reason, this research focused on preschool teachers' definitions and ideas of diversity. The focus on preschool teachers was due to the fact that early childhood is becoming more prominent in education discussions, both politically and socially. This is especially true with federal and state grant funding sources seeking ideas and projects focused on early childhood students and teachers. Additionally, race and diversity, as described above, are important topics to continue to discuss, specifically the ideas and mentalities of teachers. For example, Silverman (2010) found that teachers only saw themselves as a support to school wide diversity campaigns, but displayed contradicting messages through interactions with students. Lewis (2001) found teachers instructing minority students to get the black staff to explain a concept or stating that students "seem to play the race card a lot" (Lewis, 2001, p. 785). Both of these examples imply that the cultural gap between students and teachers is an area of growth and concern for the education system nationwide. Therefore, the purpose of this study was to investigate Central Illinois preschool teachers' ideas and mentalities around the concept of diversity in their classroom and school building.

Theoretical Framework

The theoretical framework for this specific study focused on Lynne Paine's (1989) four categories of teachers' mindsets and views of diversity between and among their students. Paine's (1989) first category is individual differences, which is when teachers view students as being different "in many ways and on many dimensions" (p. 3). The second type of teachers' understanding is categorical differences, which is when the teacher views students by differences based on specific stereotyped categories (Paine, 1989). Third is a contextual difference, which is described by Paine as a technique in which teachers assign a social construct or stereotype to students' specific categories. Finally, there is the category of pedagogical perspective. This is when teachers assume that differences are not simply random, but interesting. Paine described the pedagogical perspective as one that has consequences for both teaching and learning, which could include classroom differentiation to meet the needs of individual students through student-centered lessons. In this category, teachers believe that "every child is unique and deserves an education suited to his or her special needs" (Feiman-Nemser & Remillard, n.d., p. 10).

However, prior to exploring the four categories of diversity, Paine (1989) acknowledges that teachers need to self-reflect on their own background, biases, and experiences. Gorski (2010) also supports this self-reflection process. He states the teachers need to be transformative by engaging and examining his or her own biases and stereotypes of cultures, religions, races, genders, etc. Gorski (2010) goes on to state that an educator is unable to effectively teach the increasingly diverse student population without a clear understanding of self.

Methodology

This qualitative research study used grounded theory to investigate teachers' mindsets (Glaser & Strauss, 1967; Glesne, 1999). The data analysis process used for this research study was open coding. Overall, the research study lasted twelve weeks. In those twelve weeks, participants were asked to self-reflect at the beginning of the study and at the end of the study in written form, in focus groups, and in individual interviews. This was asked of the participants because it has been found that all of these processes assist participants in becoming aware of

their current mindsets, practices, and in some cases problem-solving (Lin, Lake, & Rice, 2008; Wood & Bennett, 2000). Additionally, the researcher observed each participant three to four times per week in her classroom over the twelve-week period. During the observations the researcher took notes while also looking for specific conversations and/or lessons that would fall under the diversity umbrella. Such examples would include a discussion of race or skin color, a discussion of religion or church, or a lesson on family demographics. After each observation the researcher typed up and coded the transcripts to show the teacher what type of conversations and/or lessons they implemented in their classrooms. The researcher also provided a time-rounded graph of the time spent in the classroom on diversity topics. This was provided as a way for participants to quickly see when the conversations under the diversity umbrella were taking place in the classroom.

This feedback cycle, of observation and notes/graphs, was used as a way to provide tangible evidence for teachers to reflect on throughout the research process. This was based on the notion that feedback can be communicated verbally, in a written form, or graphically displayed as a way to communicate information regarding current teaching strategies (Agbenyega, 2012; Barton & Wolery, 2007; Casey & McWilliam, 2008; 2011; McFarland, Saunders, & Allen, 2009; Wright, Ellis, & Baxter, 2012). Throughout the whole process, however, the researcher never commented on positive or negative conversations or how much teachers should or should not discuss diversity in her classroom. The researcher also never suggested lessons or topics. The purpose of this research study was simply to understand how teachers' viewed the topic of diversity through her conversations and lessons.

As with any qualitative research study, there were perceived disadvantages, which were addressed. Triangulation was used as a way to ensure the information collected was accurate. This was accomplished through collecting multiple data points and including member checking after each portion of the research process. The researcher also designed and followed the research protocol for each participant as designed prior to the study. The aim to have reliable results by accurately recording occurrences during the research study. This was accomplished through member checking and research protocols (Bogdan & Biklen, 2007).

Additionally, researcher bias was a major concern when implementing this study. It is known that researcher or personal biases can be triggered through personal experiences, personal background, and perceptions of individuals and situations (Johnson & Christensen, 2007). The researcher engaged in the process of self-reflection, which was essential because "unacknowledged bias may entirely invalidate the results" (Kvale, 1996, p. 286). Therefore, the researcher engaged in journal writing throughout the duration of the study as a way to reflect and become aware of personal biases.

Participants

The selection method of homogenous purposeful sampling was used in this study. The classrooms were selected based on specific criteria that included funding from the state of Illinois, NAEYC (National Association of the Education of Young Children) accreditation, and teacher certification and/or access to quality professional development for the participants. Once a school district/program was selected, the gatekeeper, in this case the Director, assigned teachers and classrooms to the study. The researcher followed through with these requests, but also acknowledged that the assignment of classrooms and teachers was a limitation of the study. This will be discussed further on.

The small sample size of five participants allowed the researcher to fully engage participants during the study and was based on Morse's (2000) guidelines

for determining sample size in qualitative research. The scope and nature of the topic for this study was quite specific, therefore a smaller sample size was required. Also, a small sample size often results in high quality data due to the multiple interactions with the participants (Morse, 2000).

The participants in this study were located in two different school buildings within the same county in Central Illinois. Each classroom had two administration offices, the office in the building where they were housed and the main early childhood office housed elsewhere in the county. One of the classrooms was located in an elementary school (pre-k-3rd grade). The other two classes were located in a middle school (6th-8th grade) due to room availability in that district. The following section describes the specific classrooms, as well as the participants associated with each classroom. The participants' names are changed to pseudonyms for confidentiality.

Classroom 1, the classroom located in the elementary school included two of the participants for this study. The school building was located in a rural Central Illinois community. It was home to two communities that shared an elementary and middle school. One of the towns was more affluent in comparison to the other town. However, at the time of this study the district had 56.9% low-income students and 2% of students were homeless. The teaching staff in the district was 100% White, with over 85% of the student body also identified as White (www.illinoisreportcard.com).

The elementary school was designed to have a hallway for each grade level. The specific preschool classroom was located in the special education and kindergarten hallway in the elementary school. Upon entering the classroom, designated in this research as Classroom 1, there were a variety of centers, such as the art center, math center, and block center.

There were two participants in Classroom 1. There was Alexandra, the lead teacher, and there was Delores, the assistant teacher in the classroom. Alexandra was in her mid-20s, Caucasian, Christian, single, middle class, and female. She was an early career certified teacher in the state of Illinois and graduated from a mid-sized state school with her teaching degree. She was currently in her second year of teaching as the head teacher in the classroom. Delores was in her late 50's, Caucasian, middle class, Christian, and female. She had been in the teaching field for twenty years. Delores was the assistant teacher in the preschool classroom and attended a small community college to receive the certification for her current position.

There were two classrooms located in the Central Illinois middle school, which included three participants. At the time of the study the overall school statistics focused on teaching staff were 97% White, with over 60% of the student population identified as a minority race. The overall low-income percentage was 89.9% with 2% of students who were homeless.

Classroom 2, the first classroom located in the middle school, was the classroom of Alivia, the lead teacher. Classroom 2 was located next to a special education classroom and near Classroom 3 in this study. Upon entering the classroom, there were a variety of centers set up in specific areas around the classroom. For example, there was the sensory area that included water and sand. There was also a quiet area that included a feeling chart of children of a variety of races. The lead teacher in the classroom, Alivia, was in her mid-30's, White, Christian, and female who self-describes herself as living in poverty. Alivia attended a Midwest University and received her B.A. in education along with her early childhood teaching certification. At the time of the study she had been a head teacher for eight years.

Classroom 3, the second classroom located in the middle school, which was designated as classroom 3 in the study, was the classroom of Monica and Alexis. The early childhood special education classroom and the other preschool classroom were located next to this classroom. The first center that the researcher came to was the art center and the snack area. There were other centers that included a rug area, housekeeping center, and science table, to name a few. The lead teacher in the classroom, Monica, was in her early-40's, a Catholic, middle class female. She self-identified as White on the demographic survey provided at the beginning of the study, however throughout both interviews she spoke of her Native American heritage. She had her B.A. from a Midwest University and, at the time of the study, had been in education as a head teacher for fifteen years. The other participant in classroom 3 was Alexis. She was the assistant teacher. Alexis had her AA from a Midwest community college. She was in her 30's, and was a White, non-religious, middle class female. She had been in education for ten years as an assistant teacher.

Findings

Through the coding and data analysis process it became clear that teachers' mindsets, ideas, and actions focusing on diversity ebbed and flowed between and among Paine's (1989) four areas. The findings will be discussed in an organized way moving through each of the four areas described by Paine. As a reminder, the topics included in Paine's (1989) framework include individual differences, categorical differences, contextual differences, and pedagogical differences.

Individual differences, according to Paine (1989), include the perspective that "the world is seen as full of people who differ in all sorts of ways and on all sorts of dimensions... psychological and biological explanations of diversity" (p. 3). The five participants all exhibited this thought process to various degrees.

When asked to describe the diversity in their classroom and/or school building, each participant immediately used the description words of "poor", and "minority", and described the family demographics of their student body. Additionally, they each stated that they had a strong desire for their students to understand that everyone is the same regardless of money, skin color, or family situations. However, when discussing the idea that everyone is different but alike, Monica and Delores both alluded to their own personal belief systems. They believed discussions involving diversity should not be a focus in preschool classrooms because the United States is a "melting pot." Delores said:

I don't understand why there is all this like Black History month but there's nothing for Caucasian people. So, that kind of bothers me because we are becoming, at some point, we are going to be a melting pot and we (White people) are dwindling so are we going to have a Caucasian month? And, we won't.

Monica also discussed this further by reflecting on her own heritage as she supported this idea. She said,

... but at this point in our lives I don't think that race, are you black or are you white, I think that we are the melting pot at this point. In my history there is Native American, but I don't walk around saying I am a Chippewa.

Alexis and Alexandra, on the other hand, approached this concept as differences with no connection to social groups. They both spoke about their childhood experiences of growing up in homogenously White communities with parents who encouraged discoveries related to differences. Overall, all of the

participants viewed diversity as differences; at points it was a *us* and *them* implied mentality.

A categorical difference perspective includes categorizing individuals based on repeating patterns “such as social class, race, and gender” (Paine, 1989, p. 3). While stereotyped categories are the focus of this perspective, the explanation of why society has created social constructs or why students may fit into a social construct is not considered or discussed.

In general the five participants all agreed that there were categorical differences and discussed those differences without being directly asked by the researcher. Delores focused on the categories of socioeconomics and gender as the two most important categories affecting her school and classroom. Alexandra agreed and reflected with Delores during a focus group regarding the category of socioeconomics. An example of this mentality occurred during a whole group activity when Alexandra read a book about two little girls who were friends. One of the little girls did not have any food at home and the other little girl had plenty of food at home. During the reading of that story the participants asked the students if they had food in their refrigerators at home. Both Delores and Alexandra commented that they were surprised when all of their students reported having food in their refrigerators at home.

When analyzing the data, it became apparent that all of the participants agreed with Delores regarding the category of socioeconomics. For example, during a focus group session, one participant began discussing her perception of holiday baskets. The holiday baskets in her district were provided to families of lower socioeconomic status. The district asked each classroom to provide supplies for a certain number of baskets. She stated that, “I have more kids who would qualify to get a basket then would qualify to donate. You know, I just don’t think it’s fair, so I just don’t do it.”

Aside from socioeconomics, participants also spoke about the importance of introducing students to differences, based on the category of cultural traditions; however, the why, was left out of the discussion and lesson implementation. For example, Monica spoke about traditions and cultures during interviews and reflections. She, along with the other participants, incorporated many Eurocentric, or what many would classify as traditional, holidays into her classroom such as Valentine’s Day and St. Patrick’s Day throughout the course of the study. However, each participant failed to acknowledge Black History Month, Martin Luther King, Jr. Day, and President’s Day in their classroom and curriculum.

When the researcher asked each participant about the holidays that were celebrated in the classroom versus the holidays that were not celebrated in the class, generally speaking, the participants agreed that families saw the celebrated classroom holidays as the “normal holidays.” The participants reported that, throughout the years, families have rarely questioned or asked to be excluded from the celebrations. Therefore, most of the participants felt it was normal and okay to implement the Eurocentric holidays into her classroom settings, making the holiday celebrations part of the norm in the classroom and school building, but while also excluding other holidays.

When speaking to Monica about the holidays, the researcher discovered that the lessons were planned around Thanksgiving and Christmas because, as she stated, “those are the two holidays where typically your whole family gets together, you know. Thanksgiving and Christmas, so between that three-week span that’s (family) my primary goal.” She went on to say, “None of these ‘things’ (multicultural topics or the idea of diversity) matter when addressing my classroom; I view every child/family as individual—therefore respecting any diversity.” The researcher noted

at this point that Monica had a difficult time self-reflecting her statements with the reality of her implemented lessons.

While participants had instances of recognizing or implementing the mindsets of categorical differences, many of the participants also touched on the next category, contextual differences, through their empathic responses or the asking of “why?” regarding situations. Contextual differences continue to build on the foundations of the first and second perspective because it takes the category or pattern and asks the larger “why?” question in relation to the socially constructed stereotypes. At this level, the data analysis indicated that not all of the participants were asking “why?” in their reflection process as teachers.

Monica embraced this perspective by stating her desire to understand the cause of socially constructed differences. She focused on her students and their categories during her personal questioning. In a discussion focused on the importance of incorporating family life, she stated:

So it's sort of this thing, oh these parents don't volunteer... I mean I don't personally understand that but I can empathize with that, you know their worry is not sitting and making sure this child is sitting and learning ABCs, their worried about if they are going to get food tomorrow. You know their priorities are different.

Pedagogical Perspective

The final category described by Paine (1989) is the pedagogical perspective. This perspective “assumes that differences are not simply random and interesting... (they have) consequences for both teaching and learning” (Paine, 1989, p. 3). The participants in this study mentioned their own view of differences having “consequences for teaching and learning,” they all just approached it in their own way.

Alivia used her contextual perspective to guide her questioning in order to provide projects for students in the classroom that were applicable to their interests and were current to their lives. Embracing the pedagogical perspective, Monica approached it as one of personal heritage as it related to the constructed idea of culture. For her, a cultural norm in America is to be with family around Thanksgiving and Christmas that can be seen as a Eurocentric mindset. Additionally, she discussed the cultural significance of Thanksgiving and St. Patrick's Day as it related to her and her family. Therefore, Monica wanted to bring in her personal background for the students in her classroom to experience. She saw this cultural additional, from her personal lens, as a benefit to her students by teaching and learning about the cultural context of “normal traditions” in America.

Stemming from Monica's pedagogical perspective was Alexis' view of contextual differences, including the teaching and learning in the classroom at the pedagogical level. Alexis greatly valued a family flag project implemented in the classroom and made sure to refer to the family flags throughout the entire observation window. Additionally, Alexis reflected on a family book project implemented in the classroom between Thanksgiving and Christmas. As part of this project, books were sent home with the requirement of family member completion. In her interview, she stated that she felt like she needed to change the wording on some of the pages within the books because each page was not representative of each student's family. She knew not everyone in the classroom had a mom, a dad, a grandma, a grandpa, and other family members that were represented in the family book.

Alexandra, who was the youngest teacher and most inexperienced participant, reflected during the final interview and focus group that throughout the study she had begun to reflect at a deeper level regarding her ideas of diversity

among and between her students. One example Alexandra reflected on regarded the discussions she began and the lessons she implemented in her classroom around skin color, hair color, eye color, and so forth, as a way to talk about differences.

Overall, analyzing the data from this research study, which focused on preschool teachers' mindsets around the topic of diversity, led to an understanding of what was currently occurring in the ever-changing school environment. This understanding supported the idea of a phenomenon happening around the country, the idea of a cultural gap between students and teachers. It became clear that teachers have the obligation to self-reflect. Additionally, teachers need to be open to learning about ideas that differ from their own and discover how their own background impacts their teaching. Most importantly, teachers need to take time to reflect on their own Eurocentric traditions and mentalities to become aware and vigilant of how those mindsets influence their classrooms.

Limitations

There were two major limitations during this study. First, the idea of time was an identified limitation. The researcher did not have the time to be in all three classrooms at one time. Therefore, some events or teaching moments were missed. This was addressed by adding in the reflection pieces and the interviews. During the interviews, the researcher was able to ask the participants if they wanted her to know anything specific that the researcher missed. Additionally, during informal conversations, at the beginning of each observation, most participants would comment on what had been happening that day or week. Sometimes these informal conversations had information that was applicable to the research.

Second, some may argue that a limitation of this study was due to the fact that the participants were chosen by the program administration because of their "lack of multicultural instruction," as defined by the director. This was a recognized constraint placed on the researcher by the gatekeepers. When the administration met with the researcher to understand the purpose of the study, they agreed that their participation as a program depended on the researcher's ability to observe in specific classrooms.

Discussion and Implications

The purpose of this study was to investigate Central Illinois preschool teachers' mindsets in relation to the idea of diversity in their classrooms and schools. This study was significant for two major reasons. First, it focused on the preschool classroom, which is a current focus as politicians, researchers, educators, and other community members advocate for high-quality early learning environments. Second, this study was significant because it brought attention to the importance of teacher mindsets in school buildings with changing student demographics and stagnant teacher demographics (Amos, 2010; Gollnick & Chin, 2009).

The results from this study have the potential to influence many stakeholders. These stakeholders include politicians who need to understand the importance of implementing multicultural education and/or high quality diversity training in school buildings; administrators who need to develop a knowledge base to educate and provide resources to their staff focused on the cultural gap and/or diversity conversations; and educators who need to develop and reflect on their understanding of diversity (Johnson & Alkins, 2009; Lowenstein, 2009; Zozakiewicz, 2010). Additionally, the results of this research study have the potential to influence the increasing number of diverse families and students in our society and school buildings.

Reflections and diversity discussions are also an important piece of how school communities are trying to prevent the inherent action of avoiding topics that may clash with the heteronormative or Eurocentric views in society. In the end, the goal is to guide teachers and administrators through the process of self-reflection as a way to become knowledgeable and comfortable in conversations focused on diversity. Additionally, the education system needs to strive to create a generation of students who are open to discussing differences, are willing to question, and are able to take action.

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EXAMINING THE CONSTRUCT OF VISION IN REAL TIME: IMPLICATIONS FOR TEACHER EDUCATION

by
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Abstract

This article is a position paper that explores the construct of vision. This construct has gained popularity within the practice of teacher education as a way of scaffolding novice teachers towards integrating novices' instructional ideals with the pragmatic realities of classroom teaching. In this article, I employ the reflections of two novice teachers to argue that the construct of vision, as currently conceived in the research literature, is lacking a critical component: Attention to the classroom dimension of time. I argue that time can precipitate three unique pressures within the instructional decision-making of a novice teacher: pressure to maintain lesson momentum; pressure to cover content; and pressure to manage emotion. In light of this argument, I discuss implications in regards to how teacher educators might invite novice teachers to craft their visions of teaching.

Introduction

The construct of “vision” – i.e., the ability to envision one’s ideal teaching in action – has currency in contemporary discourses in teacher education (see Berry, 2009; McElhone, Hebard, Scott, & Juel, 2009; McNay & Graham, 2007; Munter, 2014; Pitton, 2006; Rigelman & Ruben, 2012). A conspicuous absence in the literature, however, is a consideration of the way that a novice teacher’s vision may become quickly become complicated and conflicted as it is enacted in real time. Many vision prompts (e.g., “What is your mission as a teacher?” or “What do you see yourself doing in your ideal classroom?”) exist outside of time. Because these visions are crafted independent of pressing temporal realities, these conceptualizations may produce only static snapshots of classroom practice rather than moving pictures of instruction. Time may be both teachers’ most valuable resource (McEwan, 2012) as well as their most pressing concern (Kennedy, 2005). This article, therefore, explores how time complicates the construct of teacher vision. I argue that appreciating the pressures that novice teachers face as they attempt to translate their visions into action has implication for how teacher education invites novice teachers to consider and craft visions of teaching.

In this article, I will discuss three pressures that may emerge as novice teachers attempt to enact their visions in real time. These include the pressure to maintain lesson momentum, the pressure to cover content, and the pressure to manage one’s own unpleasant emotions. I will present the theoretical basis for each tension, and I will also present some empirical examples, generated from moments of classroom thinking that were recounted to me by two beginning teachers. When interviewed, each of these teachers (represented by pseudonyms) was White, female, between 24 and 30 years old, and in their first year of full-time high school teaching. The subjects taught were mathematics and social studies. I observed a lesson taught by each teacher, during which I video-recorded their instruction; the teacher and I then watched the video-recording together as the teacher described her in-the-moment thought processes during (what she considered to be) notable moments of instruction. Before exploring these examples, I will first review the way that the construct of vision has been presented in research literature on teaching and teacher education.

The Importance of Vision in Learning to Teach

Novice teachers tend to encounter difficulty in realizing their ambitions in practice (Grossman & Thompson, 2008; Wood, Jilk, & Paine, 2012). This occurs, in part, because novice teachers face the challenge of having to quickly calibrate their instructional ideals with the (sometimes unexpected) realities of classroom work (Cole & Knowles, 1993; Veenman, 1984). To facilitate this process of calibration, some teacher educators have argued that if novices enter the profession with well-defined, concrete mental images of what they want to accomplish in the classroom, novices may be better able to adjust to the practical challenges they face while remaining dedicated to their instructional ideals (Hammerness, 2006a; Parsons, Malloy, Vaughn, & La Croix, 2014).

Hence, the construct of “vision” has become popular in teacher education. It is important to note that, in contrast to the construct of “professional vision” (Goodwin, 1994) – a socially shared way of representing and interpreting the work of teaching (see Sherin, 2001) – the construct of vision as explored in this paper prioritizes teachers’ own personal images of “ideal classroom practice” (Hammerness, 2003, p. 43), of “what teachers hope could or might be in their classrooms” (p. 45). Developing a vision of teaching is also distinguished from authoring an educational philosophy (e.g., Boschee, 1978), for, rather than talking about teaching through abstractions or platitudes, a well-crafted vision can help novice teachers to “see” how their own personal ideals might be folded into the practical realities of classroom teaching. As Hammerness (2003) writes, “Vision may...provide...a way to ‘bring it all together’ in a way that links theory and practice” (p. 53). Similarly, Kosnik and Beck (2009) describe vision as a conceptual tool that provides novice teachers with a means of developing “an integrated understanding of what one is striving for as a teacher” (p. 147).

