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EDITOR'S INTRODUCTION

The 2015 issue of the *Texas Forum for Teacher Education* echoes the diverse and knowledgeable voices of teacher educators in our state. Undoubtedly, the body of work represented within these pages will engage readers in rich academic reflection about their own practice. Some articles explore complex issues facing teacher education, including TExES preparation (Fike, Fike, & Martinez), teacher absentism (Labby, Harrrison, & Sullivan), and the components of successful, comprehensive teacher preparation programs (Lyons, Fleming, Whitfield, Gin, Ketsetzi, Ethcells, & Waxman). Other authors challenge us to consider how we can meaningfully prepare teacher candidates in areas such as Special Education (Hurlbut), Gifted and Talented English Language Learners, (Lewis,Novak, & Cornando), Elementary Math (Ward & Johnston) and Ethics (Maninger & Wentworth). In the end, this edition of the journal informs our work and inspires us to think about our practice from new perspectives.

In the current, ever changing and challenging educational landscape, teacher educators require a forum in which they can collectively engage and share research and insight. The Forum provides such a platform and the collective scholarship in this issue most certainly deepens our understanding of the challenges facing our field. It was an honor and a privilege to work with such talented and insightful authors. Thank you for entrusting us with your work.

I would like to extend my deepest gratitude to the editorial team; Dr. Robert Maninger (SHSU) and Dr. Jana Willis (UHCL). Working with you both was a dream. Finally, I would like to thank our copy editor, Dr. Elda Martinez for being a patient guide on this journey!

As we turn to our next edition, authors can find the 2016 call for papers at the end of the journal. The 2016 deadline for manuscripts is June 15, 2016. Authors are to direct submissions to the 2016 Managing Editor, Jana Willis (willis@uhcl.edu).

If you have any comments about this edition, please email me at shulsky@uhcl.edu.

Respectfully,

Dr. Debby Shulsky

2015 Managing Editor
The Texas Forum of Teacher Education

THE EFFECT OF AN INTERVENTION TO IMPROVE TEACHER CERTIFICATION RATES: A RANDOMIZED-CONTROLLED PILOT STUDY

Renea Fike, Ed.D.
University of the Incarnate Word

David S. Fike, Ph.D.
University of the Incarnate Word

Elda E. Martinez, Ed.D.
University of the Incarnate Word

Abstract

A small, private university-based Educator Preparation Program (EPP) in Texas conducted a randomized study to evaluate a Pedagogy and Professional Responsibilities (PPR) Review Series that was designed to prepare candidates for success on the TExES PPR exam. Findings indicate that the candidates who participated in the PPR Review Series averaged nine points higher on practice test scores than those who did not participate in the review; all review participants passed the state exam. This paper will describe the format and instructional methods used in this successfully facilitated intervention.

Key words: Intervention, PPR practice exam, student success

Introduction

Preparing future teachers for success in the classroom is both an opportunity and a challenge. Teaching preservice teachers provides an opportunity to influence their pedagogical and content knowledge, strengthen their theoretical foundation, diversify their instructional techniques, and promote their sense of social justice. Teacher certification programs also face the challenge of preparing students to successfully complete their certification requirements. The certification testing requirement is a

particular obstacle for many candidates as evidenced by the number of students who struggle to pass the PPR practice exam.

The ultimate educational goal of preservice teachers is to graduate and become certified to teach. In Texas, an essential component of certification is passing two high-stakes state licensure examinations. This includes the TExES content exam for the candidates' certification area and the TExES Pedagogy and Professional Responsibilities (PPR) examination. A candidate who is unsuccessful on either of these two exams will be precluded from completing the certification process and will not be eligible to graduate as a completed certification candidate.

The accreditation status of Texas Educator Preparation Programs (EPPs) are determined on four performance standards: (1) the pass rate on certification exams, (2) the results of first year teacher appraisals, (3) the impact on student achievement by teachers in their first three years, and (4) compliance with standards for the field supervision of candidates. This study focuses on the first standard. The acceptable minimum pass rate on certification exams is 80% for each academic year (Texas Administrative Code Rule §229.4). According to the Texas Education Agency (2014), the State PPR pass rate for 2013-2014 was 90% which indicates that ten per cent of the examinees did not pass the PPR exam and may not be able to graduate as a completed certification candidate, and will not be able to begin their teaching careers. It is important to consider the 90% overall state pass rate does not take into account the countless candidates who do not attempt to take the state exam due to low performance on practice or representative tests, or those who could not meet the requirements of their content testing. Therefore, Educator Preparation Programs across the state carry the onus of preparing every preservice teacher for success on this exam.