It has been argued that teachers must enter the classroom with, not only knowledge and skills, but with a guiding moral purpose as well (Darling-Hammond & Bransford, 2005; Osguthorpe, 2013). In this way, a teacher’s vision is expected to reflect a teacher’s moral ideals and, thus, serve as a touchstone for the teacher’s ethical and mission-driven instructional practice (Fairbanks et al., 2010). Duffy (2002) describes vision as “a personal stance on teaching that rises from deep within the inner teacher and fuels [the teacher’s] independent thinking...When teachers have a vision, they assume control over instructional decision making in order to achieve [their] mission” (p. 334). In other words, if novice teachers are able to articulate their mission for teaching definitively, they may be more likely to make spontaneous classroom decisions that align with this mission within concrete classroom situations (see also Korthagen, Kim, & Green, 2013). In this way, the construct of vision has the potential to bring together practical realities and idealistic ambitions.

Developing an “integrated understanding” of teaching – folding ethical ambitions into practical constraints – is complicated. Teachers must constantly harmonize their ideal aims with pragmatic goals. Dilemmas with no clear-cut solutions often present themselves in the classroom, to which teachers must spontaneously construct “good enough” solutions (Gholami & Husu, 2010; Lampert, 1985). Professional literature on the construct of vision, therefore, encourages novice teachers both to envision the pragmatic realities of the classroom as well as to envision themselves enacting their ideals within these concrete situations. Novices must not only enter the classroom with an ambitious mission, but novices must also enter the classroom with a robust roadmap for how to navigate the complexities of the classroom. If novice teachers are unable to visualize how they want their lessons to unfold – that is, if they are unable to “see” how to bring together all of their multiple

instructional intentions – then these novices may become overwhelmed by the simultaneous demands placed upon them in the classroom (Doyle, 1977; Kennedy, 2006; Leinhardt & Greeno, 1986; Moos & Pitton, 2013). Forcing novices to visualize, in concrete terms, what their ideal classroom will actually look like is one of the most powerful features of the construct of vision. Accordingly, Hammerness (2006b) argues that the following prompt can help novices to craft a mental map of their ideal classroom:

I'd like you to begin by envisioning [your] ideal classroom for a moment...You can look around the room, and you can hear and see the activities going on...What do you see, feel, and hear when you walk around your ideal classroom? What are you doing in your ideal classroom? What is your role? Why? What are you students doing in this ideal classroom? What roles do the students play? Why? (p. 93)

This prompt asks teachers to articulate their pedagogical commitments; yet, these commitments are not articulated as fuzzy abstractions or vague moral ideals (e.g., “I want my classroom to be welcoming and engaging,” “I want my classroom to be student-centered”), but, rather, as specific actions (e.g., “What do you see the students doing? What do you see yourself doing?”). By inviting novices to describe their instructional ideals in terms of a classroom vision (i.e., in terms of specific teacher and student behaviors that one can actually see), novices may be able to condense their mission from a “head-in-the-clouds sense...[to] a feet-on-the-ground sense of purpose and direction” (Kennedy, 2006, p. 207).

Three Pressures Precipitated by Enacting Vision in Real Time

Research has highlighted how novice teachers' visions may change over time; specifically, as novice teachers encounter practical constraints in their schools, they may begin to revise (or abandon) their ideals. This may involve revising their career goals (Gu & Day, 2013; Hammerness, 2006b), diluting their educational practices (Grossman & Thompson, 2008; McElhone et al., 2009), or modifying the way that they communicate with parents and colleagues (Parsons et al., 2014; Pogodzinski, Youngs, & Frank, 2013). However, literature on vision has seemingly overlooked how time – as it unfolds within one classroom lesson – affects novices' teaching, as they teach. Said differently, most research on vision is longitudinal; yet, as Kennedy (2004) writes, “It is by weighing the *momentary* importance of their many intentions that teachers construct their practices” (p. 26). The construct of vision is intended to capture how a teacher's ideals might play out within the practical realities of the classroom; yet, literature on vision, I argue, has not yet fully explored how the classroom element of time may complicate the enactment of a novice teacher's vision. I will highlight three prominent pressures that revolve around time: the pressure to maintain lesson momentum; the pressure to cover content; and the pressure to manage emotion.

One element of classroom teaching that literature on vision has not discussed is the extent to which teachers tend to prioritize the maintaining of lesson momentum while teaching; yet, maintaining classroom momentum (i.e., accomplishing instructional tasks in a smooth and timely manner) tends to be one of teachers' most pressing practical intentions (Fischler, 1994; Kennedy, 2004). Furthermore, the practical intention of using time efficiently may be especially prominent for novice teachers, who may sacrifice their more ambitious instructional ideals in order to feel that their lessons are running “smoothly.” Novices may feel that they are in a state of perpetual evaluation (e.g., being judged by students, colleagues, and teacher educators), and, hence, novices tend to feel vulnerable

when they experience feelings of uncertainty, confusion, or frustration (Britzman, 2003; Greenwalt, 2008; Romano, 2006; Toshalis, 2010).

Although vision prompts (such as the prompt presented by Hammerness earlier in this paper) may scaffold novice teachers towards becoming mindful not only their ideals but also the many moving parts of the classroom, such prompts may fail to call attention to how strong the desire to maintain momentum can be (for novice and experienced teachers alike; see Kennedy, 2005). Even if a novice teacher's vision is characterized by ambitious, student-centered practice, this vision may not be reflected in the novice teacher's practical intentions while teaching (Windschitl, 2002). Instead, while teaching, the novice teacher may become concerned primarily with maintaining lesson momentum, acting out of his or her desire to appear to others as a "real teacher" (Britzman, 2003).

One example of sacrificing one's vision in favor of having the classroom run "smoothly" is Ronda's reflection on her thinking as she noticed her students packing up their belongings and disengaging in class a few minutes before the bell rang. Even though this was not something that Ronda wanted to see, she explains that she felt the desire to maintain momentum:

I was just kind of like, I'm just going to let it go and roll with it...It was definitely a decision, [my] thinking [was] "Let's just wrap it up"...It's more on the "does not align" [with my vision] side...because [the students are] not engaged until the end. They're ready to leave, ready to go, but my decision [to keep talking]...[was] in the sense of keeping with the flow.

Lea, similarly, describes a dilemma in which she confronted the trade-off between the desire to "roll with it" and the desire to refocus a student's behavior, here in the case of a disengaged student playing a computer game during class:

[This student is] really emotionally unstable and, so, had I continued to try to shut that game off, she probably would have thrown stuff, freaked out and then left the school...so I don't know if I resigned or if I just knew better...I wasn't going to make her that angry and set her off...So, did I like letting her play games? No. But it was the better option of what could have happened...exploding.

These examples illustrate how a novice teacher might be aware, within an individual moment of decision, that the practical intention to maintain momentum constrains their perceived ability to fulfill other elements of her ideal classroom vision (e.g., encouraging students' intellectual engagement, fostering students' on-task behavior). In this way, time – and the intense desire for time to run "smoothly" – may significantly shape the way that one's ideal classroom vision is enacted in practice.

Time also becomes a prominent concern in the classroom as teachers attempt to "cover" the required content in the given class period (Cohen, 2011; Cuban, 2007; Kennedy, 2004). Past literature has argued that central to a vision of teaching is the way that a teacher envisions engaging his or her students with the academic content (Hammerness, 2006b; Parsons et al., 2014; Skott, 2001). The pressure to "cover" a set amount of content in a predetermined amount of time may also shape the enactment of a teacher's vision in practice (Windschitl, 2002).

Ronda, for example, explained to me that she wanted to serve as a facilitator of her students' learning; yet, she felt that she needed to cover as much information as possible as efficiently as possible, compromising her ideal instructional vision in the process. She recounted one such moment of instruction:

I'm looking at the clock...I don't have enough time to have them build this thinking and understanding [for themselves], [for the students] to discover...[I was thinking] I'm going to make it somehow to the end of this [math] problem before they leave here today...We have to push this in

today...so [I made] the decision to rush that along in the interest of time...I have to just go through, we have to get to the end of this...Right here, I think what's literally going on in my head is like, 'let them search' or 'give the answer,' 'let them search' or 'give the answer,' and I'm like looking back and forth and looking at the time, and looking back and forth and looking at the time, and I think that was like an 'Ugghhhh!'

Lea articulated a similar conflict: Although she described to me her desire to serve as a facilitator in the classroom, during one lesson she instructed her students to copy down a list of historical facts as she dictated them:

The decision there that I made [was] to say to them "Write this down, word for word, as this comes out of my mouth"...I feel what I want to be is a facilitator, somebody helping them learn. And so part of me says that isn't what I want to do at all...but another part of me is like, would they have picked up on it being as important if I didn't point it out to them?

Hence, even if novice teachers possess a vision that predisposes them to serve as facilitators of learning (rather than lecturers providing direct instruction), novice teachers, under time constraints, may feel compelled to accomplish predetermined and time-sensitive learning objectives through teacher-centered instruction.

Pressure to Manage Emotion

Some authors (e.g., Fairbanks et al., 2010) have argued that a strong vision has the potential to help buffer novice teachers against the frustrations they will face in the early stages of their career. Other educational research, however, suggests that it may be inevitable for novice teachers to experience strong emotional responses to the experiences they face in the classroom (Hargreaves & Tucker, 1991; Jones & Youngs, 2012; Labaree, 2000; Shoffner, 2009). These emotional responses – contrary to what is discussed in much literature on vision – may introduce a significant pressure into novices' teaching practice; specifically, as novices try to interpret and cope with the unpleasant emotions they experience as they unfold in real time, novices must make instantaneous decisions about how to proceed in the classroom.

For example, a novice teacher may *want* to redirect a student's off-task behavior, and being an authority figure may be a part of the teacher's idealized vision of teaching; and yet, within a given moment of classroom decision, it may make the novice feel uncomfortable to assume the role of a disciplinarian. Indeed, this tension between wanting teacher control and wanting to allow student freedom is one of the most prominent tensions in the experience of becoming a teacher (Brown, 2006; Bullough, Knowles, & Crow, 1992; Friedman, 2006; Martin, 2004). Furthermore, research has shown that within concrete moments of classroom decision, novice teachers may be presented, in their own minds, with strong, emotional "images" or "gestalts" (Korthagen, 2010). Emotions of discomfort, frustration, or guilt may arise in these classroom moments and may serve to filter how teachers respond to their students (Larrivee, 2000). Novices may feel obliged to perform certain instructional duties, and, yet, these novices may also feel that such duties are not (or, ideally, should not be) part of their job as a teacher. Again, perhaps the most significant challenge in all of this is that novice teachers must negotiate this tension in real time, as each unique classroom episode unfolds.

One conversation I had with a novice teacher is particularly illustrative of this point. Here, Lea explains how she internally deliberated whether or not to continue to confront a student sleeping in class:

I was really, really frustrated, because now I'm just nagging him really to stay awake....I had made the decision just to see...what would happen...I had resigned almost, like, "Done"...I don't like those situations...It's one of

those job vs. emotional, personal type feelings where it's split between the two of those....I think that's just my personality, I'm a too-empathetic person...I'm not a disciplinarian...It just doesn't feel natural and doesn't feel right, so I just made the decision to stop before it got to that point.

Although this novice teacher was aware of her desire to refocus the student's behavior, she was also mindful of her desire to prevent herself from doing what "doesn't feel natural." This precipitates a sharp tension – or, in her words, a "split" – between the practical responsibilities of her job and the personal ideals communicated to her through her emotions. Lea expresses similar sentiments as she describes the tensions she experienced as she attempted to stop a student from walking out of the classroom:

[My] decision was made to chase after him...I guess chasing after students as they leave the room is not really something I think about as being part of [my vision]...I don't know...Honestly, I don't know where I would put that...Would I chase after him again? Yeah. [But] do I like chasing after kids? No. I'm not a babysitter.

Thus, although these actions (disciplining students, waking them up, chasing after them) is definitely not a part of how Lea imagines her ideal vision of her teaching, classroom exigencies, as they unfold in real time compel Lea to violate her vision. As classroom dilemmas occur in real time, novice teachers may experience a variety of emotions (e.g., care, concern, frustration, guilt), and these emotions may significantly shape the enactment of the novice teacher's idealized vision of practice.

Implications for Teacher Education

Vision – an imagining of classroom reality – may be among one of the few constructs in teacher education that is able to capture and potentially integrate the multiple dimensions of teaching: the ideal and the practical, the personal and the professional, the temporal and the emotional. Furthermore, vision provides novices with a way of "seeing" how a teacher might, in Hammerness' words, "bring it all together," in actual classrooms and in real time. It is important for teacher educators to continue to invite novice teachers to craft robust visions of practice.

Teacher educators, however, must also acknowledge that even when novice teachers enter the profession with ambitious visions of teaching, those visions must be perpetually calibrated in order to cope with temporal limitations and exigencies in the classroom. Thus, it seems misplaced for teacher educators to ask prospective teachers to craft an ideal vision of teaching unless that vision also addresses the temporal dimensions of classroom practice. Envisioning a classroom that is free of time constraints (e.g., running out of time in a lesson) and pressing concerns (e.g., off-task student behavior and unpleasant emotions) in all likelihood does not prepare novice teachers to cope with the moving realities of classroom life.

Thus, teacher educators might supplement vision prompts by inviting novices to envision time-related dilemmas: e.g., the dilemma of having to negotiate the trade-off between covering more content and allowing students more time to think deeply about a given concept. Novice teachers, for example, could be asked, explicitly, "Imagine you are running short on time as you are teaching this math concept. What will you do?" Likewise, teacher educators might ask novice teachers, explicitly, "Imagine that a student is sleeping in class. Despite your attempts to wake him up, he keeps putting his head down. How might this make you feel? What will you do?" If novices are able to imagine flexible solutions for such (inevitable) classroom dilemmas, novices may be more adept at coping with these dilemmas in real time; that is, novices may be more prepared to resolve these time-sensitive dilemmas without sacrificing their instructional ideals.

I argue that if the construct of vision is to be understood as a conceptual tool that can assist novice teachers in preparing for and navigating the complexities that they face in the classroom (Fairbanks et al., 2010; Kennedy, 2006), then novice teachers must be invited to construct visions that are as robust as possible. Vision prompts should broach the potential tensions that may arise between the ideal and the practical dimensions of teaching. A critical component of this is the dimension of time. Time is a reality of classroom practice, one that can precipitate some of the fundamental questions and tensions in teaching: How do I want to resolve this dilemma? What type of teacher do I want to be? What is best for this student right now? What am I capable of doing given how much time I have available to me? Am I comfortable with resolving this dilemma in this way at this moment? It may be productive for novice teachers, in the supportive environment of teacher education programs, to explore some of the pressures that time precipitates in the classroom. The exploration of these pressures – and the cultivation of appropriately robust visions – may scaffold novices towards cultivating increasingly flexible ways of responding to their students in the classroom.

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ASSOCIATION OF TEACHER EDUCATORS' STANDARDS: DEFINING TEACHER EDUCATION AS A PROFESSION

by

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Abstract

Defining the teacher education profession by explicating elements central to Teacher Educators' practice will provide a needed foundation for effective preparation, support, and analysis of teacher educator practice. In this study, teacher educators' perceptions regarding each of the Standards for Teacher Educators were surveyed. Relevance of each Standard to Teacher Educators' work and professional learning at pre-tenure and post-tenure career stages were identified. Differences in learning priorities of teacher education faculty were elucidated and Standards of focus for responding Teacher Educators' future work were made explicit. Teacher educators' perceptions of appropriate uses for the Standards were identified. Findings indicated that responding teacher educators view the Standards as appropriate representations of their roles and responsibilities. Thus, an early articulation of the nature of teacher education as a profession is advanced toward common practice among teacher educators. Findings are discussed in terms of preparation, support, and reward structures for Teacher Educators.

Introduction

Some would argue that professionalization, the implementation of professional standards and ongoing engagement in professional learning, is primarily for classroom teachers of students in grades pre-kindergarten through grade 12 (p-12). This implies that teaching, not the education of teachers is considered a profession. Teacher educators (TEs), members of a challenged professional status, can however be proactively supported. As TEs, we can begin by clearly defining our roles as members of a profession.

Despite frequent shifts in societal expectations of TEs, the profession as an area of research is fairly new and has been materializing over the last twenty years (Grossman & McDonald, 2008). Multiple forces including preparation, promotion and tenure expectations, and work-related assignments shape the practice of TEs. Accordingly, we sought to identify whether responding TEs view the Standards for Teacher Educators as an articulation of TE actions, which span institutional contexts and tenure levels. TEs are notably under researched in terms of their perspectives on frameworks, which guide their preparation, supports, professional learning, and reward structures. Though Standards for TEs have existed in the U.S. since 1996, appropriate uses for the Standards continue to be a subject of debate (Klecka, 2009). The intent of the study was to examine the fit of Standards for Teacher Educators with TE professional learning priorities across tenure levels and examine TEs views of appropriate uses. Glassick, Huber, & Maeroff (1997) aptly stated, "Without a better balance of professional priorities, gaps will widen between the fields of knowledge, between faculty and students, and between campus and the larger society. Members of the "community of scholars" will drift farther apart" (p. ix).

The purpose of this study was to advance the professional conversation about the roles and priorities of TEs and contribute a new perspective on how TEs, as members of a challenged profession might be more effectively prepared, supported, and assessed. We begin by reviewing the literature on how professions

are defined followed by review of how teacher educators are currently prepared and supported in the areas of teaching, scholarship and service - current defining frameworks in academia. After introducing the study and its setting, participants, and methods, we explicate key findings to share data which supports the Standards for Teacher Educators as an appropriate framework for defining Teacher Education as a profession, along with illuminating learning priorities for TEs by tenure category. We also juxtapose findings related to learning priorities with responding TEs' intended Standards-based focus for the coming year and perspectives on how the Standards should be used.. We conclude the study with discussion of implications for the profession along with suggestions for future study.

Literature Review

Defining the teacher education profession requires the illumination of TEs' roles and responsibilities. In the 1930's, professions were identified as distinctive groups within the division of labor (Carr-Saunders & Wilson, 1933). Later, Doyle (1990) defined the term, profession as "an occupation whose members are reputed to possess high levels of knowledge, skill, commitment, and trustworthiness" (p. 7). Professional status has also been associated with high positions within social systems, due to members' contributions being deemed of great importance to society (Goode, 1960; Barber, 1963). Friedson, (1970), specified a profession as "gaining control over the determination of the substance of its own work" (p. xvii). "The key to professional practice is not simply the existence or even the validity of claims (of technical and moral superiority), but rather, public acceptance of the legitimacy of what the occupation asserts about itself" (Doyle, 1990, p. 8). Saks (2012) elaborated on these ideas to define professions as characterized by social closure in the marketplace sanctioned by legal boundaries which prevent outsiders from performing professional practices. Thus, TEs should agree upon, clearly articulate, and work to advance central assertions regarding their professional practice and how TE practice is best supported and assessed.

Across definitions, members of professions share a common technical vocabulary, understandings of elements essential to practice, and articulated professional priorities, which guide preparation and professional action. The Standards for TEs were developed by TEs to provide an operational definition of the nature of a teacher educator's work. Accreditation bodies, however, exert tacit influence upon teacher educators' practices since their recommendations undergird the continuation of programs and positions. Examination of assertions by accreditation entities provides a contextualized view of TEs professional standing.

The current teacher education accreditation body, the Council for the Accreditation of Educator Preparation (CAEP) provides no explicit assertions regarding the teacher educator preparation or qualifications. Instead, CAEP addresses teacher educators broadly as Education Preparation Providers (EPPs), defined as:

An entity responsible for the preparation of educators at a nonprofit or for-profit institution of higher education, school district, organization, corporation, or governmental agency. It is the EPP that prepares the self-study report and hosts a site visit to make its case for accreditation by CAEP.

(CAEP, 2015)

In contrast, the National Council for Accreditation of Teacher Education (NCATE), the former accreditation body for teacher preparation units in the U.S. and

made public assertions regarding TEs Faculty Qualifications, Performance, and Development in Standard 5:

Faculty are qualified and model best professional practices in scholarship, service, and teaching, including the assessment of their own effectiveness as related to candidate performance. They also collaborate with colleagues in the disciplines and schools. The unit systematically evaluates faculty performance and facilitates professional development. (2012, p. 13)

NCATE additionally provided a supporting explanation which referenced the Standards for Teacher Educators (ATE, 2008), which represent nine areas of focus for accomplished TE practice (See Table 1).

Table 1. Association of Teacher Educators' Standards for Teacher Educators

<u>Standard</u>	<u>Description</u>
1. Teaching	Model teaching that demonstrates content and professional knowledge, skills, and dispositions reflecting research, proficiency with technology and assessment, and accepted best practices in teacher education.
2. Cultural Competence	Apply cultural competence and promote social justice in teacher education.
3. Scholarship	Engage in inquiry and contribute to scholarship that expands the knowledge base related to teacher education.
4. Professional Development	Inquire systematically into, reflect on, and improve their own practice and demonstrate commitment to continuous professional development.
5. Program Development	Provide leadership in developing, implementing, and evaluating teacher education programs that are rigorous, relevant, and grounded in theory, research, and best practice.
6. Collaboration	Collaborate regularly and in significant ways with relevant stakeholders to improve teaching, research, and student learning.
7. Public Advocacy	Serve as informed, constructive advocates for high quality education for all students.

- | | | |
|----|------------------------------|--|
| 8. | Teacher Education Profession | Contribute to improving the teacher education profession. |
| 9. | Vision | Contribute to creating visions for teaching, learning, and teacher education that take into account such issues as technology, systemic thinking, and world views. |

The recent transition to CAEP compels teacher educators to continue to engage in practices such as the development and assessment of partnerships, but also adds new expectations such as candidate selectivity, which may be in stark contrast with teacher educators' priorities in relation to cultural competence, vision, and public advocacy. In this time of transition, teacher educators' contributions to society remain essential to the future of education, and continue require high levels of knowledge, skill commitment and trustworthiness, however mounting pressures from beyond the professional community threaten professional control over the "determination and substance of its own work" (Friedson, 1970, p. xvii).

Unclear professional conceptualizations provide a foundation to two key challenges which undermine professional status among TEs. First, overreliance on existing promotion and tenure structures in preparation and support efforts fail to acknowledge the full scope and integration of TEs' work. Secondly, prevalent notions of scholarship and service undervalue the manifestations, integration, and importance of these aspects of TEs practice. Taken together, these challenges are prevalent within and beyond the U.S. (Acker, 1997), and serve to undermine public acceptance of the importance of TE's work, and limit the legitimacy of the profession. Frameworks for Promotion and Tenure –Teaching, Scholarship and Service

Promotion and tenure structures, the primary reward system in academia, have come to represent job security and to express the value of research (Aper & Fry, 2003). Though faculty merit is assessed in three categories– teaching, scholarship and service, promotion and tenure structures are typically weighted toward scholarship, which has become a hallmark of both research and teaching-oriented institutions within and beyond the U.S. (Youn & Price, 2009). Promotion and tenure categories have been a focus of criticism within teacher education institutions, both in terms of preparation and support for developing TEs (Cruz Ellem, Ford, Moss & White, 2009). Specifically, organizational theorists claim that promotion and tenure structures were created to increase legitimacy and ensure survival, often drawing from rules of other organizations perceived as successful and powerful (Youn & Price, 2009). We argue that existing promotion and tenure frameworks are problematic foundations for TE preparation and support, since the categories are artificially broad and place a greater focus on perceptions of power and prestige than on the nature of TEs work.

Though most TEs have experienced both extensive careers as schoolteachers and significant disciplinary study, few intentionally study toward careers within teacher education. Many emerge from doctoral study underprepared for the realities of the tenure track (Berry & Van Driel, 2012). Berry and Van Driel found that despite "pressing concerns about the need to prepare high-quality teachers, and the central role of TEs in this process, there does not seem to be an organized or formal way of preparing TEs for their tasks" (2012, p. 2).

Studies of both U.S. and Canadian TEs have found that across institutions, TEs preparation, support, and promotion/tenure criteria evidence varying degrees of

structure around the framework of teaching, scholarship and service (Reybold & Corda, 2011; Cruz, Ellem, Ford, Moss, & White, 2009). Across contexts, few opportunities are afforded for TE apprenticeship prior to employment and evidence revealed “very limited if any support for beginning TEs, let alone a certain learning trajectory” (Berry & VanDriel, 2012, p. 8; Lortie, 1975 see also Acker, 1997). Concerns surrounding the preparation and support of TEs center upon the need for systematic and differentiated learning experiences tailored to the nature of TEs work. The Standards for Teacher Educators may offer a framework for TE preparation and support well matched to TEs roles and responsibilities.

Tracing their transitions from teaching to teacher education, Reig and Helderbran (2005) revealed unexpected complexities of the tenure track progression. Complexities included “silent additions” to their required roles, such as student advising, office hours and program directorships. These elements required vision, self-direction, and new professional learning. Chauvot (2009), a self-study researcher, added that all silent additions are assumed to be part of the workload of TEs.

Greene, O'Connor, Good, Ledford, Peel, and Zang (2008) conducted one of few studies which examined the experiences of early-career faculty in research extensive, intensive, and comprehensive colleges of education in the U.S. Drawing from this diverse research base, the average respondent “had taught for 2.9 years on the tenure track; taught five classes (15 hours) per academic year four days per week; was responsible for two and three different preps per year; required to publish two articles per year; worked with an average of 11-15 advisees; and supervised one to three hours per week in the public schools” (p. 432) In addition, some respondents indicated additional duties including writing reports and supervising program areas without compensation or load reduction (Greene, et al., 2008). While teaching consumed the majority of their workload, research productivity was the major emphasis of promotion and tenure determinations.

Though Greene and colleagues (2008) described the work-related responsibilities of pre-tenure faculty in ways which mirror the Standards for Teacher Educators, in terms of differentiated forms of service including advising (program development), supervising program areas (program development/ teacher education profession), and work within the public schools (professional development/collaboration/vision), such aspects of TEs work are rarely attended to within the context of preparation or support offerings. Rather, preparation and support is typically focused more generally on teaching, scholarship, and service, though the address of these areas also displays notable shortcomings with regard to TE specific foci.

Teacher Educators and Teaching, Scholarship and Service

Shortcomings of TE preparation and support in relation to teaching, scholarship, and service are rooted in inattention to the complexity of TEs' work and the multiple forms of scholarship and service that contribute to effectiveness. For example, in relation to teaching, Zeichner (2005) advocated for immersion in the practice of teacher education through teaching and associated research in the process of learning to be a TE. Murray and Male, in their 2005 study, highlighted the importance of collaboration and reflection on teaching to combat first-year TEs' tendency to teach with a “transmission” of information focus, which lends limited connection and support to TE's roles as researchers (Murray & Male, 2005). Van Zoest, Moore, & Stockero (2006) asserted the importance of engaging U.S. doctoral students in “explicit conversations about what it means to be a TE, the importance of emphasizing experiences that are different from k-12 classroom teaching”, and

advanced the recommendation that collaborations with experienced TEs be a required component of doctoral programs (p. 152). Self-study researchers across multiple nations also identified learning needs of TEs which lasted well beyond doctoral study. However, learning needs can be effectively addressed through research focused on enhancement of teaching practices (Tzur, 2001; Chauvot, 2009; Zeichner, 2005). Program related roles such as teaching a course/seminar and supervising practicum students/student teachers, integrated with course-based self-study are suggested as essential preparation for doctoral students in teacher education (Zeichner, 2005). Despite researchers' recommendations of integrative research practices, inconsistent institutional definitions of scholarship continue to present challenges for TEs.

Typically, faculty research productivity is assessed by the number of publications in academic refereed journals and the production of scholarly books (Wilson, 2001). Some institutions consider presentations at professional meetings, grant applications, and awards as part of faculty productivity (Santo, Engstrom, Reetz, Schweinle & Reed, 2009). Differing views of scholarship also limit recognition of TEs who engage in teaching effectiveness, partnership, or professional development research which requires extensive observation or lengthy methods of data collection (Cruz et al., 2009).

Since the 1960's research demands on TEs have continued to increase significantly within the U.S. and Canada and critics suggest deficiencies in TEs research capacity and productivity (Acker, 1997; Santo, Engstrom, Schweinle & Reed, 2009). TEs also recognize these challenges. Lin, Wang, Spalding, Klecka and Odell (2011) found learning about research, learning to do research, and sustaining research beyond dissertation completion as key challenges within doctoral programs (Lin et al. 2011). Such challenges may be rooted in limited explication of the multifaceted aspects of TEs' work to appropriately fuel research agendas. Specifically, Zeichner (2005) identified a gap in the connection between TEs' use and creation of scholarship and their teaching efforts, particularly in research institutions across the United States.

Limited attention to service activities in TE preparation and support exacerbates the challenges of teaching and scholarship. Service requirements are rarely the focus of mainstream research on TE preparation, support or professional learning. Often regarded as standalone activities, service typically bears limited reward in promotion and tenure structures (Boice, 2000). However, U.S and Canadian TEs identified service roles as prominent features of their work (Reybold & Corda, 2011). Service activities are often at the heart of TEs commitment to improving p-12 learning environments and are needed to advance social reform (Cole, 1999). Effective service carries "a heavy research and writing commitment along with the demands associated with teaching and related activities" (Cole, 1999, p. 287). Very little preparation for service, particularly in the form of public advocacy, was evidenced by doctoral students' limited knowledge of the literature, history, or policy issues of teacher education, and challenge teaching and research efforts once these students become TEs (Zeichner, 2005). Many doctoral students ultimately become TEs within institutions that offer minimal support for continued TE development (Zeichner, 2005).

Though earning tenure is highly celebrated, lifetime employment is no longer "safe" or secure based on U.S. faculty members' early productivity (AAUP, n.d.; Youn & Price, 2009). In one of few studies spanning a diverse range of institution sizes and levels of research intensity, Harris (1996) identified post-tenure review processes in place in 61% of institutions. While more prevalent in public than private institutions, the development of post-tenure review processes is on the rise

(Aper & Fry, 2003). Post-tenure review, however, is not uniform across institutions and has been connected to both faculty development and personnel decision-making (Aper & Fry, 2003).

Having earned tenure does not mean that prioritization is easy for TEs. Marston & Brunetti (2009) found that faculty, including those post-tenure, experience challenges integrating their professional priorities with their Universities' expectations. Cater, Lew & Smith (2008), however, identified universities as much more likely to retain faculty members who establish a strong record of scholarship as they work toward tenure.

TEs' enacted roles may shift along the promotion and tenure continuum in response to contextual factors, which are largely unexamined in the existing literature. For this reason, it is important to examine the extent to which Standards-based priorities, of U.S. TEs differ before and after tenure. TE's articulations of their roles and learning priorities, along with identification of how the Standards might best be used, hold promise to advance the teacher education profession toward consistent professional practice built on shared expectations in both national and global arenas.

The Study

Against this background, the purpose of this research was to examine perceptions of TEs (n=131) attending the Association of Teacher Educators (ATE) 2012 Annual Meeting regarding the Standards for Teacher Educators as appropriate descriptors of TE roles and priorities. More specifically, five objectives guided the study: 1) to identify and describe the perceived relevance of each Standard to responding TEs, 2) to identify teacher education specific learning priorities of responding TEs overall, and at pre- and post-tenure career stages, 3) to determine whether professional learning priorities of responding TEs differ by tenure status, 4) to identify the Standard of greatest focus for responding TEs' work in the coming year, and 5) to identify TEs' perceptions of appropriate uses for the Standards.

This study was conducted at an Annual Meeting of the Association of Teacher Educators (ATE). ATE was founded in 1920 and is the only individual membership organization in the U.S. "devoted solely to the improvement of teacher education both for school-based and post secondary TEs" (ATE, 2003). ATE has a broad-spanning membership of individual TEs which draws from upwards of 700 colleges and universities, 500 major school systems, and the majority of state departments of education. A major goal of the organization is to identify and serve its members' interests before governmental agencies and education organizations. The ATE Vision Statement "ATE promotes advocacy, equity, leadership, and professionalism for TEs in all settings and supports quality education for all learners at all levels" supports the appropriateness of the Annual Meeting as a venue for gathering the perspectives of U.S. teacher education faculty on issues of their work related roles (ATE, 2012).

At the Annual Meeting, all attendees were invited to complete the self-administered questionnaire used for data collection in this study. Questionnaires were distributed and collected throughout the three-day span of meeting registration. A distribution area near the registration table was selected to maximize visibility and access. Since all attendees could not be accessed, this study does not seek to generalize to the entire population of TEs attending the meeting, but rather only to those returning completed questionnaires. Since it is unknown how many attendees obtained the questionnaire, response rates cannot be calculated. The data analyzed for this study were 131 completed questionnaires submitted at the meeting. The

analysis included all item responses available to respond to the research objectives. For this reason, the sample size across research questions varies.

The questionnaire was developed as a part of a larger study on Standards for TEs. The instrument was designed for in-person, self-administration to reduce non-response and to promote ease of contact with U.S. faculty who self-identified as TEs engaged in professional learning (Fowler, 2002; Heberlein & Baumgartner, 1978; Jobber, 1984).

The instrument developed was based on the Borich Needs Assessment Model (Borich, 1980). A major strength of the model as its ability to determine the “congruence between what should be and what is, i.e. between what the teacher should be able to do and what the teachers can do” (Borich, 1980, p. 42). It goes beyond a simple report of felt needs to the provision of defensible data which identify important topics for further knowledge and skill development (Barrick, Ladewig & Hedges, 1983). Additionally, this model attends to learners’ high motivation for addressing what they perceive as relevant to their needs (Knowles, 1980; Cannon, Kitchel, Duncan & Arnett, 2011).

Eighteen items addressed the relevance of each Standard to the respondents’ work in his or her current role and his or her perceived competence related to each Standard (See Table 2).

Table 2. Survey Items used for Calculations presented in Findings	
Directions	
ATE has identified nine Standards to describe the work of teacher educators. To what extent does each of them apply to you in your current job? For example, some may be core standards, central to what you do, while you may find other Standards less important.	
Please consider each of the nine standards, assessing its relevance for you in your current job. Apply the following five-point scale as you think about how each of the Standards relate to your current work in teacher education.	
Relevance of Standard	My own competence related to Standard
5.Core standard; Central to what I do; Vital	5.Proficient; professionally recognized
4.Important standard; Relevant to my effectiveness: Necessary	4.A major strength
3.Relevant standard	3.Strong; contributing to profession
2.Of limited importance in my current role in teacher education	2.Improving; working on this standard
1.Not relevant to my current role in teacher education.	1.Not demonstrated; Limited competence
Relevance	My Competence
5 4 3 2 1	5 4 3 2 1
1 Teaching Model teaching that demonstrates content and professional knowledge, skills, and dispositions reflecting research, proficiency with technology and assessment, and	

	accepted best practices in teacher education.	
5 4 3 2 1	2 Cultural Competence Apply cultural competence and promote social justice in teacher education.	5 4 3 2 1
5 4 3 2 1	3 Scholarship Engage in inquiry and contribute to scholarship that expands the knowledge base related to teacher education.	5 4 3 2 1
5 4 3 2 1	4 Professional Development Inquire systematically into, reflect on, and improve their own practice and demonstrate commitment to continuous professional development.	5 4 3 2 1
5 4 3 2 1	5 Program Development Provide leadership in developing, implementing, and evaluating teacher education programs that are rigorous, relevant, and grounded in theory, research, and best practice.	5 4 3 2 1
5 4 3 2 1	6 Collaboration Collaborate regularly and in significant ways with relevant stakeholders to improve teaching, research, and student learning.	5 4 3 2 1
5 4 3 2 1	7 Public Advocacy Serve as informed, constructive advocates for high quality education for all students.	5 4 3 2 1
5 4 3 2 1	8 Teacher Education Profession Contribute to improving the teacher education profession.	5 4 3 2 1
5 4 3 2 1	9 Vision Contribute to creating visions for teaching, learning, and teacher education that take into account such issues as technology, systemic thinking, and world views.	5 4 3 2 1
Directions		
Seven uses for these professional standards have been identified. Please rate the appropriateness of each of these uses of the Standards.		
5. Significant, integral to the improvement of the profession and my responsibility		
4. Relevant to my responsibility in teacher education		
3. Important		
2. Somewhat important		
1. Not significant		
5 4 3 2 1	1. Serve as a catalyst to spark debate	

	and discussion about the definition, roles and expectations of teacher educators.
5 4 3 2 1	2. Assess the performance of teacher educators.
5 4 3 2 1	3. Collect data on the performance, expectations, and/or working conditions of teacher educators.
5 4 3 2 1	4. Analyze the extent that the standards are reflected in my professional resume.
5 4 3 2 1	5. Design a doctoral program for the preparation of teacher educators.
5 4 3 2 1	6. Define the role of school personnel who have responsibilities in teacher education.
5 4 3 2 1	7. Develop staff development programs for Teacher Educators.
As a professional teacher educator, which one of the nine Standards do you plan to focus on next year?	
1 2 3 4 5 6 7 8 9	

Each Standard was identified and described and five point Likert-type scales were provided for both perceived relevance and perceived competence ratings. Rating “1” on the scales signified the least relevant or the lowest level of competence, whereas rating “5” indicated most relevant or of greatest competence. An additional section was provided for respondents to identify appropriate uses of the Standards and to indicate which Standard they planned to focus on in the coming year. Demographic items included requests for the respondent’s current role, title and rank, and organizational type.

All items were reviewed by seven experts who were members of the TE Standards Task Force who participated in the initial development or 2008 revision of the Standards. The focus of the review was on face and content validity. According to George and Mallery’s (2003) guidelines, a post-hoc reliability analysis of the full instrument measuring both relevance and competence indicated good reliability (Cronbach’s alpha =.877). A post-hoc reliability analysis of the relevance section of the instrument indicated excellent reliability (Cronbach’s alpha =.948). A post-hoc reliability analysis of the competence section of the instrument indicated good reliability (Cronbach’s alpha =.849).

Analysis

Quantitative data were coded and analyzed using the Statistical Package for the Social Sciences (IBM SPSS Statistics Version 20 for Windows). Descriptive statistics were used to analyze the data. Modal categories were identified and ranked to summarize the perceived relevance of each Standard to responding TEs (Objective 1). The Borich Model was used to assess professional learning priorities (Borich, 1980). Key steps of the Borich Model are listing of constructs of focus, surveying practitioners and ranking the constructs by Mean Weighted Discrepancy Scores (MWDS) which are calculated from practitioner responses (Layfield & Dobbins, 2002). In this study, Mean Weighted Discrepancy Scores (MWDSs) were calculated to identify professional learning priorities (Objective 2). MWDS calculation occurs in three steps. First, the competence rating is subtracted from the relevance

rating for each respondent on each Standard to yield a discrepancy score for each Standard by respondent. A weighted discrepancy score is then calculated by multiplying each discrepancy score by the mean relevance rating for the Standard. Finally, the Mean Weighted Discrepancy Score (MWDS) is calculated by summing the weighted discrepancy scores for each Standard and dividing that total by the total number of respondents (Borich, 1980).

One potential shortcoming of the Borich needs assessment model is the use of mean relevance ratings on individual Likert-type items representing constructs of interest, in this case, individual Standards (Clason & Dormody, 1994) to generate weighted discrepancy scores. For this reason, care was taken to ascertain that the calculated means reflected similar perceptions of relevance rather than the compensation of multiple low ratings for multiple high ones (Layfield & Dobbins, 2002). Before proceeding with further analysis, modal response categories were examined (see Objective 1 findings).

Higher MWDS scores couple high relevance and low competence to indicate greater learning priorities, while scores at or below zero indicate that the topic does not represent a priority for new professional learning. MWDS scores were ranked and compared across the complete set of respondents, and for self-identified pre- and post-tenure respondent groups to identify differences in prioritization (Objective 3). Descriptive statistics were calculated to identify a modal category among responses on intended Standards of focus for the coming year (Objective 4). Descriptive statistics were also tabulated to summarize the percentage of respondents rating proposed uses at the "4" (Relevant to the improvement of the profession and my responsibility) or "5" (Significant, integral to the improvement of the profession and my responsibility) level (Objective 5).

Results

Objective 1: The modal category rating was "5" ("vital to my work"). Rating 4 was the second most prevalent response selected. Together, ratings of 4 and 5 accounted for over eighty percent of the responses related to each Standard. Teaching and Professional Development (98.4% and 97.7% of the respondents respectively) were the Standards which were most frequently rated as either "4" ("Important Standard; Relevant to my effectiveness) or "5" ("Core Standard, Central to what I do; Vital") by respondents. The two standards receiving the fewest ratings of 4-5 were Public Advocacy (83.6%) and Vision (84.3%).

Objective 2: High overall MWDS scores for Public Advocacy (2.8695), Cultural Competence (2.1563), and Scholarship (2.1512) identified these Standards as professional learning priorities for the full respondent group (n=131). Pre-tenure TEs (n=22) MWDS scores ranked highest in the areas of Public Advocacy (3.6532), Scholarship (3.0682), and Cultural Competence (2.53). Lowest pre-tenure MWDS scores were observed in Collaboration (.5945), Vision (.9905) and Teacher Education Profession (.9909) Standards. For Post-tenure faculty (n=19), highest MWDS scores were evidenced in Cultural Competence (2.53), Public Advocacy (2.3795), and Vision (1.19184). The lowest MWDS Scores were returned from post-tenure faculty data on Professional Development (-0.23), Program Development (.6647) and Teaching (.7484) Standards.

Objective 3 of the study was to determine whether the responding TEs' learning priorities differ by tenure status. While most respondents indicated their position title on the questionnaire, many did not provide their tenure status. Thus the "overall" findings include a mix of pre and post tenure respondents, as well as non-tenure track instructors. Pre-and post tenure analyses eliminated data from questionnaires representing perspectives of non-tenure line TEs and those who did not indicate a tenure status. It was noted that Scholarship ranked in the top three

prioritized Standards for the Overall and pre-tenure, but not for post-tenure TEs. Vision was within the top three rankings for post-tenure TEs, but was ranked eighth of nine for pre-tenure TEs. Public Advocacy and Cultural Competence were prioritized among the top three Standards across TE tenure status levels (see Table 2).

Objective 4 asked TEs to identify the Standard they intended to place their main focus on in the coming year. Scholarship emerged as the modal category, followed by Program Development, and Teaching, while Teacher Education Profession and Vision were the least frequently reported. Table 3 reports MWDSs and Standards of focus for the coming year.

Table 3. MWDS Rankings and Standard of Focus Selected

Rank	MWDS Rank All Respondents	MWDS Score	MWDS Rank Pre-Tenure	MWDS Score	MWDS Rank Post-Tenure	MWDS Score	Standard of Focus for Next Year*
1	Public Advocacy	2.8695	Public Advocacy	3.6532	Cultural Competence	2.53	Scholarship (17.4%)
2	Cultural Competence	2.1563	Scholarship	3.0682	Public Advocacy	2.379	Program Development (15.7%)
3	Scholarship	2.1512	Cultural Competence	2.9456	Vision	1.918	Teaching (15.6%)
4	Teaching	1.8118	Teaching	1.9350	Collaboration	1.61	Cultural Competence (14.8%)
5	Vision	1.7153	Program Development	1.5055	Scholarship	1.569	Public Advocacy (13.0%)
6	Teacher Education Profession	1.1622	Professional Development	1.0432	Teacher Education Profession	1.107	Professional Development (8.7%)
7	Program Development	1.072	Teacher Education Profession	.9909	Teaching	.7484	Collaboration (6.1%)
8	Collaboration	1.0895	Vision	.9205	Program Development	.6647	Teacher Education Profession /Vision (4.3%)
9	Professional Development	.8528	Collaboration	.5945	Professional Development	-0.23	Teacher Education Profession /Vision (4.3%)
n=131			n=22		n=19		n=111

In pre and post tenure calculations, only those whose tenure status was clearly indicated within his or her responses were included.
 *Percentage of All respondents

Objective 5 identified TEs' perceptions of appropriate uses for the Standards. Seven possible uses for the Standards were presented. Listwise deletion was employed such that only surveys with complete responses to the full section (n=127) were included in the analysis. The percentage of respondents returning ratings of either "4" or "5" by use were:

1. serving as a catalyst to spark debate and discussion about the definition, roles and expectations of TEs (71.6%),
2. assessing the performance of TEs (70.8%),
3. collecting data on the performance, expectations, and/or working conditions of TEs (64.5%),
4. analyzing the extent that the Standards are reflected in my professional resume (54.3%),
5. designing a doctoral program for the preparation of TEs (35.4%),
6. defining the role of school personnel who have responsibilities in teacher education (45.6%), and
7. designing staff development programs for TEs (54.3%).