Professionals in the field are aware of best practices or interventions that help prepare candidates for success on this high stakes exam. One study (Goodman, Arbona, & Dominguez de Rameriz, 2008) found that participating in practice test-taking sessions greatly increased the probability of the candidate passing the exam. Their study also solicited from the examinees suggestions for how their performance

might be improved. When asked, the teacher candidates emphasized practice test sessions and test-taking skill acquisition as the most effective strategies for improving their performance (Goodman, et al., 2008). Another study by Hegwood (2011) found that **candidates** who reviewed books and study guides were statistically more likely to pass than those who had no preparation at all. Additionally, Fike, Fike, and Natale (2014) discovered the importance of using both critical thinking and THEA scores as predictors of success on the State PPR exam. Amedahe (2001) extends preparation practice by suggesting that the practice of combining teacher certification examination scores with assessments of preservice teachers' performance in their teacher education programs provides a truer measure of teaching effectiveness. Dr. Amedahe suggested a new paradigm for teacher certification that might blend classroom demonstrations of teaching skills with standardized test scores, resulting in a holistic approach to teacher certification.

In the field of teacher preparation, there are numerous approaches to providing opportunities for candidates to develop their knowledge and skills. Prior to clinical fieldwork as student teachers or interns, Texas preservice teachers are required to complete a minimum of 30 clock-hours of field-based experience (Texas Administrative Code Rule §228.35). During their fieldwork, candidates spend hours in actual classrooms. They participate in the daily classroom activities and are mentored by the hosting teacher. These authentic learning opportunities help candidates prepare for the real world of teaching. In the advanced phases of coursework, candidates begin to focus on the state certification examinations. The Educator Preparation Programs have access to representative tests prepared by ETS, the certification testing vendor (Educational Testing Services, EPP Resources-Representative Tests). Most programs allow candidates to take these practice exams to inform the candidate of needed preparation areas and as an indicator of readiness for the state certification exams. If the candidates score below a predetermined standard, they are commonly encouraged to delay taking the state exam. In the meantime, interventions may be suggested to improve their performance. Some teacher education faculty will work one-on-one with a candidate to review the areas needing improvement. Other times, purchasing a study manual will be recommended, and the candidates study independently. Other approaches such as informal study

groups and formal review sessions may be utilized to help prepare students for success on the examinations.

When conducting research, it is not uncommon to use an intervention as part of an experimental design. One study (Nelson, McMahan, & Torres, 2012) implemented an intervention project to "generate an immediate and profound change in student perceptions of how the adults in students' lives care about them on a day-to-day basis" (p. 129). This was done by bringing in a team of adults from the community who were likely to generate individual relationships with students and take an interest in their lives and learning. In addition, Zimmerman and Dibenedetto (2008) conducted a study using mastery learning as the intervention after observing that there was much variation in students' academic learning in traditional classrooms. Their study proposed a mastery learning approach to instruction as an intervention wherein students do not move to new topics until prior topics have been mastered. Another example of the utilization of interventions is discussed by Judson (2007) regarding mathematics testing. Finally, an intervention that altered teachers' instruction and grading practices (Miller, Heafner, & Massey, 2009) had positive results on student success.

With the numerous interventions commonly used to assist candidates in preparing for the PPR, it is difficult to know what really works to support their improvement. Since most EPPs have limited resources, such as time and money, the need to determine the success of an intervention is apparent. This study focused on an intervention that was offered to help prepare candidates for success on the PPR exam.

Theoretical Framework

Lev Vygotsky's Sociocultural Theory emphasizes that the social, cultural, and historical contexts in which students grow up have profound influences on thinking, learning, and effective instructional practice (Ormrod, 2014). This research study utilizes the concepts of "scaffolding" and "zone of proximal development" which are effective instructional practices according to Vygotsky (1930-1934/1978). The range of tasks students cannot yet perform independently but can perform with the help and guidance of others is, in Vygotsky's terminology, the zone of proximal development (ZPD). Vygotsky proposed that

students develop very little from performing tasks they can already do independently. Instead, they develop primarily by attempting tasks they can accomplish only in collaboration with a more competent individual. The guidance and support provided by this more competent individual is generally known as scaffolding. Scaffolding is a support mechanism that helps a learner successfully perform a challenging task.

In this study, scaffolding was provided by the intervention (the PPR Review Series). The "more competent individual" was the teacher of the PPR Review Series. The candidates were in their zone of proximal development by the time the intervention was provided. Because they had completed two semesters of professional development coursework giving them a foundation of knowledge necessary to be successful on the PPR exam, students were ready to accept the assistance of the more competent individual. The scaffolding was in the forms of PPR content review, testing strategies, and familiarization with the test format. This scaffolding (the intervention) provided the support the candidates needed to flourish in their zone of proximal development. The intervention prepared the candidates for success on the PPR exam as demonstrated by the results of this research study.

Purpose

The primary purpose of this study was to determine if candidate participation in an intervention conducted by the EPP resulted in improved performance on the TExES PPR practice exam. The research questions were:

RQ1: Do candidate learning outcomes differ based on participation in the intervention?

RQ2: What student characteristics are associated with learning gains?

Methods

Setting

This study was conducted at a private, urban university in Texas. The institution has annual enrollment of about 9000 students. The university is federally-designated as a Hispanic Serving

Institution (HSI). Degrees offered by the institution include baccalaureate, masters, professional doctorate and doctorates of philosophy.

Sample

The study sample included undergraduate students enrolled in their senior-year professional development coursework, as well as Master of Arts in Teaching (MAT) students. All had been admitted to the EPP's Teacher Certification Program and were enrolled in the final semester of professional development coursework preceding the student teaching semester. Sixty-three eligible students were invited to participate in the study; of the 63 students, 21 agreed to participate (Table 1).

Table 1

Student Characteristics (N = 21)

Variable	N (%)
Caucasian	5 (24)
Hispanic	15 (71)
Other	1 (5)
Female	15 (71)
First Generation	11 (52)
Receive Financial Aid	16 (76)
Native English Speaker	18 (86)
Undergraduate	20 (95)
Elementary	12 (57)

Data Analysis

The analysis focused on intervention and control group learning outcomes as measured by performance on the practice PPR exam. Statistical analyses were performed using SPSS 21. Descriptive statistics of student demographics data were used to characterize the sample.

Student's t-tests were used to compare practice PPR exam scores between the intervention and control groups. The research hypothesis was that the intervention group will demonstrate better learning outcomes than the control group. To test the association of student characteristics with learning gains,

Pearson's and point-biserial correlation coefficients and one-way analysis of variance were used. Assumptions for all statistical tests were verified. For all analyses, the level of significance was .05.

Variables

The primary dependent variables were scores from the initial practice PPR exam (pre-test) and the post-test. The primary independent variable was group (intervention vs control). Covariates included demographics data such as student age, gender and ethnicity, program level (undergraduate, graduate), first-generation student, financial status, and Native English speaker.

Instrumentation

The PPR is a standardized test created and printed by Educational Testing Service (ETS) and is used to help students prepare for the state PPR exam. ETS adheres to standards that reflect a commitment to producing fair, valid and reliable tests (Texas Educator Certification Program Technical Manual, 2013).

Research Design

The study implemented a randomized experimental design. Academic and demographic data were analyzed for all students participating in the study (Figure 1). The eligible students were certification candidates who had completed the fall semester of their professional development coursework preparing them for the PPR and were enrolled in the second semester of their professional development coursework during the spring semester. At this institution, it is common practice to encourage candidates to begin focusing on the PPR exam during the spring semester.

At about the mid-point of the Spring, 2014 semester, all candidates who were planning to student teach during the 2014-2015 school year, were required to attend a state-required six-hour PPR review session. The session was offered on Saturday. During this session, the purpose and logistics of the intervention were explained. At that time, the candidates signed a form agreeing to participate or waiving their right to participate in the experimental study. About a week later, all the candidates were given their first practice PPR exam for benchmarking purposes which provided pre-test scores.

Intervention

The intervention consisted of an intensive 15-hour review, including a PPR study guide provided for each candidate. The intervention is referred to as "PPR Review Series." Those who agreed to participate in the intervention study were randomly assigned to Treatment Group A and Control Group B (Figure 1). In May, Treatment Group A students received the intervention, which was an intensive 15-hour workshop covering PPR content and testing strategies. Students met for five days for three hours per day. The instructor thoroughly reviewed and reinforced each PPR competency utilizing the PPR study guide. The instructor provided supplemental materials as the need was recognized. The students answered practice PPR questions and analyzed the reasons a particular answer was correct. Students were given homework assignments each night incorporating the PPR study guide. A PPR study guide was provided to Group A and Group B. The Group B candidates were told to study independently. At the completion of the PPR Review Series workshop (the intervention), all candidates were asked to post-test by taking the practice PPR exam again. At this point, the data were analyzed to determine if the candidates who participated in the workshop achieved better scores on the practice PPR exam than the candidates who studied on their own.