Discussion

This study outlines key contributions to what is known about the roles and priorities of responding TEs. The study identified the Standards for TEs as highly relevant to the work of the vast majority of the respondents, suggesting the Standards as an appropriate foundation for a shared framework to describe the work of TEs (Grossman & McDonald, 2008). Findings indicated that responding TEs find multiple types of service including those described by Cole (1999) and Zeichner (2005) to be relevant to their work in their current positions. Identifying a framework which effectively describes the nature of TEs' work is an essential step toward a more concentrated focus on cultivating professional knowledge (Doyle, 1990), communicating the importance of the profession's contributions to society (Friedson, 1970), gaining public acceptance (Doyle, 1990) and control over professional practices (Saks, 2012). The study also clarifies the nature of TEs' work to influence preparation (Lin, et al. 2011; Murray & Male, 2005; Zeichner, 2005) and ongoing differentiated supports to novice (Greene et al., 2008; Sorcinelli, 1994) and experienced TEs (Aper & Fry, 2003; Santo, et al. 2009; see also Berry & VanDriel, 2012).

The similarity in relevance ratings suggest that the Standards for Teacher Educators express statements about the roles of TEs which are commonly recognized by this group of respondents. The academic literature, however, indicated dissimilarities in TE preparation and support which warranted the examination of potential differences in TEs learning needs and priorities. This study revealed that though most responding TEs possessed at least beginning levels of proficiency with regard to the Standards, unevenness in professional learning priorities connected to each of the nine key aspects of their work as TEs offers suggestions for increased attention to specific aspects of TE preparation and development (Lin, et al. 2011; Murray & Male, 2005). Identification of priorities for ongoing TE learning enables linkages between TEs' work expertise and what is currently valued in the education profession, in the U.S. at large, and across international contexts.

Recent initiatives in U.S. education suggest cultural competence, a high priority for professional learning across tenure categories, as a valued contributor to student learning. Public advocacy, also highly prioritized learning area, has recently been recognized as a necessary support for equitable learning opportunities for all students. Other aspects of TEs' work, such as professional development and vision, are less recognized by both TEs and independent entities.

Not surprisingly, responding TEs' calculated professional learning priorities and intended focus Standards for the coming year evidenced a lack of alignment. Focus Standards for the coming year best mirrored promotion and tenure expectations (Aper & Fry, 2003; Youn & Price, 2009) rather than address of aspects

that were identified as learning priorities. Scholarship, the greatest priority toward promotion and tenure requirements, was most frequently selected as a focus for the coming year despite not having been the highest calculated professional learning priority (MWDS score) for any set of respondents. Findings also indicated that professional learning priorities were not consistent across pre-and post-tenure respondents, suggesting a need for differentiated professional learning opportunities. Program development was identified as the Standard of 2nd greatest focus, which appears reasonable in light of current mandates faced by TEs including the enactment of new assessments. This finding lends support to the notion of currently enacted promotion and tenure structures as mirroring a collective value system of academia (Youn & Price, 2009) with limited attention to specific aspects of the work of U.S.TEs and their associated professional learning needs.

Findings regarding potential uses of the Standards were also highly informative about the current state of teacher education as a profession. Despite the evident disconnect between TEs learning priorities and promotion and tenure categories, this study revealed a lack of consensus on how to best integrate TEs' learning priorities into professional practice. Using the Standards for TEs as a catalyst to spark debate and discussion about definition, roles, and expectations was most highly rated, which suggests that the profession has yet to provide clear and consistent articulations about the nature of its practice (Friedson, 1970). Notably, the second highest rated use of the Standards was the assessment of TE performance. The Standards used for collection of data on the performance, expectations, and/or working conditions of TEs, which bears connection to the process of defining goals and priorities for the profession, was the third highest rating (64%).

Surprisingly, given the literature focused on a need for enhanced preparation and support for TEs, the design of a doctoral program with inclusion of the Standards, for the preparation of TEs yielded the lowest proportion of 4-5 ratings (35.4%). Also, limited numbers of responding TEs (53.9%) identified incorporation of staff development programs for TEs as an appropriate use of the Standards. Additional studies may illuminate rationales and professional learning surrounding the Standards and how they may be best made available to practicing TEs.

Conclusion

A review of the literature found p-12 teachers were considered as members of a profession and TEs were missing from the equation. There was a dearth of research on TEs perspectives about frameworks which guide their preparation, supports, professional learning, and reward structures. TEs must identify and define practices relevant to teacher education to communicate their professional expectations, roles, and priorities to audiences within and beyond the profession. Defining the teacher education profession provides a framework to explicate roles and responsibilities and identify strengths and learning priorities that are needed to support consistent practice. Clarification of the work, of TEs, offers enhanced opportunities for analysis and ongoing assessment of TE preparation and support thus fostering the longevity of the profession.

Findings of this study showed that there was a community consensus among responding TE's views of the Standards. They identified the Standards as appropriate representations of their actual roles, thus the Standards may provide an early articulation of the nature of teacher education as a profession. Further study of the professional learning priorities of teacher education faculty is warranted in different populations, including TEs less likely to be aware of the Standards and those working in other nations. Qualitative studies may follow to explore differences in enactment of the Standards within and across institutions and preparation settings.

Future research may also explore the extent to which TE roles and priorities evidence similarities across global contexts. Replications with larger samples of TEs which yield relevance and competence findings which parallel those of this study would lend further support for use of the Standards for Teacher Educators as a framework of common practice to inform preparation, supports, assessment, and reward structures in the profession.

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WHAT?! NO FINAL?

by

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Abstract

Teach, assess; teach, assess – it seems that is what we do and then we teach our candidates to do the same. The profession has learned so much about learning and how to ensure that what is learned is actualized; but, how does one know what one has really learned? The traditional use of final exams, with true and false, multiple-choice, and matching items has long been proven to be ineffective representations of learning. Why do we continue to test learning using these ineffective methods while we teach our candidates that they don't work? The following is an examination of alternatives to the traditional final and an exploration of an effective way for undergraduate and graduate students to express learning by synthesizing the concepts, skills, and vocabulary addressed in reading courses using concept maps.

Why Assess at the End?

Testing seems to serve two masters – determining the degree to which students have learned the course content and then using that information to measure the effectiveness of the teaching of that content. It is commonly understood that part students seem to study for the test in order to get a good grade. Traditionally, grades reflect the accumulated scores on assignments, quizzes, chapter tests, a midterm, and final. In addition, dispositional elements such as professionalism, attendance, and participation are factors that combine to provide the course grade. Johnson (2011) points out that too often, students generally wait until just before the exam to review the course materials and their notes and try to memorize all of the content. He asks the ultimate question – do exams measure learning or memorization?

Test anxiety is another consideration for moving away from the traditional final. Burns (2004, 2008) has examined this issue in terms of test anxiety, student expectations of performance on exams, and exam performance itself. He suggests that assessment formats that require other forms of thinking and expression may reduce anxiety, increase grade expectations, and provide demonstration opportunities that better represent what the students take away from the course. Similarly, Landrum (2007) offered a variation on the cumulative final exam by introducing a weekly quiz of 20 questions with 10 of those items appearing on the final. He found that the addition of weekly assessment increased student retention of content which translated into higher scores on the final.

We certainly want to know what students have learned; but, is giving a test the best measure of that. No one really cares what anyone knows – what matters is what one does with that information. Higher education engages in instruction that can be defined as changing cognitive behavior – essentially helping learners know more so they can do different or better. Since knowledge is held in the head, and humans cannot see inside each other's head, the only real way to find out what someone knows is by observing behaviors or determining the quality of expressions, or artifacts, that represent that knowledge (Saunders-Smith, 2009).

Alternatives to Final Exams

Perhaps not surprising, quite a bit has been written on the concept of having students express what they have learned using vehicles other than the age-

old paper-pencil exam. As far back as 1975 Esch and Gladstein suggested using alternative forms of assessment. Suggestions for alternative forms of final assessments abound with some not so far from tradition. For example, Learning (2008) offers several familiar variations on the traditional exam such as allowing students to bring notes to class, turning the test into an open-book exam, having students complete the exam outside of class (i.e. the take-home exam), and collaborative testing where an exam is completed by pairs or groups of students. Williams and Wong (2009) compared the traditional closed-book, proctored final exam with open-book, open-web exams taken on a computer and found greater learning reported in the latter option. Another option suggests “super-sized multiple choice questions” where students provide short answer responses that explain their rationale for their answer choice. Credit is earned for the quality of the explanation even if an incorrect answer is selected (Learning, 2008).

Halverson (n.d.) suggests student-generated exams in which students determine the major points to be assessed. He also offers verbal options such as one-on-one or small group interviews as an oral exam. Similarly, he has found a final class meeting valuable especially when students are expected to continue conceptual learning in a sequence of courses. A reflective essay is similar to the final class meeting, but is more personal and learner-driven than learning-driven.

Both behavior- and artifact-based examples of alternative final assessments for use in higher education have been offered by instructors in a number of fields (Shammas, 2010; Johnson, 2011; BestCollegesOnline.com, 2012; University of California, Berkeley, 2009; Worcester Polytechnic Institute, 2013; Glentz, 2011, 2013; Learning, 2008). A number of print-based alternatives begin with the traditional final paper and include annotated anthologies or course readers that are valuable collections of references used by students in completing other assignments. A variation on this idea is an annotated research bibliography where students identify a problem, write an introduction that includes proposed questions, conduct the literature review (research the topic), and compile an annotated bibliography without actually writing the paper. Annotated portfolios of work samples are assemblages of artifacts with each item described and critiqued. The portfolios can be displayed seeking feedback from the instructor and peers.

Performance assessments offer examples of authentic, behavior-based exams. For example, poster sessions or presentations either to peers, community groups, or at professional conferences enable students to synthesize and showcase their learning. Students might prepare print pieces such as op-ed articles or fact sheets on an issue for local publication that are real-life expressions of learning. Service learning projects provide authentic opportunities for students to identify a problem, plan a course of action, conduct the project, then summarize the results. Having students show what they have learned offers a more authentic examination of what they are able to do with what they have learned.

One More Option – The Graphic Synthesis

The alternative final I used with an undergraduate and graduate class seems to be a hybrid of several of the options suggested in the literature. One type in particular, shared by Barrett (2012), utilized concept mapping which is an alternative final suggested by Mezeske (2007) and closely resembles the graphic synthesis I used.

Like Barrett (2012), my students were told at the beginning of the semester that their final would be neither a research paper nor traditional paper-and-pencil exam. Barrett told her students that they would have a final exam project; and, unfortunately, she discovered that the students did not learn the content as well as

previous students had. Alternatively, I told my students that their exam would be a graphic synthesis of all of the concepts that made up the course content and I realized pleasant results.

Course content was delivered in traditional ways in all of the classes – readings, discussions, viewing videos, hands-on applications, independent investigations with presentations, and so on. Throughout the semester, the students and I talked about synthesizing information and they were advised to take notes. I tend to use concept mapping in my teaching and so the idea of relating concepts and examples was frequently demonstrated and eventually became familiar.

Our option involved students working in a group with three to five peers which were formed early in the course as we did several assignments in small groups that remained mostly intact throughout the semester. Post mid-point in the semester, students were given two class sessions to work on preparing their graphic synthesis. As the semester continued, students were given the rubric to be used to assess the quality of their final synthesis. Once students had the rubric, their discussions seemed to become more focused. The rubric addressed the thoroughness of content, organization, presentation, conventions, and cooperation. The same rubric was used for the graduate and undergraduate courses.

	4 Exemplary	3 Competent	2 Satisfactory	1 Unsatisfactory	SCORE
Thoroughness	Image content reflects all concepts addressed in the class. Each concept is thoroughly developed and synthesized with many examples and explanations.	Image content reflects most of the concepts addressed in the class. Each concept is well developed and synthesized with ample examples and explanation.	Image content reflects many of the concepts addressed in the class. Each concept is developed and synthesized with examples and explanations.	Image content reflects few of the concepts addressed in the class. Concepts have few or no examples.	
Organization	Image content is logically organized showing obvious relationships among and between all concepts and examples. Content is easy to read and understand.	Image content is organized with clear relationships among most concepts and examples.	Image content is organized with some relationships among some concepts and examples.	Image content is disorganized with random, incorrect, or missing relationships among concepts.	
Presentation	Image is well organized & balanced, demonstrating forethought and planning. Design is clever and inviting with interactive aspects. Printing is legible & teacher-like. The work approaches professional quality.	Image is well organized & demonstrates planning. Design is clever and inviting. Printing is legible.	Image is organized. Design is neat. Printing is legible.	Image is somewhat organized. Printing is unacceptable.	
Conventions	Image has no spelling, capitalization, punctuation, and/or grammar errors.	Image has few spelling, capitalization, punctuation, and/or grammar errors.	Image has several spelling, capitalization, punctuation, and/or grammar errors.	Image has many spelling, capitalization, punctuation, and/or grammar errors.	

Cooperation	All members of the group participated in the planning, design, and execution of the graphic.	All members of the group participated in the planning, design, and/or execution of the graphic.	Most of the members of the group participated in the planning, design, and/or execution of the graphic.	One or two members of the group were responsible for the planning, design, and/or execution of the graphic.	

Students were to bring to the final one 3x5 index card containing notes of what they wanted to include in their graphic. They could use both sides of the card and the printing was small. I provided the chart paper, glue sticks and scissors and the students were to bring everything else they needed. Some groups came with pre-prepared items ready to attach to their graphic.

Results



I was delighted with the process and results. During the in-class work sessions and before and after class, I saw group members collaborating to determine the major concepts to include in their synthesis. They divided those concepts among the members and each took a concept to examine in detail. The groups then discussed what elements of each concept they would include. These conversations were impressive – students were sharing and explaining information, lobbying for why their bits of information should be included, and negotiating how it might fit into the grand design. These conversations were better than anything I could have orchestrated because individuals were in control of the content details. Students met on their own time to compile their note card and design the graphic and then came to class at the scheduled final to put it all together. Below is an example of the final product.

The quality of the work exceeded my expectations. Not only were the graphic organizers well designed and conceptually complete, the cleverness factor was unexpected. For example, many of the syntheses included flip books, fold-able parts, and other hands-on aspects. The graduate students met either exemplary or competent criteria in every trait on the rubric. The undergraduate groups met exemplary, competent, with few satisfactory criteria. One of the differences between the graduate and undergraduate students' work reflected schema regarding workplace relevance which makes sense as most of the graduate students were practicing teachers and the undergraduates were teacher candidates. Another

difference, which accounted for the few satisfactory scores in the undergraduate's work, reflected the quality of execution. The graduate students seemed to be more exacting in the way the pieces of their graphic were put together which may be a result of maturity.

What the Students Say

In the end, it's all about the learners. So, what did the undergraduate teacher candidates and practicing graduate teachers say about this type of final? In general, both groups of students liked the concept. In their critiques of the task, students commented on dealing with the content, working with classmates, and the freedom to express what they had learned. They used words like collaboration, comprehensive, cumulative, synthesis, and fun. Most shared their delight with being able to work with a group. In fact, everyone liked that aspect; perhaps because we do so much small group work it is a familiar, comfortable dynamic. Students took seriously the responsibility to mine the course content and sieve those elements they felt were personally and professionally relevant. Students also enjoyed the intellectual freedom to design a graphic organizer that arranged the course concepts as they saw fit.

One student said, "The final was unlike any other final I have ever had because it was enjoyable and because we had complete creative freedom. Preparing for the final I had to review the entire course and make meaning of what I would take with me. I didn't feel as though I was memorizing facts – this is truly what we learned." A graduate student shared, "I felt this final was a non-stressful way to recap material learned. The social interaction allowed for varied viewpoints and clarification on content points. I was able to recall and connect to prior knowledge as well as relate to my work environment. I enjoyed this final as well as felt confident about the material." A third student summed up what most of the others felt, "I really loved this task! It was engaging and worth every moment. The idea of putting the class elements into a visual representation made us go beyond the content and think of it in a comprehensive in a way. This final really gave us a lot of freedom to choose what we wanted to do and what information was important to us."

To be honest, I enjoyed this final as well. I was impressed with the efficacy demonstrated by the students in expressing their learning. Students became invested in their learning and responsible for expressing it. I have continued to use graphic synthesis as a final with similar success, and will probably continue to do so.

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WHAT EVERY CONTEMPORARY TEACHER EDUCATOR NEEDS TO KNOW ABOUT TECHNOLOGY...BUT, DIDN'T KNOW WHO TO ASK!

by

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Abstract

This article is predicated on the investigations of two different teams of researchers from a private university located in the Northeast, USA. Both research teams consisted of experienced teacher educators as well as novice teacher educators. Members of the teams represented a generational cross section of educational professionals in terms of age and teaching experience. Some members of each team may be classified as "digital immigrants" having been raised and educated in the pre-digital age but currently comprehensively using technology while other team members were raised and educated in the digital age and may be classified as "digital natives" whose current technology use is natural and ubiquitous. This article highlights technological advances, addresses the generational gap in technological proficiency, and provides specific examples of technological software applications in contemporary education. Examples of integrating technology into educational practices are also outlined to further advance the knowledge and usage of technology among teacher educators.

Introduction

Members of the two different research teams who contributed to this article have extensively used technology in their respective teaching-learning settings and have eagerly pursued information about the latest technological developments to continuously make their educational experiences relevant and interesting to their teacher education students. One of the research teams contributing to this article began in 2012 investigating and analyzing various aspects of technology in education using a comprehensive deductive approach based on existing data while the other research team compiled information about technology usage in education via a pragmatic inductive approach beginning in 2015. The two teams synthesized their separate findings into this manuscript in order to provide teacher educators with contemporary information about technology issues and applications in a user-friendly format.

Evolution of Technology

During the past three decades, technology has evolved from its initial novelty usage stage to a definitely becoming a key component in our everyday lives. The integration of technology is evident within numerous fields including education, business, and employment. Figure 1 describes trends within the evolution of technology that are evident today and will be expected to continue in the future. The information contained in the following figure makes it obvious that today's educator is teaching within a dynamic environment highlighted by technological usage.

Figure 1. The integration of technology in everyday life

The top 10 in demand jobs in 2010 did not exist in 2004.
We are currently preparing students for jobs that do not yet exist and for using technologies that have not been invented.
The United States Department of Labor estimates that today's learner will have 10-14 jobs by the age of 38.

The amount of new technical information is doubling every two years. For students starting a four-year degree that means that half of what they learn in their first year of study will be outdated by their third year of study.
There are 1.44 billion active users of Facebook, 65% of whom are daily users.
There are 105 billion searches on Google every month. In 2006, this number was 2.7 billion.
The first commercial text message was sent in December 1992. Today the number of text messages sent and received everyday exceeds the total population of the planet
The number of internet devices in 1984 was 1000. In 1992 it was one million and in 2008 it exceeded one billion. It is expected to reach 75 billion in 2020.
There are 540 thousand words in English language that is about 5 times as many as during Shakespeare's time.

Note. Information retrieved and modified from Protalinski, 2015; Sullivan, 2015; Youtube, 2012 and the Figure was adapted from Polka (2014). Planning to effectively motivate digital-age learners by addressing their “high-tech” interests and their “high-touch” needs. *Educational Planning*. 21(4), 51-68.

Table 1 and 2 outline the specific evolution and prevalence of the Internet and Google searches, as well as the hardware systems that support such technological practices. It is evident that continuous technology hardware device development helped in supporting the Internet’s accessibility as it became more widespread. The Internet has become a dynamic tool and a ubiquitous site for information within the field of education. “The meteoric increase in usage of Google alone in the past ten years emphasizes its value as a ready resource for all kinds of learners and their various interests” (Polka, 2014, p. 54).

Table 1. Evolution and usage of technological software

Software Type	1995-2000	2000-2005	2005-2010	2010-2012	2013-2015
Internet Usage %	18%	41%	69%	79%	84%
Google #s	N/A	22 billion searches	953 billion searches	1.2 trillion searches	3.6 trillion searches

Note. Internet usage is measured per US household. Table adapted from Polka (2014). Information retrieved from Malik, 2009; OwenGreaves.com, 2012; Pew Research, 2015; Statistic Brain, n.d.

Table 2. Evolution and usage of high-tech hardware systems in the United States

Hardware	1980-85	1985-90	1990-95	1995-00	2000-05	2005-10	2010-12	2013-15
Home Computer	8.2 million	15 million	22.9 million	51 million	62 million	*	230 million**	260 million**
Tablet	N/A	N/A	N/A	N/A	N/A	N/A	132 million	162 million
Cell Phones	340 thousands	5.2 million	33.7 million	109 million	208 million	300 million	327 million	355 million

Note. *Since 2007, no data was collected on home computer usage

**The Pew Statistics on American Home Computer ownership included desktops and laptops. Table adapted from Polka (2014).

The data used in Table 2 was obtained from the following sources: eMarketer (2015); FreshlyMobile (2013), Infoplease.com (n.d.), Pew Research (2015) and Wikipedia (2013). It is interesting to note that home computer usage statistics ended in 2005 since many researchers felt it would be a short-lived trend (Polka, 2014). But, the Pew Research Institute continued to collect data on home computer usage and integrated numbers on laptops as well as desktops in their findings to illustrate the increasing integration of technology in our daily lives.

Table 3 outlines social media usage since the onset of Facebook and LinkedIn in 2000. Social media has become a contemporary communication tool and has connected individuals worldwide. The exponential growth of its usage strongly correlates with the frequent use of computers, tablets, and cell phones as evident in Table 1 and 2.

Table 3. Frequency of social media usage by type

Methods of Social Media	2000-2005	2005-2010	2010-2012	2013-2015
Facebook	5.5 million	608 million	1.01 billion	1.59 billion
Twitter	N/A	26 million	500 million	645 million
Instagram	N/A	1 million	80 million	400 million
LinkedIn	4,500	90 million	202 million	433 million

Information retrieved from About.com, 2011; Associated Press, 2012; LinkedIn Newsroom, 2016; Lunden, 2012; Statista, n.d.; wersm, 2014. Table adapted from Polka (2014).

The advancements in technology from early models of home computers and cellphones to tablets, laptops, i-pads, i-phones and the burgeoning field of social media are also reflected within the field of education. The evolution of technology made an impact within curriculum delivery via the flipped classroom. A flipped classroom is defined as a classroom “where the teacher’s lessons, lectures, and discussions about a topic are provided to the students via social media and the time in the classroom is spent reviewing the material and practicing the applications” (Polka, 2014, p. 56).

Subsequently, the traditional educational settings have been redefined as students can focus on reviewing lesson material or working one-to-one with their teacher in diverse locations and at different times. Students now have the opportunity to access lessons and lectures online at their convenience. Table 4 outlines the number of lessons created to date that are readily available for educator use. Data included in that table has undoubtedly increased by the time of this article’s publication. But, the point is that education is becoming more and more of an anywhere and anytime experience for both teachers and learners.

Table 4. Prevalence of Flipped Classroom lesson delivery statistics

Web site	Date Created	Total # of Lessons Delivered
Bozeman	2010	8 million
Khan Academy	2006	244 million
TED Ed	2012	126,000

Information retrieved from TED Ed, n.d. Table adapted from Polka (2014).

However, the integration of social media and technology in the classroom may not be seamless due to different levels of exposure to technology among generations. It is important to note, “...these contemporary forms of interpersonal communications didn’t exist prior to 2000 so the usage data certainly is skewed in favor of those who were born during its existence” (Polka, 2014, p. 55). Table 5 clearly outlines a gap in percentages between different age generations and their usage of social media.

Table 5. Social media usage by age group

Ages (in years)	2000-2005	2005-2010	2010-2012	2013-2014
18-29	8%	86%	92%	89%
30-49	7%	68%	77%	82%
50-64	6%	47%	57%	65%
65+	0%	26%	38%	49%

Information retrieved from Pew Internet, 2013; Pew Internet, 2014. Table adapted from Polka (2014).

Therefore, technology has become a powerful tool in our daily lives, especially in our educational endeavors. It has influenced almost every aspect of our lives and can be seen everywhere in education. The new techniques and tools we use in today's schools are far different from those of yesterday. For example, accessing and acquiring knowledge has changed. Social behaviors in light of Facebook, Twitter, Snapchat, etc. have changed. Kahn Academy and the flipped classroom have revolutionized instruction. Our society has become global and digital. Institutions of higher education are trying to make the most of the opportunities afforded to them through technology.

Digital Immigrants versus Digital Natives

Higher education is and has historically always been at crossroads with various constituents in the form of demands and challenges that are faced in order to accommodate the many expectations that are laid before them. These proverbial "forks in the road" could be demands for funding sources, demands for more accountability, or demands for curriculum revisions necessary to meet the 21st century learner. For example, curriculum revisions embedded within the National Education Association (NEA)'s 4Cs of 21st Century Learners address the skills of communication, collaboration, creativity, and critical thinking/problem solving. NEA submits that current learners will need each of these skills in order to meet the changing 21st century workforce (NEA, 2014).

Technology and the use of technology have their own special demands. Some colleges and universities struggle to find funding sources for the array of technology they may need for their student body. Others are challenged to find space and result in traditional classroom space turning into computer rooms/labs or small group space with technology embedded throughout.

Amidst all of these demands exist yet, another unique set of challenges. These are human in nature and could be considered the exclusive traits and differences that exist between teacher and learner generations. Today, as never before, a distinctive group of learners have entered institutions of higher learning with their own set of teaching and learning expectations. Many faculty who were born and "live" in a different generation approach teaching and learning differently. Faculty, in many instances, are primarily "Matures" (born between 1900-1946) or "Boomers" (born between 1946-1964) or even "Gen Xers" (born between 1965 and 1982) (Oblinger & Oblinger, 2005). The student population today cross over all of these generations and are referred to as the "Net Generation/Millennials" (born between 1982 and present) whose characteristics and learning expectations are very, very different (Skiba & Barton, 2006).

Marc Prensky (2001) coined two terms that described the Matures and/or Boomers as "Digital Immigrants" while the Net Generation and most recently, Millennials are described as "Digital Natives" who come to universities or colleges with expectations in terms of addressing how they learn, styles by that they learn, and instructional needs that are different from earlier generations (Skiba & Barton, 2006). The following figure provides descriptions of digital immigrants compared to digital natives.

Figure 2. Information on Digital Immigrants and Digital Natives

Digital Immigrants	Digital Natives
Born before today's technology was available	Born in a digital and hyperconnected world
Adopt technology	Live technology
"Learn... to adapt to their environment, they always retain to some degree, their "accent", that is, their foot in the past" (Prensky, 2001, p. 2)	"Native speakers of the digital language of computers, video games and Internet" (Prensky, 2001, p. 1)
"Try to work around or second guess technology" (Cunningham, n.d, p. 1)	"Adapt quickly to changes in their environment and look for ways to incorporate the latest technology" (Cunningham, n.d., p. 1)
Bring perspective, history, understanding of the pitfalls of technology (Sreenivasan, 2014)	Only know the potential of technology (Sreenivasan, 2014)

While written in 2001, Marc Prensky's view of the seriousness of the gap between digital immigrants and digital natives exists even today as he explained that the "biggest problem facing education today is that our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language" (Prensky, 2001, p. 2). Some of the learning characteristics that instructors face as they teach digital natives include the following:

- digital natives are fluent in acquiring and learning all new sorts of technology. They seem to have an intuitive sense about digital language as they have grown up with it and can speak its language;
- due to the nature of their multi-use of many of these tools, digital natives are comfortable and used to receiving information quickly, enjoy parallel processing and multi-tasking, connecting to networks such as cell phones, Instagram, Facebook, YouTube, etc. (Prensky, 2001);
- they prefer graphics over text, and enjoy instant gratification preferring games to work (Frاند, 2000).

How Do Digital Natives Learn?

To answer this question, Prensky (2005) interviewed almost a thousand students from diverse backgrounds and found consistent answers to this question. Some of the answers that students shared included:

- that they do not like strict lecturing
- they need to be respected and valued
- they want the ability to pursue their own interests using the tools of the day
- they have a strong desire to collaborate and work with others
- want to make and share decisions with an education that is real as well as relevant.

These learning characteristics are either seemingly foreign or difficult to incorporate in instruction for some digital immigrant teacher educators as too many tend to believe that learners are the same as they have always been and that the same methods that worked for them when they were students will work for their students of today. But, these distinctive characteristics of digital natives challenge a traditional type of classroom and are forcing teacher educators to realize that

traditional textbooks, current strategies, and lecture type learning are not as effective as they may have once been. Accordingly, Brown (2005) has identified that digital natives or net generation learners:

- want to focus learning for understanding
- construct knowledge through their use of discovery methods
- actively engage in learning
- want instruction that is tailored to their learning style
- be a part of an option rich learning environment
- view the teacher as expert and mentor.

Oblinger & Oblinger (2005) termed the way digital natives learn as “mediated immersion.” They described this as digital natives having greater fluency in media usage, learning, and sharing in a collective and cooperative manner.

Bridging the Gap

While it is quite clear that digital technology is a major part of the contemporary students’ lives, it is not so clear as to the best approaches to address this current digital culture in the classroom. The challenge is to bridge the gap between two very different generations; digital immigrant teachers and digital native students.

Gaston (2006) shared that educators can respond to this challenge in a few ways. One way could be to simply ignore the digital culture as a fad and be done with it. Another way could be to change the learning environment entirely by following every fad or trend. The more intelligent approach, according to Gaston, is to look at the digital culture as a unique opportunity to improve the learning for everyone. Teacher educators need to view this current situation as an opportunity to change instructional approaches to meet the learning needs and interests of these digital natives.

The challenge of bridging the gap is also not answered by instructors trying to determine how to use technology effectively in the classroom for meaningful learning or what professional development training must be given so that they can master and increase the use of various digital resources in their classrooms. To be most successful and bridge the gap, teacher educators just need to know the various technologies that their current students use and then determine how they can use those technologies to increase learning (Prensky, 2005). “In partnering pedagogy, using technology is the student’s job. The teacher’s job is to coach and guide the use of technology for effective learning” (Prensky, 2005, p. 4). Technology, in other words, supplements teaching, it does not replace it (Levin, 2016). Riegel and Kozen (2016) described a number of digital resources that instructors could access and use in order to adapt teaching strategies within the current digital culture. Each of the several technology resources described in figures three, four, and five address the “Four Cs” of 21st Century skills (NEA, 2014).

The essential element in teaching and learning in a digital society is and always will be the human relationship that exists between students and instructors whether teaching is synchronous, asynchronous, face-to-face, distance, blended or e-learning. Whether teaching in any of these formats, instructors can better approach the digital native and narrow the gap when any of the following are embedded in their respective courses whether the course is taught through technology or not. And, whether their respective courses are problem-based; project-based; inquiry-based; active learning; opinion-based; student-choice-based; constructivism or co-constructing based; discussion oriented; simulation game focused; Socratic type methodology, and valuing approaches. “The world is moving in the direction of the students, and there’s going to be extraordinary pressure for colleges to move in the

same direction. It doesn't mean giving up values or what we hold as historically important, but it does speak to modes of instruction" (Levin, 2016, p. 2).

Due to the fact that instructors first need to know the technology students can use (Prensky, 2005), it follows that teacher educators should explore multiple technologies whose navigation, features, and capabilities align with and are appropriate for the grade/age level. In an effort to aid teacher educators in choosing technologies appropriate for students' period of development, the following figures are provided. The figures identify specific software examples of technology applications used in contemporary education and are designed to separate the software into three categories based on Morris Massey's major periods of value development.

The first period Massey defines is the imprinted period, where students through the age of seven absorb material like sponges (Massey, 2016). During this time, students engage with everything around them and accept much of it as true (Massey, 2016). Therefore, material presented during this time needs to be straightforward in terms of direction and navigation to minimize confusion and promote independence, as well as to encourage student-to-teacher and teacher-to-student communication in order to help develop a sense of "right and wrong."

Figure 3. Technology Appropriate for the Imprinted Period

The Imprint Period		
Software	Description	URL
Blendspace	Interactive lessons students can participate in via a step-by-step format	https://www.tes.com/lessons?redirect-bs=1
ClassDojo	Classroom management tool to incorporate fun characters and a point system into the classroom	https://www.classdojo.com
Edpuzzle	Interactive video lessons that pause to ask students questions	https://edpuzzle.com
Kahoot!	Games/assessments students can participate in by selecting one of 4 shapes	https://getkahoot.com
Microsoft PowerPoint	Presentations that walk students through material slide-by-slide	https://products.office.com/en-us/powerpoint#
Microsoft Word	Documents that walk students through material	https://products.office.com/en-us/word
Poll Everywhere	Real time online polls	https://www.pollerywhere.com
Prezi	Presentation platform that walks students through material step-by-step, allowing for nested material	https://prezi.com
Remind	Parents and student message platform	https://www.remind.com
Socrative	Online assessments and data collection	http://www.socrative.com
YouTube	Pre-made or self-made videos on all topics	https://www.youtube.com

Note. The “Four Cs” of 21st Century Skills: Technologies and URLs. Adapted from Riegel and Kozen (2016).

The second period that Massey defines is the modeling period, where students between the ages of eight and thirteen mimic the actions of others (Massey, 2016). During this time, students no longer blindly accept information as true, but work with and test information themselves to see what works (Massey, 2016). Thus, material presented for this age group should allow for student manipulation, customization, and presentation in an effort to promote creativity, and foster reflection to eliminate blind belief and promote critical thinking.

Figure 4. Technology Appropriate for the Modeling Period

The Modeling Period		
Software	Description	URL
Animaker	Custom animated videos	http://www.animaker.com
Camtasia	Interactive whiteboard	https://www.techsmith.com/camtasia-education.html
Creativist	Tool to create media-rich stories	https://www.creatavist.com
Diigo	Save and tag online resources for easy access	https://www.diigo.com
Discovery Education Virtual Field Trips	Virtual field trips	http://www.discoveryeducation.com/Events/virtual-field-trips/explore/index.cfm
Google Art Projects	Virtually explore art form around the world	http://www.googleartproject.com
Google Sky	Virtual field trip through the galaxy	http://www.google.com/sky
Inside the White House	Virtual field trip through the White House	https://www.whitehouse.gov/about/inside-white-house/interactive-tour
Kahn Academy	Pre-made videos on educational topics	https://www.khanacademy.org
OneWord	Random word generator with timed writing activity	http://www.oneword.com
PowToon	Customizable cartoons	https://www.powtoon.com
Scribe	Save, tag, and mark online resources for easy access	http://www.scribe.com
Smithsonian	Virtual field trip through the Smithsonian	http://naturalhistory.si.edu/panoramas

Steller	Stories told via a collection of images	https://steller.co
Stormboard	Online Brainstorming and Collaboration	https://www.stormboard.com
Teachertube	Pre-made or self-made videos on educational topics	https://www.teachertube.com
TED Talks	Video lectures form the best and brightest in their field on specific topics	http://www.ted.com
Voki	Avatar creator	http://www.voki.com
Wordle	Word cloud generator	http://www.wordle.net

Note. The “Four Cs” of 21st Century Skills: Technologies and URLs. Adapted from Riegel and Kozen (2016).

The third period Massey defines is the socialization period that includes students between the ages of 13 and 21 who are largely influenced by others (Massey, 2016). During this time, students look for way ways to individualize and modify their original programming while connecting with people whose ideas are congruent with their own (Massey, 2016). During this period, material presented should foster student collaboration as well as increase students’ capacity to make decisions independent of the influence of others.

Figure 5. Technology Appropriate for the Socialization Period

The Socialization Period		
Software	Description	URL
Bubbl.us	Mind map generator	https://bubbl.us
Edublogs	Educational blog platform	http://edublogs.org
Dreamhost	WIKI	https://www.dreamhost.com
ePals	Virtual pen pals from overseas	http://www.epals.com
Google Drive	Cloud based document storage	https://www.google.com/drive
Google Hangout	Web based online meeting platform	https://hangouts.google.com
Mindmup	Mind map generator	https://www.mindmup.com

PenPal Schools	Virtual pen pals	https://www.penspalschools.com
Penzu Classroom	Learning management	http://classic.penzu.com/content/products/classroom
Popplet	Mind map generator	http://popplet.com
Sococo	Online meeting platform	https://www.sococo.com

Note. The “Four Cs” of 21st Century Skills: Technologies and URLs. Adapted from Riegel and Kozen (2016).

Although the authors chose to assign each of the identified software to a specific values growth period, it should be noted that any of these technology-based programs may be used across the board with appropriate scaffolding by astute student-centered teacher educators.

A Senior Teacher Educator and Digital Immigrant Offers An Example

As a senior teacher educator who began teaching in the late 1960s, one of the researchers engaged in this project was constantly searching for strategies that would promote a more student-oriented cooperative classroom. This senior teacher, who is best described as a digital immigrant, was interested in engaging students in their personal experiences to actively link new knowledge with previous knowledge and experiences. This senior teacher also recognized early in their teaching experiences the significance of that sage teaching axiom that, “Students at any level of the instructional spectrum (PreK-Graduate School) do not care how much you know as a teacher until they know how much you care about them as individual learners.” Subsequently, this teacher educator comprehensively researched and enthusiastically practiced constructive teaching approaches that were later acutely articulated by Brooks and Brooks (1993) as the following:

- encourage and accept student ideas and initiatives
- encourage students to engage in dialogue.
- encourage student inquiry by asking thoughtful, open-ended questions.
- provide time for students to construct relationships and create metaphors.

This senior teacher developed a process that provided structure for classroom activities based on the above concepts at the undergraduate and graduate school levels and also promoted personal interactions as early as possible in the course semester. The program that this teacher originally developed in 1972 and effectively used in traditional classroom settings for the next 40 years became known as, “Personal Course Portfolios.” This activity consisted of students personally designing a manila folder using multi-colored magic markers with information about themselves and their personal goals, objectives, values, and feelings about learning experiences. Personal course portfolios are valuing activities that can serve as icebreakers for new groups of students and can engender the development of productive cooperative learning teams (Polka, 2002, p. 15).

The portfolio manila folder was turned in to the teacher after each class for review of student progress and feedback regarding various class activities and returned to students at the onset of each succeeding class meeting. In addition, to serving as a two-communication vehicle, the customized folders also served as an attendance check and provided immediate feedback to both the teacher and the

students. The “Personal Course Portfolios” also promoted an organized method to distribute and collect course related readings, assignments, and evaluations. As the senior teacher noted,

Those folders served a valuable purpose for me and my students and they continued to evolve in format differently with each course over the years. They became excellent artifacts of the constructivist approach to teaching and learning that I promoted as they were customized communication vehicles and encouraged interactions (Polka, 2016).

However, times changed and this senior teacher realized that the “hard copy personal portfolios” needed to evolve in the digital age, especially given that some of the courses taught by this teacher were going online! As an astute digital immigrant, this senior teacher also evolved and transitioned this long-standing “concrete” classroom experience into a digital one. The “Personal Course Portfolios” folder activity and course long usage of it evolved into “Personal Digital Course Portfolios” that act as living résumés, where the student compiles and updates papers and projects completed throughout this teacher educator’s course. These digital portfolios allow students the opportunity to document their learning electronically and recall it, modify it, and re-catalogue it as the student deems appropriate now and in their future. Digital portfolios can be used in a variety of ways and as Niguidula (2005) states, “digital portfolios are multimedia collections of student work stored and reviewed in digital format” (p. 44).

After almost 5 decades of using a well established organizational process and instructional technique that worked very well for this digital immigrant teacher educator, there was a change for the better as now students have an easily accessible multi-media portrayal of their course experiences that they can use into their future and the teacher has a very user friendly digital way to continue the constructivist approaches that have worked so well for so long!

A Novice Teacher Educator and Digital Native Offers An Example

Just as senior teacher educators can incorporate technology into instruction, novice teacher educators can do the same. However, unlike the challenges senior teacher educators face in terms of changing, modifying, and/or adapting pre-established teaching techniques, novice teacher educators are faced with the challenge of applying innate technological familiarity in meaningful, motivational, and educational ways. One way to meet these challenges is to embed “high-touch” and “high-tech” technology into the classroom in a way that meets the needs of 21st century learners (Polka, 2010).

NEA (2014) identifies four competencies that embody the 21st century skills all students will need for life proficiency: communication; collaboration; critical thinking and problem solving; and creativity. Although these skills may be effectively fostered for some learners and by some teachers in traditional ways; most contemporary students, using their technological acumen, hardware, and software can communicate in person, collaborate in class, demonstrate critical thinking on written assignments, and display creativity in hands-on activities. However, as students become “digital natives,” “surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age” (Prensky, 2001, p. 1), there is a push for educators to use the contemporary technologies students are familiar with and to incorporate a “high-touch” and “high-tech” balance in their teaching-learning experiences in the classroom (Polka, 2010).

Due to the fact that, educators have “historically questioned the applications of innovative technologies in learning settings” (Polka, 2014, p. 52), there is a barrier

to overcome in terms of fostering communication, collaboration, critical thinking and problem solving, and creativity through technology. The following example works to demonstrate how one can achieve the NEA's (2014) 21st century skills through the use of technology (i.e. Pear Deck) in a mathematics classroom.

Pear Deck is a reasonably priced commercially available software, like similar contemporary technology products, that allows students to follow along with and participate in a presentation from their own computer, tablet, or smartphone in real time (PearDeck Inc., 2016). With a "wide acceptance of BYOD in education," a "Bring Your Own Device" initiative where students bring their personal devices into the classroom for educational use (Afreeen, 2014), the idea that every student can have their own device to follow along with the teacher and participate with their peers has become plausible. When this technology is employed in the mathematics classroom, students are able to join a live presentation session using a code provided by the teacher. This code puts the presentation in the students' hands, and allows them to follow along and participate both on a projector in class *and* on their own device in interactive "Draggable," "Drawing," "Text or Number," and "Multiple Choice" slides (PearDeck Inc., 2016).

Each type of interactive slide can be used in a different way to achieve one of the 21st century skills. For example, "Draggable" slides can be used to help students communicate their opinions by allowing for straightforward, instinctive responses. Figure 6 demonstrates how teachers can effortlessly gauge whether students like math by posing the question and providing a marker for students to drag over a thumbs-up/thumbs-down image. Teachers can customize both the marker that students drag as well as the background image. This customization allows for "Draggable" slides to be used in various ways to foster classroom communication.

Figure 6. Various Views for "Draggable" Interactive Pear Deck Slides



"Text and Number" slides can be used to form collaborative class answers by taking into consideration all individual student answers. Figure 7 displays how teachers can pose a short answer question addressing the steps needed to solve a mathematical word problem. Each student first answers the question individually on their device, and then refers to the projector where all student responses will be displayed anonymously for students to form a collaborative answer in terms of what steps are actually needed to solve a word problem.

Figure 7. Various Views for "Text and Number" Interactive Pear Deck Slides



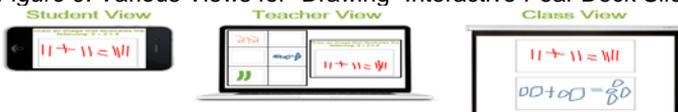
"Multiple Choice" slides can be used to engage students in critical thinking and problem solving by prompting the strategic elimination of wrong answers. Figure 8 demonstrates how teachers can foster critical thinking by presenting students with a question regarding solutions to an equation, along with several possible choices. By presenting students with multiple choices, they are prompted to critically think through each option, and use their problem solving skills to choose one solution.

Figure 8. Various Views for “Multiple Choice” Interactive Pear Deck Slides



“Drawing” slides can be used to foster student creativity by allowing for the creation of custom visuals to represent ideas and concepts. Figure 9 illustrates how teachers can foster creativity by allowing students to draw a visual that depicts the equation “ $2 + 2 = 4$ ”. By allowing students to use different colors, texts, fonts, sizes, etc. on a blank canvas, teachers allow students to access their originality and imagination. These graphic creations can then be shared anonymously with the class.

Figure 9. Various Views for “Drawing” Interactive Pear Deck Slides



In addition to the features mentioned above, Pear Deck offers a web slide that allows the teacher to take students directly to a predetermined web page on their devices. Pear Deck also works to provide the educator with classroom control by allowing the teacher to see the responses of each student, as well as lock the presentation on students’ devices if necessary. Furthermore, Pear Deck works to create positive classroom environments by eliciting the mood of each student at the beginning of the presentation as well as providing the educator with feedback by asking each student how well the lesson went at the end of the presentation. Finally, Pear Deck provides each student with a copy of all Pear Deck activity through a “Takeaway” in the form of a Google Doc emailed to each student upon completion of a presentation. These documents allow students, parents, and others to reference material from class at their leisure.

As in any content area, mathematics teachers often find it “difficult to use new learning tools and replace their previously successful approaches” (Polka, 2014, p. 52). However, as Polka (2010) states, educational outcomes are more successful when educators employ modern technologies that appeal to the “high-tech,” “high-touch” interests of students. With the use of Pear Deck, teachers can work to achieve 21st century skills through 21st century means by incorporating technology into the classroom.