Figure 1. Research methodology flowchart.
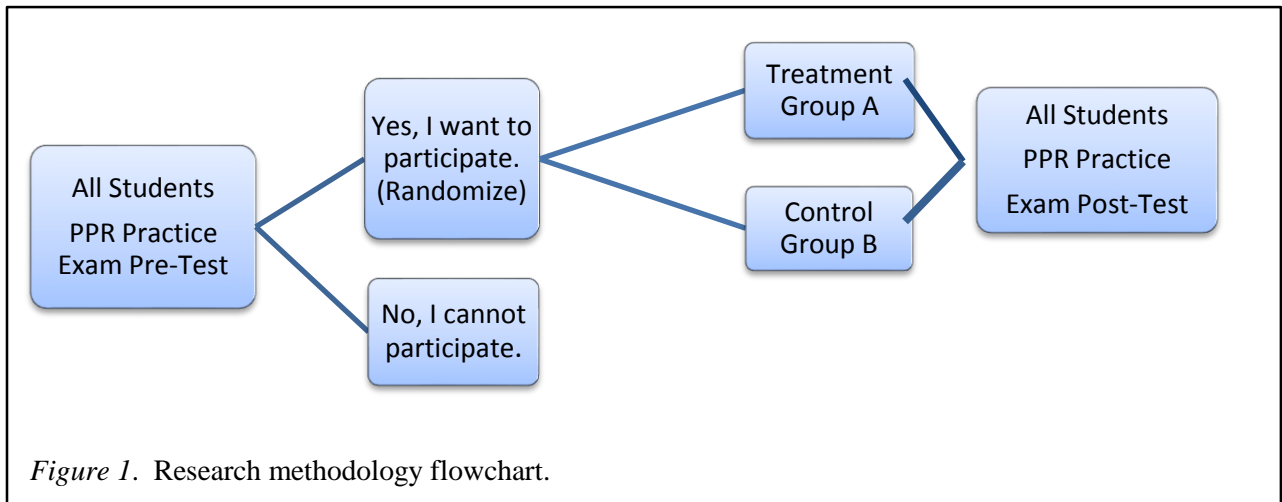
Results

The candidates (n=21) participating in the study were randomly assigned to the intervention or control groups. Pre-test and post-test scores for the two groups are provided in Table 2. Of the 21 candidates who participated in the pre-test, 14 completed the post-test. Pre-test scores did not differ significantly between the intervention and control groups. Post-test scores (mean = 80.14) for the Intervention group were significantly higher than post-test scores (mean = 71.43) for the Control group (p = .016). The standardized effect size for the between-group difference in post-test scores was very large (Cohen's d = 1.49), indicating that the Intervention group's mean score was approximately one-and-a-half standard deviations higher than that of the Control group. A standardized effect size of this magnitude reflects the strong impact of the intervention.

Point-biserial correlations and one-way analysis of variance were calculated to determine if gain scores (defined as post-test score minus pre-test score) differed based upon student demographics including gender (M/F), first-generation student (Y/N), financial aid (Y/N), English-language learner (Y/N), class (Undergraduate/Graduate), level (Elementary/Secondary), and ethnicity (Hispanic/Caucasian). Gain scores did not differ based upon any of the student demographic variables. The only variable for which gain scores differed was the group (Intervention/Control).

Table 2

Pre-test and Post-test Scores

		Pre-test			Post-test		d[b]
Group	N	Mean ± SD	Significance[a]	N	Mean ± SD	Significance[a]	
Intervention	11	74.27 ± 4.22	t(19)=1.169, p = .257	7	80.14 ± 4.41	t(12)=2.787, p = .016	1.49
Control	10	72.00 ± 4.69		7	71.43 ± 7.00		

a Independent samples t test.
b Standardized effect size, Cohen's d

Discussion

Educator Preparation Programs are required to meet established standards but also operate with the mission to prepare candidates to be effective practitioners as inservice teachers. The certification testing is not merely a required component of the certification process; it serves to determine candidates' knowledge and understanding of the teaching content, pedagogy, and professional responsibilities expected in professional practice. EPPs prepare candidates for their certification tests but, more importantly, prepare candidates to integrate information taught in coursework with classroom instructional practices. This study served to address this aim through the PPR Review Series workshop with facilitated instruction, a scaffolded instructional approach, and opportunities to deepen understanding by associating early field experiences with the PPR competencies through group discussions. It is expected that students will be able to take the information learned in courses and apply this learned content to the state certification assessments. It may also be expected that students will know they should study for the state exams using materials developed for this purpose. Through informal analysis of previous student performance on PPR testing, the Teacher Education Program faculty of the study's institution believed the divergence occurred as students encountered difficulty interpreting their learned experiences. Traditional university programs address the PPR competencies in various courses, typically over several semesters. Students may be segmenting, rather than connecting and retaining, this information. The facilitated review sessions did not teach new content; they offered the opportunity to engage in review, reflection, and application with assessment, feedback, and reinforcement. As discussions took place, the participation of the group members and faculty facilitator provided the need to offer rationale for answer choices, to explain options that were not appropriate, and support for thought processes. This learning experience may extend beyond the testing goal and into professional practices as professional reasoning becomes more directed and explicit.

Providing a structured, facilitated review can increase success of first-attempt testing. Eliminating or reducing the need for repeated testing reduces the expense of testing incurred by the candidates, as well

as the anxiety associated with the high-stakes testing. Earlier success also results in completing certification requirements before degree completion avoiding possible delays in degree conferral and attainment of certification, which yields employment eligibility.