Summary

This article investigated the evolution and various aspects of technology that have been moving society from a natural time/space world to a society that also lives in a cyber time/space parallel environment (Sylvester, 2009). Digital immigrants and digital natives were discussed as both groups are immersed in the two worlds. As the electronic environment expands into more areas of our lives it is no surprise that digital natives are increasing.

The authors not only explored the various challenges and opportunities of our current digital educational landscape but also described various software examples of technology applications used in education today. It is the hope of the teacher educators who wrote this article that this exploration showed how digital immigrants and digital natives can merge together within the educational environment. Both groups bring important knowledge, skills, and dispositions that

can be shared within the teaching and learning process. Instructors can develop and use technology in a cyber time space environment as they teach while taking into consideration, that students, who have been born in an era of technology, still need and want instructors to help them develop their own set of skills while living among the challenges and issues they face in their natural digital, yet constantly evolving, environment.

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MENTORING NON-TRADITIONALLY PREPARED TEACHERS: A FOCUS ON THE LITERATURE

by

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Abstract

The educational research community has suggested that hiring non-traditionally prepared teachers may be a way to respond to growing teacher shortages, especially in light of the plummeting number of teacher education enrollments. However, as beginning educators encounter concerns and uncertainties in teaching, the result can bring discouragement, recruitment and retention challenges, and a continued drain of new talent. Now more than ever, a support system for non-traditionally prepared teacher candidates is needed since such a support system is crucial to slowing the attrition rate of these and other new teachers. Mentoring has been identified as one of the most important components in transitioning and retaining educators, especially novice teachers prepared along innovative pathways. This article unfolds as follows: First, using a series of questions to frame and synthesize the literature, we present existing scholarship around mentoring. Next, we highlight areas where researchers propose a more comprehensive mentoring framework tailored for adults who enter teaching along non-traditional pathways. Last, recommendations are offered that can strengthen educational leaders' skills for activating and accelerating new teacher development to retain our newest teaching talent.

Introduction

Novice teachers, no matter which pathway of teacher preparation, are a critical population within our educator workforce. During the mid to late 90's, the typical educator had about 17-18 years of teaching experience and stayed longer in one school (Ingersoll, Merrill & Stuckey, 2014; New Teacher Center, 2016). Today many P-12 teachers have only been in the classroom for few years and are more transient than ever. The situation is equally or more grave for teachers who have come into teaching through non-traditional pathways. Teacher shortages exist in specific contents such as mathematics, physics, special education and English as a second language (ESL), and in many states including Arizona, Hawaii, Indiana, Nevada, and Oklahoma. Further, the United States' (U.S.) teacher churn rate hovers around 33% for educators with less than three years of teaching experience. As such, how we recruit and retain teacher talent in our P-12 public schools in the U.S. deserves attention and action. In response to conclusive evidence in the literature that illustrates new teachers typically have a steep learning curve (Ingersoll & Strong, 2011; Redding & Smith, 2016), we need an institutional commitment with a systematic approach to onboard them. Developmentally-appropriate induction strategies should be applied to accommodate each beginning teacher's professional growth and development needs, regardless of their prior work or preparation proficiencies before becoming a teacher.

The educational research community has suggested that hiring non-traditionally prepared teachers may be a way to respond to growing teacher shortages (Structure, Darling Hammond & Carver, 2016), especially in light of the plummeting number of teacher education enrollments (Sutcher, Darling-Hammond & Carver-Thomas, 2016). Others claim that the preparation of individuals through

pathways other than a traditional undergraduate college or university degree, vary by program and lack consistent requirements and coherent benchmarks to assure a high quality and effective teacher preparation experience (Consuegra, Engels, Nadine & Struyven, 2014; Murnane & Steele, 2007). Without adequate support and intensive training, these teacher candidates may muddy teacher quality, and exacerbate teacher “churn” or turnover (Redding & Smith, 2016; Structure, Darling Hammond & Carver, 2016). Despite such claims, approximately ¼ of the teachers in our nation’s schools enter teaching through non-traditional pathways (Goldring, Jay & Bitterman, 2013). These individuals are often placed in high need hard to staff situations (Ingersoll & Strong, 2011; Redding & Smith, 2016). This has been especially the case for beginning non-traditionally prepared teachers and these placements aggravate the challenges of early teachers (Ingersoll). Further, educational leaders persistently wrestle with finding ways to make these early experiences more positive, to provide greater support, to more fully prepare teachers for the learning curve of the profession and to help slow the attrition of new teachers (Redding & Smith, 2016). Leadership is key to these experiences because effective principals can set a tone in a building that encourages professional collaboration and continuous improvement.

As non-traditionally prepared teachers encounter concerns and uncertainties in teaching, the result can bring discouragement, recruitment and retention challenges and the continued drain of attrition of educators from teaching. Now more than ever, a support system for non-traditionally prepared teacher candidates is needed since such support systems are crucial to slowing the attrition rate of these and other new teachers. Mentoring has therefore been identified as one of the most important components in transitioning and retaining educators, especially novice teachers prepared along innovative pathways (Feistritzer, 2008; Humphrey, Weschler & Hough, 2005; Redding & Smith, 2016). In support of mentoring for beginning non-traditionally prepared teachers this article unfolds as follows: First, using a series of questions to frame and synthesize the literature, we synthesize the existing scholarship around mentoring, Next, we highlight areas where researchers propose a more comprehensive mentoring framework which is specifically tailored for adults who enter teaching through innovative pathways. Last, recommendations are offered that can strengthen educational leaders’ skills for activating and accelerating new teacher development in order to retain our newest teaching talent.

Why Highlight Mentoring for Non-traditionally Prepared Teachers?

Early teaching experiences have been characterized by many scholars as overwhelming, challenging, and isolating (Burke, Aubusson, Schuck, Buchanan & Prescott, 2015; Ingersoll & Strong, 2011; Redding & Smith, 2016). This holds true for both traditionally prepared and non- traditionally prepared educators, who are sometimes described by researchers and the educational community as ‘alternatively’ prepared. Although research supporting the importance of mentoring for beginning teachers is not a new idea, specific literature that focuses on mentoring of non-traditional educators is less available. Haberman (1986) began this conversation on the value of mentoring for non-traditionally prepared novice teachers twenty years ago. Given the growing demand for teachers and the emphasis on non-traditionally trained faculties as a possible resource (Murnane & Steele, 2007; U.S. Department of Education, 2005) scholars have begun to look at mentoring in a different way. These new perspectives on mentoring stem from the growing teacher shortages (Structure, Darling Hammond & Carver, 2016), the increased demand for quality teachers in high need and hard to staff schools and disciplines, recruitment and retention problems in districts and the urgent need for teachers in urban and

rural communities. With the increased emphasis on non-traditional teachers as a possible solution for teacher shortages, mentoring is being considered as an approach toward strengthening training for and retaining quality personnel. Further, mentoring is now not only regarded as a way to acclimate and prepare beginning non-traditional teachers but is also seen as an approach to strengthen veteran teachers' skills.

Mentoring of non-traditionally trained teachers by veteran, experienced teachers has been considered an essential element in preparing and supporting these educators through the early stages of their teaching journey (Feistritzer, 2008; Humphrey, Weschler & Hough, 2005; Smith & Ingersoll, 2004). Substantive interactions with highly-qualified, seasoned educational professionals can be influential in guiding new teachers, in producing positive perceptions and creating lasting impressions in the minds of novice educators. Further, intensive supervision or a mentoring assignment is required for alternatively certified teachers to be considered as a highly qualified teacher by the U.S. Department of Education (DoED, 2005). Mentoring programs have been cited by scholars as a possible solution for preparing and retaining effective teachers and further scaffolding non-traditionally prepared educators as they fully transition into the profession (National Retired Teachers Association, 2003; Feistritzer, 2008; Humphrey & Wechsler, 2007).

Mentoring is acclaimed by researchers, teachers and administrators as making a difference in the early experiences of non-traditional prepared teachers (Feistritzer, 2008; Ingersoll & Kralik, 2004; Sapier, Freedman & Aschheim 2001). Mentoring is also tied to providing quality experiences for teachers. Further, it has been proven that mentoring helps teacher retention rates (Feiman-Nemser, Schwillie, Carver, & Yusko, 1999; Smith & Ingersoll, 2004; Structure, Darling Hammond & Carver, 2016). Mentoring is reported by teachers and researchers as an activity that contributes to them becoming more effective teachers. Mentoring is crucial for addressing the higher attrition rates of teachers particularly in chronically low performing school districts with hard to staff content areas. The reflections of many teachers indicate that the mentoring support they received in the induction stages was crucial for them as they continued beyond the first year. Although the concept of mentoring is defined in the literature in various ways, mentoring appears to include activities such as coaching, assisting, guiding, role modeling, and supporting. Specifically, mentoring has been defined as the "personal guidance provided usually by seasoned veterans, to beginning teachers in schools" (Ingersoll & Strong, 2011). Mentoring is also viewed as "the one to one support of novice or less experienced practitioner (mentee) by a more experienced practitioner (mentor), designed to assist the development of the mentee's expertise and to facilitate their induction into the culture of the profession" (Hobson, Ashby, Malderez & Tomlinson, 2008). Some scholars stress coaching as a key part of the mentoring function (Feistritzer, 2008). For beginning teachers who have met the requirements to be licensed via a non-traditional pathway, mentoring is seen as essential in strengthening the pedagogical knowledge and classroom management proficiencies of these teachers (Redding & Smith, 2016).

What Do Mentoring Arrangements Look Like?

Scholars have identified several necessary supports for beginning non-traditionally prepared teachers including adequate orientation, mentoring, formative assessment (Olebe, Jackson & Danielson, 1999, Redding & Smith, 2016), peer support and professional development (Feistritzer, 2008; Humphrey & Wechsler, 2007). However, literature on support services overall for beginning teachers, and specifically non-traditionally trained teachers, is cursory at best (Ovando & Casey,

2010). Further, processes to retain beginning non-traditionally prepared teachers often lack details (Humphrey & Wechsler, 2007; Redding & Smith, 2016). Mentoring is referenced as an integral part of educator success and longevity. In the foundational literature regarding options for strengthening and building the ranks of beginning, non-traditionally prepared teachers, scholars (Haberman, 1986; Berry, Darling-Hammond, Hirsch, Robinson, & Wise, 2006) suggest that mentoring is a key ingredient in supporting these novice educators. There is a wealth of literature on mentoring traditional teachers; however, the literature is far less comprehensive for mentoring and other support services such as coaching and peer support for new non-traditionally trained teachers. This section aims to share an overview of what mentoring looks like.

Smith and Ingersoll (2004) highlight the importance of induction programs and formal mentoring in helping the retention of new teachers. Specifically, the assignment of a mentor was the most significant and effective aspect of the induction experience. They note that effective mentoring strategies for beginning teachers included collaborative time for lesson planning and instructional guidance. Further, these authors advance that these mentoring activities contributed to decreases in the movement and attrition of novice teachers showing that there was less turnover in schools with teachers who participated in a required induction program. Schoon and Sandoval (2000) studied the Northwest Indiana Urban Teacher Education Program (UTEP) which provided a 19-month intensive in-service teacher education program to guide prospective urban middle and high school "limited license" (p. 423) teachers through alternative certification. The preparation included a mentoring component coupled with the training in pedagogical knowledge. These researchers stressed the importance of on-going support for teachers and the use of strong, effective mentor teachers to model and provide guidance to pre-service teachers. Findings from this study suggest that not only are programs of this type effective in training teachers for urban school districts they are key in developing strong potential future mentors for other non-traditional teacher candidates. Although urban schools can be challenging and stressful, have high needs, and are often hard to staff, Schoon and Sandoval found that high quality, in-service intensive alternative certification programs can be effective in preparing teachers for urban schools. The authors suggest that "small [programs that] ... maintain a strong and continuous university connection" (p. 421) can help to ready teachers for urban educational organizations. These researchers also posit that programs for non-traditional beginning urban teachers can be strengthened "by having district administrators identify exemplary urban teachers to be mentors" (p. 421) particularly those who would relate well and be comfortable with urban children. Schoon and Sandoval have suggested that since alternative certification programs attract large numbers of individuals from educationally underserved groups these prospective teachers may be prime candidates to transition into urban schools due to their potential to identify with, the "socioeconomic and ethnic" backgrounds of their students (p. 421).

Humphrey, Weschler, & Hough's (2005) examined seven cases in their assessment of effective characteristics of teacher education programs. As with numerous other scholars, Humphrey et al., concur that particular elements of mentoring are an essential part of alternative certification programs due to the emphasis on on-the-job training. The researchers highlight three mentoring arrangements including school administrator mentoring, program mentoring from university personnel or program staff, and in school mentoring provided by veteran teachers in the school. Humphrey et al. suggest that in school mentoring arrangements provide the most effective kind of experience for non-traditionally prepared teacher candidates. The new teachers in this study note that mentor

demonstrations of lessons, mentor mentee lesson planning, sharing of curricular resources, and opportunities for discussion of student needs and strengths, provided the most helpful aspects of the mentoring relationships (p. 14). The researchers noted, however, that mentoring quality varies from program to program and cite concerns that many program participants often feel a void in their professional development experiences with mentors. Humphrey et al., conclude that diverse mentoring experiences could be due to the variations in mentor preparation, training, compensation and the teaching loads of mentors. One program cited in the Humphrey and Wechsler (2007) study offered beginning teachers two mentors – one from the district and one from a university. Although this was seen as a plus it could also be a source of confusion if the mentors are not consistent with the information they share. Other mentor formats included full time mentors or volunteer mentors with varied levels of preparation and training for teacher mentors. Humphrey and Wechsler propose that mentoring can enhance on the job training and that without it teachers can be alienated and driven away from teaching. These researchers asserted that mentor accessibility is important and noted that mentor relationships should provide “emotional support,” help with ideas on instruction and curriculum and opportunities for information and resource sharing. What differs extensively is the quality of the mentoring relationship, the format of the mentoring arrangements, and opportunities for guidance by experienced mentors.

In a study conducted by Ovando and Casey (2010), three 1st year beginning non-traditional bilingual teachers hired by a high poverty school were interviewed with their mentors and principals. The researchers found that educational leaders and teacher mentors fulfilled major roles in the development of novice teachers as professionals. Ovando and Casey noted that while mentoring relationships with the instructional leaders was valuable in the early “survival” period of the new teachers’ careers, the data revealed that these novice teachers could receive greater benefits from the involvement of multiple mentors who might have more time than the principals could allocate. Study findings also suggest that new teachers who enter the profession through non-traditional pathways may require “more and differentiated pre-service and in-service training and supports that are focused on their assignment and the actual context in which they are teaching” (p. 164). Interestingly, beginning teachers sometimes perceive that they are a burden to veteran teachers and their colleagues (Hamel & Jaasko – Fisher, 2011; Sapien, Freedman & Aschheim, 2001). Thus, in the absence of formal mentoring arrangements both beginners and veterans can become cynical and reluctant to participate in these potentially valuable relationships.

Who Are the Protégés and What Are Their Needs?

Researchers have identified some specific characteristics that numerous non-traditionally trained teachers possess. They have often been considered older, mature individuals with the ability to apply a more seasoned perspective to their relationships with students and to the classroom environment (Chin & Young, 2007; Linek, Sampson, Haas, Sadler, Moore & Nylan, 2012). These individuals have also been shown to have other professional and real life experiences that they can apply to activities in the classroom (Chin & Young, 2007). Further, these non-traditionally prepared, teachers are often male (Kee, 2012) and more diverse than traditional beginning teachers (Humphrey & Wechsler, 2007). This characteristic can be a positive factor in schools that are seeking a greater balance in staff diversity and those that are looking for role models from varied backgrounds. Beginning non-traditionally prepared educators have generally completed majors in disciplines other than education and possess a knowledge of other subject matter content (Feistrizer,

2001). This has the possibility of enabling them to enrich curricular concepts with expanded knowledge on varied topics. While these characteristics have a strong upside these individuals may need more exposure to specific instruction and training in pedagogy, child and adolescent development and classroom management (Darling-Hammond & Sykes, 2003).

Characteristics and Needs of Minority Pre-service Teachers

It seems appropriate to review the literature on non-traditionally prepared and alternatively certified minority teachers in urban school communities especially since large numbers of non-traditionally prepared minority teachers ultimately teach in urban, high need, hard to staff schools (Darling-Hammond & Sykes, 2003; Madkins, 2011; Shen, 1998). Specific literature addressing mentoring programs and experiences of minority non-traditionally trained teachers and their mentors is sparse; however, a general overview of some of the literature available has been included.

Scholars suggest that teachers of color leave the profession at higher rates than White teachers (Achinstein, Ogawa & Sexton, 2010; Ingersoll & Connor, 2009). Further, these same scholars note that teachers of color experience a higher rate of job dissatisfaction than White educators. Based on this it seems prudent for the field of education take a hard look at ways to enrich the teaching experiences of these and all teachers early in their careers. In research by Villegas and Geist (2008) considering teaching routes of new minority teachers and new White teachers in the first three years these researchers found that new teachers of color entered teaching through alternative programs at a statistically higher rate than their White peers. Further, in the study by Villegas and Geist it was discovered that when teachers of color were compared to new White teachers approximately 30.0% of the new teachers of color had no exposure to practice teaching before becoming teachers of record, while 13.7% of new White teachers did (Villegas & Geist, 2008 in Achinstein, Ogawa & Sexton, 2010, p. 84). This suggests that alternative certification pathways serve as a conduit for providing greater access of teachers of color into teaching but that minority teachers may not have access to much needed supports such as practice teaching.

Scholars have concluded that teachers in urban communities have unique mentoring and support needs because of the distinct cultural demographics of urban communities and that new non-traditionally prepared teachers may have different needs from traditionally prepared teachers (Tillman, 2005). Tillman's study examined the mentoring experiences of a first year teacher beginning alternatively certified teacher and her interactions with her mentor and the principal. Her research found that urban principals should develop specific mentoring approaches focused on teacher competence to guide and retain new minority teachers because it supports teacher professional and personal effectiveness and is key to student advancement. Further Tillman determined that mentoring enhanced the "professional and personal competence" transmitted the "culture of the educational environment"; and was a "catalyst for transformative leadership" (p. 609).

Current scholarship shows that new non-traditionally prepared teachers have certain needs that should be addressed in induction and mentoring programs (Tillman, 2005). As such, non-traditionally trained teachers who anticipate working in urban schools will also require specific training to prepare them for the unique job of serving in urban educational environments (Darling-Hammond & Sykes, 2003). This training is necessary since many non-traditionally prepared educators end up teaching in urban, high need and hard to staff schools (Darling-Hammond & Sykes, 2003). From his study in Milwaukee Public Schools, Haberman (1999) concluded

that it is possible to identify qualified minority college graduates to train as teachers through alternative certification programs. Further, he suggested that minority, college graduates who reside in urban communities and who receive quality training with adequate supports, mentoring and on-site coaching are likely to be high performers and remain teaching in the same urban areas. Haberman noted that these non-traditionally prepared teachers had high retention rates because they generally remain as teachers in their communities for extended periods of time. In addition, the principals of these AC teachers rated “51% of them as satisfactory and 45 % as exemplary” suggesting that they are high achievers. Mentors identified for this program were teachers with sophisticated pedagogical skills in the school district and received a full time release to serve in the mentoring capacity. Each mentor in the program was assigned four mentees and was responsible for on-going visits to mentees and on-site coaching (p. 208). In Madkins’ (2011) article she noted that a number of African American individuals who pursued opportunities to become teachers in recent years where older and career changers (Feistritzer, 2005; Humphrey & Wexler, 2007). These teacher candidates have also expressed a desire to work with young people, to give back to their communities, and to follow their family traditions of becoming teachers (Chin & Young, 2007; Madkins, 2011).

It is clear that further research into the mentor and the non-traditionally prepared minority protégé relationship in an urban setting is needed with a focus on bi-directional learning and growth. While mentors serve to provide wisdom and experience to mentees, programs should not dismiss the cultural wisdom and knowledge that minority protégés can provide to mentors. Madkins (2011) in her article addresses that Black teachers not only serve as role models for Black students but, they also help to inform non-Black educators regarding the diverse backgrounds of Black students and the community and approaches for communicating and supporting these students and their parents.

Who Are the Mentors and What Are Their Needs?

Teacher mentors have been known to be teachers, principals or university faculties who have multiple years of teaching experience (Humphrey, Weschler & Hough, 2005; Mullen, 2005). Most often mentoring assignments are given to veteran teachers (Tillman, 2005) who are established in the profession and who can provide a complete overview of the teaching experiences for new and or non-traditionally prepared teachers (Humphrey & Weschler, 2007). Occasionally retired educators have served in the role of mentor for teachers and can leverage their years of experience toward sharing recommended approaches and best practices with beginning or non-traditionally prepared teachers.

Whatever the characteristics of mentors are there is a wealth of literature (Darling-Hammond & Sykes, 2003; Feistritzer, 2008; Saphier, Freedman & Aschheim, 2001) that supports the need for professional development and training of mentors. These characteristics, experiences, and skills are necessary to adequately prepare mentors for their roles and to help them understand the expectations on them as they carry out their responsibilities as mentors. Since mentors give of their time and resources to guide and support non-traditionally prepared teacher candidates, researchers advocate for stipends or bonuses in order to compensate these educators for their contributions (Saphier et al., 2001).

Concerns have been raised that some mentors who are randomly selected to serve in mentoring roles often lack the passion for the mentoring. Poor mentoring matches can hinder new or non-traditionally prepared teachers from understanding the full essence of the field of teaching. Further, these informal mentoring

arrangements often cause protégés to miss out on potentially important guidance and support from their mentors.

The New Teacher Center is an example of a program that presents mentorship as a key component to the induction process for new teachers. The programming also provides essential characteristics for effective mentoring, that include: (1) a rigorous process for selecting mentors as well as ongoing mentor support; (2) dedicated time (1.5-2.5) each week to mentor-protégé interaction; and (3) sustainability and consistency- maintaining mentor-protégé partnerships for at least two years (New Teacher Center 2016). This approach provides many key elements that can contribute to the success of beginning non-traditional teachers.

Feistritzer (2008) suggests that mentors of non-traditionally prepared teachers need to be able to work well and collaborate with their peers and communicate teaching techniques clearly and thoroughly (p.42). Saphier et al. (2001) note that mentors not only need adequate training and professional development but they also require time to reflect and prepare for their roles (such as release time from course loads) and time to collaborate and share ideas and challenges with other mentors.

What Are the Benefits Of Mentoring?