The PPR Review Series (facilitated review session) used in this study yielded significant improvement from candidates' pre- to post-test scores. Candidates who participated in the PPR Review Series scored an average of nine points higher on their PPR practice post-tests when compared to those who did not participate. This difference in outcomes between those who participated in the review series and those who did not was not only statistically significant, but it was notable with respect to practical significance. The large standardized effect size for the difference in performance of the two groups provides compelling evidence of the intervention's effectiveness.

This study found no differences in candidates' gains based on demographic differences. This suggests that the intervention may be equally effective for all candidates regardless of the student's gender, socio-economic level, class (graduate/undergraduate), level (elementary vs. secondary), ethnicity, or being an English learner.

Implications for Practice

While EPPs have differences in preparation structure unique to their program and candidate development needs, the requirements remain the same. The results of this study present a three-step model for a test preparation process, which is implemented after coursework and field experiences; or may overlap based on the EPPs implementation decision. As illustrated in Figure 2, candidates must have content instruction and practical experiences before beginning testing preparation in order to be able to integrate these components and to demonstrate their understanding on the exam; rather than teaching to the test model.

The first step of the preparation process is the pre-assessment. Critical to this step is providing assessment feedback by competency to the candidate to determine areas of strength and those of needed development. Aggregating this data provides the review session facilitator with knowledge of common

areas of strengths and weaknesses of the group, which will inform the instruction and focus areas. Additionally, the aggregate data might present patterns that indicate the need for coursework review and possible revision.

The second step of the preparation process is the review session. The instructor's guidance facilitates candidates' processing and application of theory learned, fieldwork experiences, and application to the testing questioning format which is often in the form of scenario-based items. The review session addresses specific competencies but perhaps more importantly, teaches the process of reflection and application. The instructor's formative feedback is integral to this intervention as it provides the individualized scaffolding needed to guide the learning process. Questions and continued conversation support development of the individual and the collective group. As needed, the instructor may suggest additional areas for study as well as to clarify aspects which are misunderstood. Recommended indicators for readiness for the state exam will aid in success on first-attempt state testing.

The final step of the preparation process is the state exam. The feedback, assessment, and instruction provided in the review session addressed the competencies and testing format of the state exam. As reported anecdotally, candidates approached the first state testing attempt with greater confidence and familiarity with the testing structure. The ideal result is an increase of first-attempt pass rate.
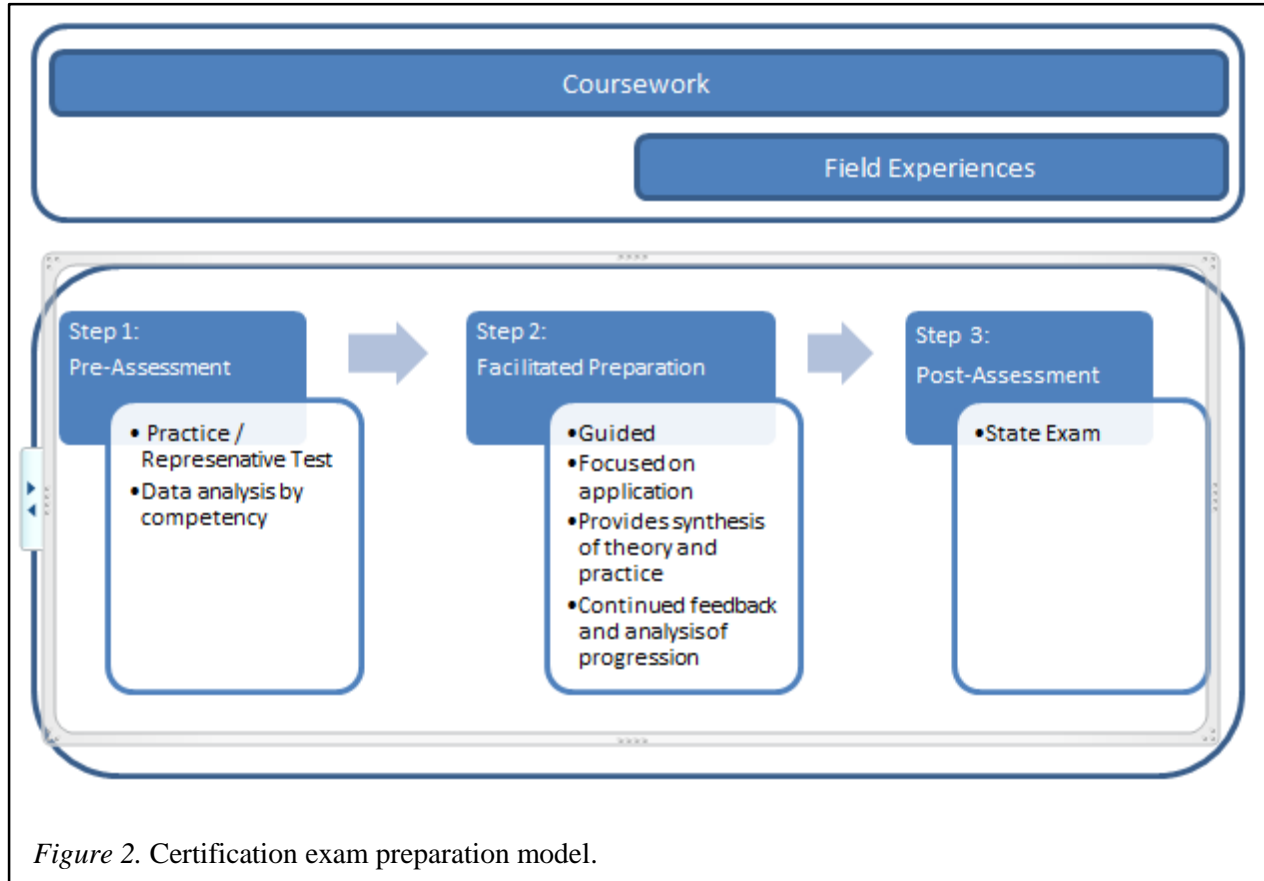
Figure 2. Certification exam preparation model.

Implications for Research

Given the favorable results, the study should be replicated with a larger group of students and at additional institutions. Further research should be conducted to determine if the timing of the intervention has a bearing on outcomes. Additionally, further studies implementing qualitative research designs may be useful to explain how and why elements of the intervention help to produce favorable results.

Limitations

The findings may not be applicable to candidates or settings that differ from those in this study. Replication with candidates from different settings may serve to strengthen the external validity of this study. The demographic data analyzed in this study were self-reported (e.g. gender, ethnicity); these data were not verified. Though there was a control group, blinding was not possible. Thus a possibility for cross contamination exists, though this concern may be offset by the fact that the intervention group had

better learning outcomes. The small sample size limited statistical power for comparisons of the two groups on student demographics.

Conclusion

The questions of this study were: (1) Do student learning outcomes differ based on participation in the intervention? And (2) What student characteristics are associated with learning gains? Results of this study indicate the facilitated intervention yielded higher scores, which substantiates the benefits of providing intervention to certification candidates. Gain scores did not differ based upon any of the student demographic variables. While the specific timing or format may vary, the critical components of facilitation, assessment, and application should be included. Additionally, the timing of the testing process and curriculum review based on aggregate data should be considered in order to yield greater success for individual and group performance.

Educator Preparation Programs continuously search for ways to support their candidates in achieving success on certification examinations. The Teacher Certification Program at the institution where this study occurred experiments with numerous approaches to preparing students for success on the TExES Pedagogy and Professional Responsibilities examination. The faculty have implemented scenarios into their professional development coursework, asked PPR-type questions on exams, provided a mandatory six-hour review session, and offered short review sessions for students who elected to attend. In this study, a facilitated intervention, the PPR Review Series, was offered to candidates to help them prepare for the PPR exam. The PPR Review Series consisted of 15 hours of intensive review and test preparation.

This study indicates that this facilitated intervention provided the review and support necessary to help pre-service candidates achieve success on their PPR practice exam. Candidates who received the intervention, the PPR Review Series, achieved nine points higher on their post-tests than the students who did not participate. The success of the intervention suggests the need to implement a similar program for all candidates who are preparing to take the PPR exam.

References

Amedahe, F.K. (2001). Combining teacher-assessment scores with external examination scores for certification: The Ghanaian experience. *Educational Measurement, 20*(4), 29-30.

Educational Testing Service (2015). EPP resources: Representative tests. Retrieved 8/9/15 from http://texes.ets.org/epp/eppresources/#representative_tests.

Fike, R., Fike, D.S., & Natale, A. (2014). Improving teacher certification rates: An exploration of the role of critical thinking ability in teacher certification examinations, *The Texas Forum of Teacher Education, 4*, 121-141.

Goodman, G., Arbona, C., & Dominguez de Rameriz, R. (2008). High-stakes, minimum- competency exams how competent are they for evaluating teacher competence? *Journal of Teacher Education, 59*(1), 24-39. doi: 10.1177/0022487107309972

Hegwood, J. C. (2011). *The influence of different preparation methods on students' test performance for the examination for certification of educators in Texas* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (ED550811)

Judson, E. (2007). Retaking a high stakes mathematics test: Examination of school interventions and environments. *American Secondary Education*, *36*(1), 15-30.

Miller, S., Heafner, T., & Massey, D. (2009). High-school teachers' attempts to promote self-regulated learning: "I may learn from you, yet how do I do it?" *Urban Review: Issues and Ideas in Public Education*, *41*(2), 121-140.

Nelson, L.P., McMahan, S.K., & Torres, T. (2012). The impact of a junior high school community intervention project: Moving beyond the testing juggernaut and into a community of creative learners. *School Community Journal*, *22*(1), 125-144.