Sapier, Freedman, Aschheim's (2001) research cites the personal advantages reported by mentors regarding mentoring relationships. The mentors identified in their article report they have become better teachers and have obtained ideas for improved practice from their protégées (Sapier et al., 2001). This suggests that the mentoring experience can be a win-win experience for all participants. Bradbury and Koballa (2007) also note that the mentor and protégée relationship can prove to be motivating and encouraging for both mentors and mentees by providing an avenue for them to collaborate and consider information from their discipline. Their article focuses on mentoring experiences and relationships in an alternative certification program specifically for science teachers. As with the wealth of literature on mentoring, Bradbury and Koballa agree that mentoring is a key experience for non-traditionally prepared teachers. Through their research they found that guidance (advice) and support from mentors centered more on "general pedagogical knowledge" (p. 817) or "the how to of teaching" (p.820) and less on content specific knowledge. Further, they note that the mentoring experiences and models would be enhanced if greater communication occurred between teacher education programs and school mentors (training), if benchmarks are identified from which to pattern mentoring arrangements (parameters and effective models) and if the induction processes and mentoring relationships are set up to span across multiple years (multiyear induction). Additional findings on mentoring include the tremendous impact mentoring had on beginning teachers learning, the opportunities that mentoring provided for sharing of ideas between mentors and mentees and the opportunities for teachers to engage in teaching as a reflective practice. Other scholars (Andrews, Gilbert & Martin, 2006) have noted that the relationships can prove to be motivating and encouraging for both mentors and mentees by providing an avenue for them to collaborate and consider cutting edge information from their discipline.

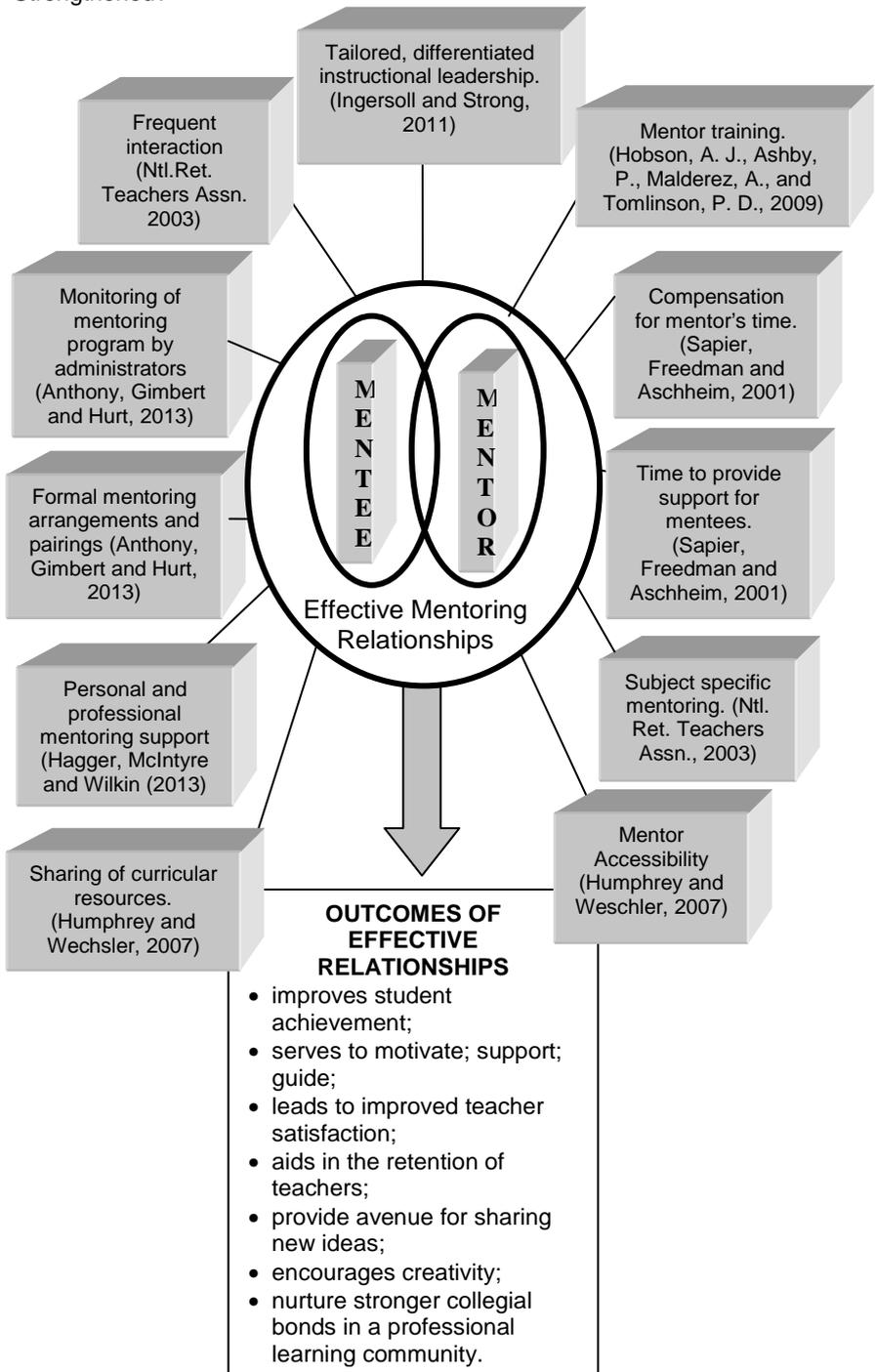
Feistritzer (2008) has emphasized the importance of mentoring through coaching and support and notes that mentoring serves as a "bridge" in helping teachers grow and learn as they develop as teachers (p. 36). Mentoring helps to improve teacher quality ...student achievement...and recruitment and retention of teachers" (Ibid). Mentors of new teachers provide guidance and support and help with pedagogical problem solving and decision-making. Further, Feistritzer cites

challenges that occurred in California when the state confronted major problems retaining teachers due to the dramatic demographic growth including increases in the multicultural populations and increases in classroom sizes. During this time period schools in the urban and rural areas of the state had high levels of turnover with new teaching personnel especially among minorities. The legislature provided funding and proposed a new induction initiative that emphasized mentoring and provided the support necessary to help sustain the program. Feistritzer concludes that when resources and coordinated efforts are made to support teacher mentoring arrangements that the effects can be beneficial not only for new, non-traditionally prepared teachers but also for veteran teachers. The author notes that the mentoring experience can be transformational for all parties as it helps to support new teachers and re-energize veteran educators.

What Are the Challenges Of Mentoring?

Darling-Hammond and Sykes (2003) describe multiple challenges in preparing teachers through non-traditional pathways and express concern about the inadequate quality of mentoring and supervision experienced by many alternatively certified teachers. These researchers note state arrangements and requirements for traditional and alternative certification vary substantially. They suggest that non-traditional preparation programs need to have a substantial educational preparation component and extensive “clinical guidance” or mentoring to prepare the non-traditionally trained teachers to teach. Importantly, Darling-Hammond and Sykes emphasize that specific content related training must be identified and provided for training non-traditionally prepared teachers. Steadman and Simmons (2007) have advised that our effort to address the critical teacher shortage by inducting non-traditionally prepared teachers into schools under the guidance of mentor teachers have caused mentoring relationships to become burdensome for mentor teachers. Citing statistics that illustrate the low retention rates of non-traditionally trained teachers in New York, these researchers have questioned if the teacher mentor burden is worth the extra work. They have remarked that many school districts are ill-equipped in assisting experienced teachers with support and resources necessary to carry out the mentoring roles and responsibilities. Further, these responsibilities are being placed on the already heavy workload of the veteran teachers and have the possibility of taking its toll on mentor teachers. Finally, these researchers advocate for a greater assessment of benefits and costs of teacher mentor-mentee relationships to discern if these arrangements are having an impact and if the benefits outweigh the costs. Recognizing that mentoring can involve time and resources school districts across the country have developed arrangements that can serve to motivate and provide incentives to teacher mentors. These arrangements include planning time for the mentor and mentee, leave time for mentoring and/or extra compensation. These strategies are seen as a way to show appreciation to mentors who give their time, reduce the burdens on veteran teachers, and to help elevate the importance of the mentoring function. The following figure (see Figure 1) provides scholarly references for mentoring arrangements and select references that illustrate the bi-directional relationship between the mentors and mentees.

Figure 1. How Can Mentor Relationships Between New Teachers and Mentors Be Strengthened?



How Can Mentoring Be Fortified?

There are numerous recommendations from practitioners and scholars alike that provide ideas for strengthening mentoring relationships. Beginning teachers who were matched by grade level, who received assistance with the supports investigated, and who met with mentors at least once monthly for the specified activities were more likely to commit to remaining in the profession than their peers who had received less support. This suggests that purposeful mentoring programming has the potential to help with attrition. Support for frequency in mentor mentee interaction has been suggested as an approach for strengthening mentoring relationships. These suggestions have been integrated into the framework shown in Figure 1 that illustrates the ways in which mentoring relationships can be strengthened. Figure 1 also shows what the outcomes of these successful relationships can be.

Parker, Ndoye and Imig (2009) inquired into the mentoring experiences of almost 9000 beginning teachers in North Carolina and reported that the novice teacher respondents who received intentional mentor matching with grade level colleagues, regular monthly interactions with mentors and specific supports served to sustain them as educators. Researchers for the American Association of Retired Persons, National Retired Teachers Association (2003) have found that the majority of current and former teachers “agree that formal mentoring, support and training would be beneficial for new teachers” (p. v). In their study that compared the experiences of 50 current teachers and 50 former teachers in K-12 education teachers from both groups indicated that the following mentoring conditions would facilitate an ideal support system for individuals new to the profession:

“Routine daily interaction with mentors or other new teachers....A formal mentoring and support team, consisting of veteran teachers as well as colleagues who are new teachers....Mentors that really want to help rather than those who are forced to do itMentoring that is non-judgmental, constructive and compassionate....Being paired with a mentor in a specific subject area” (p. v).

Recommendations were provided by the comparison group of teachers and emphasized the importance of mentoring in order to support teacher retention. Some of the recommendations included suggestions that the following resources be provided for beginning non-traditionally prepared teachers:

- Access to technological support systems through the development of on-line communities.
- A mentoring support and networking system established for new teachers.
- Access to an “on-line forum” for new and seasoned educators to share ideas, provide support and help problem solve with one another.
- Access to and development of on-line shared storage capability in order for educators to share information related to pedagogy and resources for teaching.

Chin and Young's (2007) article focuses on literature from ecological perspectives and human development and considers the socio-cultural backgrounds and environments of teachers to develop a typology of teacher characteristics and characteristics of successful non-traditionally prepared teachers. The researchers have observed that programs must train teachers to function effectively in varied situations and circumstances. Further, Chin and Young note that as attention is paid to the experiences of non-traditionally trained teachers, programs can better determine which teaching conditions foster higher retention of non-traditionally

prepared teachers and mentoring in alternative education program structures. They suggest that in order to retain teachers of color, approaches must be coupled with adequate supports sensitive to the particular needs of teachers of color, including mentoring in alternative education program structures. Hagger, McIntyre and Wilkin (2013) observed that mentoring beginning teachers serves to enhance professional and personal development for both new teachers and the mentors that guide them. Further, it has been suggested that mentoring experiences have helped mentors develop new ideas and new perspectives (Hobson, Ashby, Malderez, & Tomlinson, 2009, p. 209). While mentoring experiences are crucial for the successful trajectory of new teachers, mentoring arrangements can benefit both mentors and mentees.

How Can School Leaders Support Mentoring?

In their study of alternatively certified bilingual teachers, Ovando and Casey (2010) described novice teachers as more likely to be hired by high poverty, chronically low performing urban schools with different personal and professional capacity needs from that of their traditionally prepared peers. These new teachers required “both structural and professional support” (p. 148) that may also be unique to individual new teachers, and identified the principal as the provider of “instructional guidance for these teachers, particularly during their first year of teaching” (p.128). Further, Ovando and Casey claimed that “alternatively certified teachers may be more effective, more satisfied, and more likely to stay in a school where instructional leadership sustains a school-wide professional culture of collaboration and collegial interaction” (p.148). Similarly, almost a quarter of a century ago, Billingsley and Cross (1992) reported that teachers who experienced higher levels of principal support were less stressed and more committed to staying in their current school of hire. Gimbert and Fultz’s (2008, 2009) literature review suggests that school leaders can influence novice teachers’ experiences through 1) holding an positive perception of novice teachers to foster their self-efficacy and sense of accomplishment, 2) cultivating a positive relationship with their teaching staff and providing teachers feedback, recognition, and praise, 3) explaining their expectations of the novice teacher’s role and responsibilities, and 4) providing teachers with mentoring services and instructional resources to be successful in their classrooms. Ingersoll and May (2010) suggested that principals indirectly affect teacher retention by ensuring that teachers have individual classroom autonomy, useful and content focused professional development, useful professional development concerning discipline and classroom management, and help keep student discipline problems to a minimum. Kardos, Johnson, Peske, Kauffman and Liu (2001) stated that school leaders can actively engage in efforts to improve instruction and organize collaboration among teachers.

What Functions do Individuals Carry Out to Support Novice Teachers? How Do Teacher Support Functions Performed by Principals Compare With Those of Non-principals?

Anthony, Gimbert and Hurt (2013) were interested in knowing what functions individuals carry out to support novice teachers (seeking certification via non-traditional preparation pathways), and, to what extent school leaders are interested in receiving additional professional development on supporting novice teachers. Specifically, these researchers examined how the distribution of teacher support functions performed by principals compared with those of non-principals. Within three targeted areas of socialization, pedagogical support, and teacher induction administration and management, alternatively prepared novice teachers and school leaders were surveyed to indicate whether 22 teacher support functions

were performed by principals, assistant principals, teacher liaisons (e.g., mentor teachers, master teachers, new teacher superiors, peer assistance teachers), other building leaders, instructional coaches, curriculum coordinators, and/or subject area department chairs. It was found that functions associated with novice teacher support are distributed across three groups: principals, teacher liaisons, and others including assistant principals, instructional coaches, curriculum coordinators, department chairs, and other district staff.

With regards to novice teacher socialization, for example, the following functions were more likely to be performed by a principal: (1) arranges time for new and experienced teachers to have shared planning time or to work in professional learning communities; (2) helps minimize and addresses student discipline problems; and, (3) provides feedback on lesson plans. Assistant principals, instructional coaches or curriculum coordinators were more likely to (1) plan or lead orientation or professional development workshop related to school and district policies, and (2) promote collaboration and sharing of professional knowledge. Teacher liaisons were more likely to provide new teachers with emotional support to cope with new responsibilities.

In relation to support for novice teachers' pedagogical practices, principals, assistant principals, instructional coaches and/or curriculum coordinators were more likely to provide feedback and support on classroom management, teaching practices and lesson plans. Assisting beginning teachers with gathering and reflecting on evidence of student learning is facilitated by teacher liaisons.

Around matters related to teacher induction, administration and management, principals were perceived to conduct teacher evaluations and pair new and mentor teachers. Assistant principals, instructional coaches and/or curriculum coordinators were more likely to ensure that an alternatively certified teacher has passed their certification exams; (2) learn about state and/or district teacher induction programs and expectations, and (3) may recommend changes to school and/or district teacher induction policies and practices. On the other hand, teacher liaisons appeared to have very little responsibility for administering induction functions.

How Do School Leaders' Interests in Professional Development to Support Novice Teachers Compare With Novice Teachers' Perception That Such Professional Development Is Needed?

New teachers are continually entering the teaching profession, while at the same time schools are expected to address new expectations such as implementing the Common Core Standards, teaching across face-to-face and virtual environments, and helping students develop 21st century competencies such as critical thinking, collaboration, creativity, and technological literacy. Therefore, it is important that school leaders (principals and non-principals, alike) are knowledgeable about how to support new teachers in order to improve teaching quality in ways that are aligned with efforts to meeting expectations of school effectiveness. In a study examining rural high school principals' professional development, Salazar (2007) found that high on the list was the need for additional learning about fostering team commitment, communicating effectively, facilitating change processes, and facilitating the professional development of others – all of which are organizational conditions associated with beginning teacher support, which school leaders can work to influence.

Within the existing scholarship, school leaders are strongly encouraged to move beyond delivering the same instructional leadership encounter for all new teachers to tailoring an individual induction experience (Ingersoll & Merrill, 2011;

Ingersoll & Strong, 2011). Typically, school leaders at the building level are responsible for all novice teachers' professional development. What seems to be needed to accelerate new teacher development is an individual growth plan of contextually-appropriate and content-specific support for *each* novice teacher, rather than *all* novice teachers. In response, Anthony, Gimbert and Hurt (2013) surveyed school leaders' interests in additional professional development on supporting novice teachers, and compared this with novice teachers' perception that such professional development is needed. Specifically, after reporting their overall level of interest or agreement, both groups were asked to indicate their level of interest (leaders) or agreement (novice teachers) that specific professional development topics would be of interest or helpful for improving novice teacher support.

In addition, Anthony et al. report that school leaders and novice alternatively prepared teachers, on average, agreed that additional professional development focused on supporting novice teachers will help improve their school district's teacher induction program. However, there were differences noted in the ranking of preferences for foci of professional development. Whereas school leaders ranked 'developing students' problem solving skills' as the most preferred professional development topic for novice teachers, 'creating a school culture and structure that support new teacher induction' was the novice teachers' most highly ranked choice for school leaders. In support of prior studies' findings (Ovando & Casey, 2010; New Teacher Center Report, 2016), alternatively prepared teachers desired their school leaders' develop skills and knowledge in order to influence workplace decisions in ways that contribute to improved school conditions for novice teachers' success. Perhaps, not surprisingly, given the common perception of the principal as the champion of teaching and learning conditions, the most closely aligned preferred professional development topic for both school leaders and novice teachers was 'models and best practices to accelerate new teacher development.' While novice teachers believe school leaders to have sophisticated skills around 'student data and performance-based assessments in the classroom,' they espoused that their leaders needed a better handle on how to support them with regards to E-Learning and other technologies.'

Three recommendations are offered on how principals, in particular, can better work with a range of teachers to support novice, specifically non-traditionally prepared, teachers.

1. Establish structures for teacher interaction and collaboration (team meetings; proximity of classrooms and shared spaces; departmental or vertical meetings; Professional learning communities, virtual spaces like blogs, wikis, and Google drive)
2. Foster communication about district/state-developed induction programs, training days, etc. Identify gaps between what is covered vs. what is not covered.
3. Value teacher leaders as potential informants of challenges novice teachers encounter, how those challenges are identified, and how teacher leaders address those challenges.

Comprehensive professional development on novice teacher support should be designed not only for principals and mentor teachers, but it should also address the learning needs of assistant principals, instructional coaches, curriculum coordinators, department chairs, and other school and district staff who support novice teachers (Anthony, Gimbert & Hurt, 2013). Previous research has emphasized the role of the mentor teacher or principal in supporting beginning teachers, without recognizing seasoned teachers in leadership roles beyond mentoring. However, there is indication that leadership in schools is increasingly

being distributed (Leithwood, Mascall, & Strauss, 2009; Moller & Katzenmeyer, 1996). Also, in many schools, other support personnel such as instructional coaches, curriculum coordinators, and professional development specialists may serve a role in supporting new teachers. Further research is needed that explores how school leaders learn from settings where non-traditionally prepared novice teachers are well-supported, and how targeted talent management opportunities can be designed.

Conclusion

Teacher attrition in the early years (between 2 – 5 years) is a major national concern as it can affect the sustainability of teaching staffs, can cause districts to lose money and investments in teacher training, and can impact student advancement (Redding & Smith, 2016; Linek et al., 2012). This suggests that renewed strategies need to be considered to strengthen teacher quality, bolster teacher satisfaction and experiences and address some of the concerns that new teachers have. Mentoring has been heralded as an essential piece of the puzzle. The type of mentoring and induction experiences are are key for new non-traditionally prepared teachers (Consuegra, Engels, & Struyven, 2014) and a “mosaic of mentoring” (Mullen, 2005, p. 85) provides beginning teachers with varied choices of mentors and resources. Current literature regarding non-traditionally prepared teachers is consistent with these notions and underscores the fact that mentoring is an effective means for strengthening the ranks of teachers and for retaining new educators. It is apparent that both beginning traditional teachers and beginning non-traditionally trained teachers are enriched and thrive from quality mentoring programs (Ingersoll & Strong, 2011; Ingersoll & Smith; Redding & Smith, 2016). It is clear that educational leaders are essential participants in mentoring and guiding new traditionally and non-traditionally prepared teachers (Tillman, 2005) and that veteran teachers in schools can help to sustain successful experiences for novice non-traditionally prepared educators. Further, strong teams of mentors made up of school leaders and veteran teachers might provide key support that can help to sustain beginning non-traditional teachers. When non-traditionally trained teachers are adequately prepared with substantive mentoring programs that help to support and guide them it helps to contribute to their teaching effectiveness, their success, and retention in the schools (Darling-Hammond & Sykes, 2003; Linek et al., 2012). The literature suggests that non-traditionally prepared teachers have specific needs that should be addressed in the context of mentoring and induction (Humphrey & Wechsler, 2007). Approaches that integrate the reported maturity, broad perspectives on work and/or teaching, and problem solving abilities of many non-traditionally prepared candidates should be considered when developing mentoring strategies (Humphrey & Wechsler, 2007). Appropriate nurturing of these and the other skills that non-traditionally prepared teachers bring to the profession coupled with adequate training in pedagogical content knowledge can help to yield a strong and committed workforce (Darling-Hammond & Sykes, 2003).

Many researchers have espoused the need for systematic training for mentors (Hopson et al. 2009; Sapier, Freedman & Aschheim, 2001) and funding for mentor compensation and mentor time release (Saphier et al., 2001). These enhancements to the experiences for mentors can provide a more substantive approach to mentoring combined with more long-term programming for beginning non-traditionally prepared teachers (Darling-Hammond & Sykes, 2003; Miller, McKenna & McKenna, 1998). Although there is still much to be studied and shared regarding the needs, experiences and responses of non-traditionally prepared teachers, scholars are beginning to recognize the benefits of adequately preparing these individuals (Grossman & Loeb, 2008; Hopson et al. 2009). It is also apparent

that with adequate and extended training, non-traditionally prepared teachers can be as effective as their traditional counterparts as illustrated by Decker, Mayer, & Glazerman (2004) when examining beginning teachers from Teach for America. These authors found that the novice non-traditionally TFA prepared teachers were more effective as teachers in math when compared to the traditionally prepared teachers. Further, the research data showed that the TFA teachers appeared to be as effective in reading when compared to traditionally prepared teachers.