Ormrod, J. (2014). *Educational psychology developing learners* (8th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Texas Education Agency. (2013). The accountability system for educator preparation (ASEP) manual, Version 1.2, 5.

Texas Education Agency. (2014). ETS Data Manager, Quick Reports.

Texas Education Agency (2015). Texas Administrative Code. Retrieved 5/30/15 from http://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=3&ti=19&pt=7.

Texas Education Agency. (2015). Texas educator certification program technical manual. Retrieved 8/3/15 from http://cms.texes-ets.org/epp/eppresources.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner & E. Souberman., Eds.) (A. R. Luria, M. Lopez-Morillas & M. Cole [with J. V. Wertsch], Trans.) Cambridge, Mass.: Harvard University Press. (Original manuscripts [ca. 1930-1934]).

Zimmerman, B.J., & Dibenedetto, M.K. (2008). Mastery learning and assessment: Implications for students and teachers in an era of high-stakes testing. *Psychology in the   Schools*, *45*(3), 206-216. doi:10.1002/pits.20291

ABSENT TEXAS TEACHERS: REASONS AND REVELATIONS

Debbie Harrison, M.S. Ed.
Sam Houston State University

Sandra A. Labby, Ed.D.
Texas A&M University - Texarkana

Sam Sullivan, Ed.D.
Sam Houston State University

Abstract

The purpose of this study was to collect data directly from Texas K-12 teachers regarding their absenteeism and the reasons for their absences. There is limited research regarding the true reasons behind teacher absences in a forum where teachers were free to divulge and discuss absences without the restrictions of pre-formatted answer choices and without the fear of retribution.

Results showed that many teachers were balancing workplace commitment with family obligations. Teachers were not only caring for young children but, in some cases, aging parents. Others were absent in an effort to fight stress from the workplace, balancing their many family responsibilities, their own health concerns, and issues involving other family members. Working longer hours with more duties was counterbalanced with having less time available for various personal obligations. It was suggested that administrators should review this study for suggestions to ease teacher absences in schools.

Key words: attendance rates, sick leave, teacher absences

Introduction

Teacher absenteeism is a current and growing concern in schools across the nation for a variety of reasons, not the least of which is the negative impact that is imposed on student academic success and statewide achievement test scores. Miller, Murnane, and Willett (2008) determined that 10 additional teacher absences decreased student achievement by one-to-two percent of a standard deviation, while the same article cited at least twelve other studies conducted over the last twenty-five years found similar results.

An equally compelling reason for concern regarding teacher absences, especially in economic downturns, are the fiscal costs to schools including, but not limited to, the cost of paying a substitute in addition to the regular teacher's pay and benefits. The National Council on Teacher Quality (2014) reported that in 40 school districts in 2012-2013 alone, costs for substitute teachers reached approximately $424 million. Miller (2008) estimated that combined substitute pay and associated costs in the United States were a minimum of $4 billion annually, with an average of 5.3 percent of teachers absent on a given day.

Concerns about absent teachers were not limited to the current decade but have, in fact, been discussed as early as the 1930s (Emery, 1931; McGinnis, 1935). Additionally, concerns about teacher absences were not limited to the United States. Teacher absenteeism was a concern in locations as diverse as is Nova Scotia (Unicomb, Alley, and Barak, 1992), Bangladesh (Chaudbury, Hammer, Kremer, Mularidharan, & Rogers, 2004), Nigeria (Independent Advocacy Project, 2010), Peru (Alcazar, Chaudhury, Hammer, Kremer, Muralidharan, & Rogers, 2006), Israel (Shapira-Lishchinsky & Rosenblatt, 2010), India (Beteille, 2009), and the Netherlands (Miller, Murnane, & Willett, 2008). The main concern was related to the effect that teacher absenteeism had upon student performance in the classroom.

This study focused on the reasons behind teacher absenteeism as reported by Texas K-12 teachers in an effort to determine some future course of action that would benefit teachers, students, and schools.

Statement of Problem

Finding ways to reduce teacher absenteeism is of major concern to many schools and their administrators. However, administrators are hard pressed to reduce teacher absenteeism without knowing the true causes of those absences. In discovering the causes of teacher absenteeism in Texas, as given by absent teachers, school administrators should be able to address the concerns of absent teachers in more direct, useful, and effective ways. Why are Texas teachers absent and how can this information enable schools and their administrators to reduce future teacher absenteeism?

Literature Review

A literature review on the topic of teacher absenteeism found literature spanning a period of approximately 84 years. After reviewing the available literature, it was decided to limit the review included in this paper to the years 2000-2014, which represents the most recent and relevant time period. It was during this time period that school districts and teachers began to experience more external accountability measures including No Child Left Behind (a Federal mandate that began in 2001) as well as more emphasis on standardized testing measures. The literature under review regarding teacher absenteeism predominantly focuses on three major areas: the impact of teacher absences on students; the impact of teacher absences on district resources; and the impact of incentive programs on teacher absences.