Beginning non-traditionally prepared teachers may hold the answer to helping to alleviate impending shortages in the teaching profession and the staffing urgency for educators in high need hard to staff school. While there is room in the literature, however, to expand the research on strategies to address the needs and preparation of all non-traditionally trained teachers, specific approaches for successfully mentoring and guiding of minority teachers who often end up teaching in high need, hard to staff and urban communities warrants further research.

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IMPACT OF PERCEPTIONS AND EXPERIENCES ON PRE-SERVICE TEACHERS' LEVELS OF SELF-EFFICACY TO HANDLE SCHOOL VIOLENCE

by

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Abstract

With the October 2016, shooting at the elementary school, in South Carolina, school violence has once again made the news. For the past twenty years, researchers have been working on understanding the impetus of and the reaction to this horrific trend. This study explores the impact of experiences and perceptions of pre-service teachers with school violence. The results indicate that personal experience tends to influence a pre-service teacher's ideas of preparation for an incident. Even with personal experience of school violence, an accurate perception of how to handle an incident might be improved upon with teacher preparation programs including training related to school violence from the educator's perspective.

Introduction

School violence awareness is peaking due to the large number of victims in recent school shootings (Ricketts, 2010; Violence Policy Center, n.d.). This is due in part to the amount of media attention that the recent school shootings are receiving. Recently, Wednesday September 28th, another school shooting took place at Townville Elementary School in Townville, South Carolina. This incident contributes to the belief that schools are unsafe. Social media, along with the media, is perpetuating a belief that schools have become a violent place to work and study. For the past twenty years, researchers have been studying acts of violence in schools because it was believed that acts of violence in schools had reached epidemic proportions (Price & Everett, 1997). This perception is inaccurate. While there has been an increase of high-profile shootings in schools; which leads most people to generalize that schools are unsafe (USSS, 2000). Statistics indicate that there has actually been a decrease in rates of school violence since 1993 and school-related homicides are a rare event (Ricketts, 2010; USSS, 2000). Schools have responded to safety concerns by implementing new safety precautions, procedures, and professional development trainings. Most recently, Superintendent Joanne Avery, of Anderson school district 4, stated after the shooting on September 28th, that there were few injuries in this violent incident due to the security measures that were in place (www.anderson4.org, retrieved Sept. 30th). She went on to articulate to the public that in the past six years the school had implemented upgrades including locked entryways, buzz-in systems in addition to camera systems and school resource officers. Also, she stated that the quick action by staff and teachers that allowed for the safety of the students demonstrated the effectiveness of the active shooter training they receive (www.anderson4.org, retrieved Sept. 30th). Even with school violence incidents decreasing statistically and safety measures increasing, there continues to be a concern that schools are not safe for children or those who work there. This fear may be influencing individuals who would otherwise choose the teaching profession to select other careers due to a concern for their safety. According to Williams and Corvo (2005), pre-service teachers were more fearful of school violence events than in-service teachers. These pre-service teachers were more afraid for their personal safety and failure in a crisis situation (Williams & Corvo, 2005).

The following research study explores the impact of pre-service teachers' experiences and perceptions of school violence on their levels of self-efficacy in handling school violence as a teacher. The following two research questions are focused on in this mixed-methods study:

- 1.) What perceptions of school violence do pre-service teachers have of their high school experience?
- 2.) To what extent do perceptions and experiences with school violence impact pre-service teachers' levels of confidence to handle school violence?

Literature Review

Often there are many variables at play when school violence occurs, but one commonality is that almost all of the violent perpetrators have reached out for help prior to the incident, but never received the support/help they needed (United States Secret Service and Department of Education, 2002). According to Kingery, Coggeshall, and Alford (1998), children's behaviors, including violent tendencies, are usually hidden from the adults in their lives. The risk factors for the participants involved in school violence included: involvement in crime, violence, and victimization, which were more influential, than parental relationships or self-esteem (Kingery, Coggeshall, & Alford, 1998). More often than not, there was not one single cause triggering the risk for the individual's violent behavior, rather, it was a combination of individual, relational, situational, and environmental influences that increases the likelihood of violent behavior (Ricketts, 2010). Other risk factors that were moderately important included: selling drugs, disposable income, feeling distant from people at school, and feeling that people in their community do not look out for each other (Kingery, Coggeshall, & Alford, 1998). In an effort to respond to the violent behaviors, school districts have taken proactive measures to increase physical school safety.

Schools across the country have responded to school violence in their schools by implementing more physical school safety measures, including metal detectors (Ricketts, 2010). Ninety-three percent of schools control access inside the schools, 75 percent use security cameras, 68 percent use badges, and 58 percent enforce a strict dress code (U. S. Department of Education, 2015). In addition, schools provide training on safety procedures to teachers and staff, bullying policies, positive behavioral interventions and warning signs. Ricketts (2010) reported that there is little evidence that any single strategy to prevent school violence is successful. Proactive strategies do consistently reduce violence in the school setting; these involve families, students, and the community (Ricketts, 2010). According to Blossnich and Bossarte (2011), students prefer the teacher's presence as an inhibitor of acting out violently. As more research is completed, schools should continue to experiment to find the most appropriate policy and method of response for a solution (Ricketts, 2010).

According to Nims and Wilson (1998), violence prevention strategies fall into multiple areas. An approach that is holistic, including individual knowledge, attitudes, and behavior in conjunction with school and community environments is necessary (Nims & Wilson, 1998). In addition, according to the Secret Service, fostering a culture of respect is critical for creating a safe environment (USSS, 2000). Additional characteristics of a safe environment include positive role models, open discussion regarding diversity, and conflict being managed (USSS, 2000).

Influence of Teacher Self Efficacy

Self-efficacy is the belief one holds about his abilities to successfully accomplish a task. Perceptions about one's abilities form positive or negative self-efficacy through a cause-effect relationship (Bandura, 1997). There are several

different means for creating these perceptions. First, the person may have previously experienced success or failure at the task. Second, the person may have observed others having success or failing at the task. Third, the person may make social comparisons against his peers. Finally, the verbal and nonverbal messages related to persuasion also impact one's self-efficacy (Author, 2016; Pajares, 2003). Anxiety, locus of control and cognitive processing of information all have an impact on self-efficacy (Bandura, 1977).

Teacher self-efficacy is the confidence that one has about their ability to influence a student (Klassen, Tze, Betts, Gordon, 2011). Those who feel they are capable and are more willing to attempt new tasks tend to have strong levels of self-efficacy (Bandura, 1977). Positive self-belief develops as one increases their abilities to complete a task. This is achieved when one attempts a behavior, receives feedback, and modifies a behavior. If one's performance improves than one's self-belief will increase, likewise, self-belief decreases if one continues to experience failure (Bandura, 1977).

Teachers are at a greater risk of low self-efficacy levels if they struggle to implement strong classroom management strategies to handle student behavior (Klassen et al., 2011; Pas, Bradshaw, Hershfeldt, & Leaf, 2010). Pre-service and first year teachers tend to have lower levels of teacher self-efficacy as they have the least amount of experience in dealing with student behaviors and implementing effective classroom management strategies (Craig, Bell, Leschied, 2011; Klassen et al., 2011).

Role of Teacher Preparation Programs

Although there seems to be a dearth of research about teachers' preparedness in the moment of a school violence incident, some research was completed about twenty years ago. An atmosphere of fear creates a difficult, if not impossible, environment to teach and learn (Nims & Wilson, 1998). Teachers play a valuable role in creating a safe environment for students (Craig et al., 2011; Price & Everett, 1997), not to mention have a responsibility to create a safe environment since students are obligated to be there (Kingery, Coggeshall, & Alford, 1998). According to Price and Everett (1997), teachers' impressions can influence the safety of their students.

Higher education institutions have a role to play in preparing educational professionals to address the violence in the school setting (Nims & Wilson, 1998). According to Nims and Wilson (1998), very few higher education institutions offer a specific violence prevention course and less than half of their survey participants indicated the topic is addressed in any other components of curriculum. Williams and Corvo (2005) found that in-service teachers responded to school violence with an awareness about their students, while pre-service teachers were focused on themselves. While higher education institutions are preparing pre-service teachers, the lack of "ownership" of students might be an area of consideration in outlook about school violence (Williams & Corvo, 2005). Pre-service teachers do not feel well prepared to address issues surrounding school violence when they enter the field (Kandakai & King, 2002)

Methods

Participants were junior and senior undergraduate pre-service teachers attending a four- year university located on the southwest border of the United States and who were enrolled in a course focused on teaching diverse student populations. The majority of the students who attend the university are first generation bilingual students. This course is the last pre-education course students are required to take prior to formal admission to the College of Education. The students are required to

participate in field based assignments which are linked to the course syllabus, and assignments. The course syllabus and instructor was the same for all participants. Data was collected over several semesters.

Survey Instruments

Participants completed an online survey designed by the researchers. This instrument consisted of 12 demographic questions which participants self-reported data. Additionally, there were 17 Likert-scale quantitative questions and 4 open ended qualitative questions related to their perceptions and experiences with school violence. The 5 point Likert-scale followed two formats: 1 *Strongly Agree*, 2 *Somewhat Agree*, 3 *Agree*, 4 *Somewhat Disagree*, and 5 *Strongly Disagree*; 1 *Continuously*, 2 *Frequently*, 3 *Sometimes*, 4 *Once in a While*, or 5 *Never*.

Results

104 participants completed the survey instrument. The demographic data showed that 87 (83.65%) of the participants were female, and 17 (16.35%) were male. 81 (77.88%) participants were between the ages of 18-25, 17 (16.35%) were between the ages of 26-33, 4 (3.85%) were between the ages of 34-40, 2 (1.192%) were between 41- 46(1.92%). None of the participants were 47 and older.

17 (16.83%) participants reported they experienced school violence in elementary school, while 48 (47.06%) participants experienced school violence in middle school and 52 (50.98%) experienced school violence in high school. This data suggests that the majority of the school violence experiences occurred during the middle and high school years.

Data indicates the extent to which pre-service teachers felt that their school was serious about making the students feel safe. 43 (43.57%) felt the school *continuously* worked to make the students feel safe, 24 (23%) felt the school *frequently* worked to make the students feel safe, while 33 (31.736%) reported *sometimes* and 4 (3.96%) reported *once in a while*.

The participants rated the types of school safety procedures that their high school implemented to keep their schools safe. The highest rated measures used in schools (*Strongly Agree*, *Somewhat Agree* and *Agree*) identified by the students included; security guards or assigned police officers (95.2%), other school staff or adults supervising the hallways (91.35%), a requirement that visitors sign in (97.11%), one or more security cameras (92.3%), and a code of student conduct (98.07%). The lowest rated measures (*Somewhat Disagree*, *Strongly Disagree*) identified by the students included; wands (29%), metal detectors (50%), locked entranced or exit doors (67%), and locker checks (49%) (see Table 1).

Table 1. Did your school use any of the following measures to make sure students were safe?

	Strongly Agree	Somewhat Agree	Agree	Somewhat Disagree	Strongly Disagree
Security Guards or Assigned Police Officers	56 (54%)	19 (18%)	24 (23%)	1 (1%)	3 (3%)
Other School Staff or adults supervising hallways	49 (47%)	20 (19%)	26 (25%)	9 (9%)	0 (0%)
Metal Detectors	21 (20%)	7 (7%)	25 (24%)	16 (16%)	35 (35%)
Wands	7 (6%)	11 (11%)	14 (13%)	29 (30%)	40 (41%)

Locked Entrance or exit doors during the day	39 (38%)	14 (13%)	17 (16%)	17 (17%)	14 (14%)
Visitor Sign In	66 (63%)	13 (13%)	22 (21%)	2 (2%)	1 (1%)
Locker Checks	19 (19%)	14 (14%)	19 (19%)	19 (19%)	32 (32%)
One or more security cameras	57 (55%)	14 (13%)	25 (24%)	4 (4%)	4 (4%)
A Code of Student Conduct	70(67%)	13 (13%)	19 (18%)	1 (1%)	1 (1%)

When participants were asked if there was a means to report a threat to school or student safety without providing your name, 69 participants (66.355%) reported no. The 33.65% that reported yes identified Crime Stoppers as the means to report anonymous tips. Crime Stoppers is a national organization that creates local networks of support to schools to help prevent and solve crimes.

Participants responded to statements focused on physical school violence (see Table 2). The sample size for this question was 101 as 3 participants skipped this question. The data indicates that the majority of the participants *strongly disagree* that they did not bring a gun (95%), knife (96%) or other weapon onto school grounds (97%). Only 3% of the participants *strongly agreed*, *somewhat agreed*, or *agreed* that they brought a gun to school grounds. 2% of the participants *strongly agreed*, *somewhat agreed*, or *agreed* that they brought a knife or some other weapon to school grounds. When asked if they knew of someone else who brought a gun, knife or other weapon onto school grounds the data indicates higher percentages of *strongly agreed*, *somewhat agreed*, and *agreed*. 10% *strongly agreed*, *somewhat agreed*, or *agreed* that they knew of someone who brought a gun to school, 21% *strongly agreed*, *somewhat agreed*, and *agreed* that they knew of someone who brought a knife to school, and 12% of some other weapon to school (see Table 2). 46% of the participants *strongly agree*, *somewhat agree*, and *agreed* that they knew someone who was in a gang, 15% reported *strongly agreed*, *somewhat agreed*, and *agreed* being approached by gangs, but only 4% reported being in a gang themselves.

Table 2. During your K12 school experiences in the United States

	Strongly Agree	Somewhat Agree	Agree	Somewhat Disagree	Strongly Disagree
Were you in one or more physical fights?	3 (3%)	2 (2%)	10 (10%)	8 (8%)	78 (77%)
You saw hate-related words or symbols in offices of school personnel?	10 (10%)	7 (7%)	11 (11%)	7 (7%)	66 (65%)
You brought a gun onto school grounds?	0 (0%)	0(0%)	3 (3%)	2 (2%)	95 (95%)
You knew another student who brought a gun onto school grounds.	4 (4%)	3 (3%)	3 (3%)	4 (4%)	87 (86%)
You brought a knife onto school grounds.	0 (0%)	0 (0%)	2 (0%)	2 (2%)	96 (96%)

You knew another student who brought a knife onto school grounds	7 (7%)	5 (5%)	9 (9%)	1 (1%)	79 (78%)
You brought some other weapon onto school grounds.	0 (0%)	0 (0%)	2 (2%)	2 (2%)	97 (96%)
You knew someone who brought some other weapon onto school grounds.	4 (4%)	2 (2%)	6 (6%)	7 (7%)	82 (81%)
You were involved in a gang.	0 (0%)	0(0%)	4 (4%)	1 (1%)	96 (95%)
You were approached by gangs	3 (3%)	1 (1%)	11 (11%)	10 (10%)	75 (75%)
You knew another student who was in a gang.	18 (18%)	7 (7%)	21 (21%)	5 (5%)	49 (49%)
You reported an act of school violence.	1 (1 %)	5 (5%)	12 (12%)	6 (6%)	74 (76%)
You knew about an act of school violence but did not report it.	6 (6%)	10 (10%)	7 (7%)	9 (9%)	68 (68%)

18% of the participants *strongly agree*, *somewhat agree*, and *agreed* that they reported an act of school violence, while 74% *strongly disagreed*. However, 23% *strongly agreed*, *somewhat agreed*, and *agreed* that they knew about an act of school violence and did not report it.

The participants also responded to open-ended questions focused on their perceptions of school violence. Participants who did not complete all of the open-ended questions were not included in this data set. The sample size for the open-ended questions was 95. The responses from these qualitative questions were coded and analyzed. Each response was analyzed by phrases and coded. The codes were developed based on the main idea of the phrases. Once this process was complete, the researcher examined the data for similar codes and identified overarching themes (Glesne, 2006; Rossman & Rallis, 2003). Five overarching themes were identified in the qualitative data.

1. Pre-service teachers feel that bullying is the most prevalent type of school violence currently facing public schools today. An example of a student's response "*I feel that there is a lot of bullying in my local school area and nothing is being done about it.*"
2. Pre-service teachers feel that fighting is the second most prevalent type of school violence currently facing the local public schools today. An example of a student's response "*I think physical fights are the most common in schools.*"
3. Pre-service teachers feel that main causes of school violence are due to peer pressure and parental involvement. "*Bullying and students not knowing how to handle certain emotional situations. Their parents approve fighting so they do it.*"
4. Pre-service teachers do not feel that the students have a means to report the acts of violence and that there are no consequences for bullying. An example of a student's response "*They could be prevented if teachers identify the real problems students are experiencing and stop ignoring children when they come with an issue or complaint for as minimum as it may be.*"

5. Pre-service teachers feel prepared to handle school violence in the public schools. An example of a student's response *"I feel that I am prepared to handle school violence because I know how to react."*

The following open-ended questions *"What do you feel is currently the main cause of school violence?"* and *"How prepared do you feel you are to handle school violence?"* as well as *"What could your teacher preparation program do to help you to be prepared to handle school violence?"* are focused on in this study.

The responses to *"What do you feel is currently the main cause of school violence?"* were coded and sorted into three themes.

1. Pre-service teachers feel that the students' lack of morals and upbringing significantly contribute to the violence in schools. An example of a student's response *"Lack of ethical and moral judgement."*
2. Pre-service teachers feel that the teachers and school administration are not addressing the student concerns. An example of a student's response *"Violence continues in our schools because there are no consequences to these students who are bullying others. The district have so many rules and consequences on paper but never follow through on it."*
3. Pre-service teachers feel there is fear of negative consequences if one reports the violent act. An example of a student's response *"The main cause of school violence is that the students don't speak to the teachers or report it because the students might be threaten[ed] and he might be afraid of that person who threaten him."*

The responses to *"How prepared do you feel you are to handle school violence?"* were coded and sorted into three themes: *very prepared*, *prepared*, *not prepared* indicating their perceived levels of preparation (see Table 3). Survey results show 52 of the participants felt they were *very prepared* to handle school violence, 15 felt *prepared*, and 27 felt *not prepared* to handle school violence.

Table 3. How prepared do you feel you are to handle school violence?

Very Prepared	52 (55.91%)
Prepared	15 (16.12%)
Not Prepared	27 (29%)

Three overarching themes that emerged from *"How prepared do you feel you are to handle school violence?"*

1. Pre-service teachers base their levels of preparation on their prior public school experiences. An example of a student's response *"I feel that since I went to a really violent middle and high school I will be able to deal with violence in school."*
2. Pre-service teachers feel confident in their ability to handle school violence with the exception of the use of weapons. An example of a student's response *"I believe that at this point in my life I am pretty prepared to handle bullying and fights, but I don't believe I will ever be prepared to handle violence when it escalates to the use of weapons."*
3. Pre-service teachers who do not feel confident in handling school violence feel confident that they can learn. An example of a student's response *"I'm not totally prepared because I never really went through school violence. It is going to be tough, but taking these education classes will help me learn how to handle school violence."*

The responses to “*What could your teacher preparation program do to help you to be prepared to handle school violence*” were coded and one overarching theme emerged: Teacher preparation programs should provide professional development focused on school violence. Subthemes included: definitions of violence, classroom management skills, videos, scenarios, and first aid.

Discussion

The data indicates that the majority of pre-service teachers (66%) felt that during their K-12 experience that the schools were serious in making the students feel safe. This supports the literature which shows safety concerns have become a top priority for school districts (Ricketts, 2010). The data indicates the most commonly implemented physical safety measures during the pre-service teachers’ K-12 school experience included; security guards or assigned police officers, other school staff or adults supervising the hallways, a requirement that visitors sign in, one or more security cameras, and a code of student conduct (see Table 2). Wands, metal detectors, locked entrance and exit doors were the lowest rated safety measures used by schools as reported by the participants (see Table 2). Efforts to increase school security and safety have increased over the past twenty years. The findings in this study are consistent with the US Department of Education (2015) findings of commonly implemented safety measures in schools.

Pre-service teachers’ experiences with violence in schools may influence their self-efficacy to handle school violence. The participants responded to questions related to their experiences with various types of violence. The data indicated that the majority of the participants did not personally bring weapons onto school property or participate in gangs (see Table 2). However, they reported higher percentages regarding bringing weapons to school and gang involved when asked if they knew someone or if they were approached by a gang member (see Table 2). Participants responded to questions related to reporting school violence acts. 74% *strongly disagreed* that they reported an act of school violence, however, 23% *strongly agreed*, *somewhat agreed*, and *agreed* that they knew about an act of school violence and did not report it (see Table 2). The lack of reporting school violence incidents may be related to the lack of knowledge about an anonymous reporting system as only 66% of the participants were not aware of the Crime Stoppers organization on their campus. The lack of reporting school violence act may be related to a fear of retaliation.

The pre-service teachers’ personal experiences with violence during their K-12 school experiences and school safety measures (see Tables 1 & 2) have influenced their self-efficacy to handle school violence as the classroom teacher. The qualitative data indicates that the majority of the pre-service teachers felt very prepared or prepared (see Table 3) to handle school violence. Pre-service teachers indicated in their qualitative responses that they felt prepared due to their own experiences in K-12, which supports the findings in the literature which links personal experience to levels of confidence to handle a situation (Williams & Corvo, 2005). This high level of self-efficacy is based off their ability to handle overall school violence on their personal experiences in K-12, as seen in the qualitative responses. Pre-service teachers reported lower levels of self-efficacy related to school violence involving weapons and higher levels of self-efficacy related to bullying and low incidence violence. This supports the literature that shows self-efficacy is developed through positive or negative experiences (Craig, Bell, Leschied, 2011; Bandura, 1977; Klassen et al., 2011).

Knowing how to respond in a crisis situation is essential to being able to effectively handle the crisis. Recent events in South Carolina support the concept

that training for teachers will aid in the reduction of victims in a school violence situation; unfortunately, preparing with security measures and knowing how to respond to a violent incident does not guarantee there will be no casualties. Research suggests that pre-service teachers are receiving limited, if any coursework or professional development trainings related to school violence (Williams & Corvo, 2005). The data indicates that pre-service teachers would like their teacher preparation program to address school violence during their coursework through a variety of methods; definitions of violence, classroom management skills, videos, scenarios, and first aid.

Conclusion

The data collected in this study clearly shows the strong correlation between one's experience with school violence and one's self-confidence in their ability to handle the school violence as an educator. Drawing on personal experiences may provide an avenue for pre-service teachers to feel compassion for their students along with insight to how students perceive schools' reactions to school violence. However, it does not necessarily provide an accurate understanding of how to handle school violence or to implement safety measures. Teacher preparation programs should examine their programs to see how they can include seminars on topics related to school violence from the educator's perspective. In addition, teacher preparation programs should raise awareness to the multiple factors that influence violent behavior, how to recognize these signs, and best practices for responding to crisis situations.

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