Impact of Teacher Absences on Students

The latest studies on teacher absenteeism (Dana, 2014; National Council on Teacher Quality, 2014; Portland Public Schools, 2012; Siebert, 2013) have reported the negative impact of teacher absences on student achievement in the classroom. Miller, Murnane, and Willett (2008) investigated the negative effects of teacher absenteeism as it related to the use of less qualified substitute teachers during teacher absences, the disruption of the classroom routines, and feelings of stability that support student learning (Miller, Murnane, & Willett, 2008).

Teacher Absences and School Poverty Levels

Some studies (Albrecht, 2011; Clotfelter, Ladd, & Visdor, 2007; Dana, 2014; Hanushek, Kain, & Rivkin, 2004; Klusmann, Kunter, Trautwein, Ludtke, & Baumert, 2008; Loeb, Darling-Hammond, & Luczak, 2005) found a relationship between higher levels of teacher absenteeism in lower economic level schools. According to Dana (2014), "Elementary schools, larger schools, and high-poverty schools experience higher teacher absence rates than their upper-grade, smaller, and more affluent counterparts" (p. 43).

Several other studies did not find the same correlation between higher teacher absences and lower economic level schools (Tingle, Schoeneberger, Algozzine, & Kerr, 2012; National Council on Teacher Quality, 2014). According to the National Council on Teacher Quality (2014), "Teacher absence rates did not significantly increase as the level of poverty increased … The difference between the average days absent in the highest and lowest poverty schools was under one day and was not statistically significant" (p. 8). Thus, a relationship between high teacher absences and lower poverty levels of the students in the schools was not found.

Impact of Teacher Absences on District Resources

Teacher absences have a direct, negative impact on district resources. Several studies described the costs of paying the regular teacher's salary and benefits, the substitute teacher day-rate pay, and the staff expenses related to the support of teacher absences (Cheng, 2013; Kallio, 2006; National Council on Teacher Quality, 2014; Portland Public Schools, 2012). The National Council on Teacher Quality (2014) found that the cost for substitutes alone in only 40 school districts to be approximately $424 million for the school year 2012-2013. A report, *Reducing Teacher Absenteeism,* which was prepared for the Wisconsin Association of School Boards (WASB), conveyed that the expenses associated with substitute teachers may cost some school districts approximately a full one-percent of their entire annual budgets (Hubbell, 2008). The financial impact also included the time and resources used to recruit, train, and retain qualified substitute teachers (National Council on Teacher Quality, 2014).

Impact of Incentive Programs on Teacher Absences

The National Council of Teacher Quality (2014) investigated the possible impact of incentive programs on teacher absences and found that overall these programs have no significant impact in reducing teacher absences. The incentive programs studied included:

- payment or unused sick leave at retirement;

- payment for unused sick leave at the end of the school year;

- rewarding excellent attendance with additional leave or compensation;

- restricting leave on specific dates;

- requiring medical certification for sick leave;

- including teacher attendance as a measure in teacher evaluations; and

- additional policies to encourage good attendance and discourage excessive absences.

Attendance rates did not differ among districts with or without formal policies designed to encourage attendance (National Council on Teacher Quality, 2014).

Another paper discussed mixed results where incentive programs depended upon location and implementation procedures (WASB, 2009) including:

- **Positive results**: year-end bonuses and remuneration for up to seven unused sick days in New York resulting in an average reduction of almost two sick days per teacher;

- **Positive results***:* both monetary and nonmonetary incentives (savings bonds, plaques, and a year-end trophy) for outstanding attendance in Georgia resulting in a 16 percent improvement in attendance;

- **Uncertain results**: pay to teachers for unused sick leave were believed to lower teacher absences; however, the findings were not statistically significant.

- **Negative results:** drawing one teacher name from a "lottery" of teachers with two or fewer absences in a school year to win a three-year lease on a Cadillac; however, results did not reduce absences as much as the administration had hoped.

- **Negative results**: $50 for each of the first three sick days that they did not use: however, results did not reduce absences by a "meaningful amount."

- **Negative results**: a failed plan to financial reward if entire teaching staff saw a certain reduction in sick days.

Nevertheless, most researchers agreed that incentive programs, if properly implemented, can improve attendance (WASB, 2009).

Additional Aspects

The relevant literature also discussed other aspects of teacher absenteeism including the negative impact on teacher morale (Albrecht, 2011); the reduction in teacher absence rates when the teacher had to report an absence to a person (such as the principal) as opposed to an automated system (Scott, Vaughn, Wolfe, & Wyant, 2007); and the impact of a "use it or lose it" entitlement mentality related to having leave days available for illness or other emergencies (WASB, 2009).

The research suggested that teacher absences were a problem in public schools due to a variety of reasons for those absences besides just illness. As a result, this study examined in greater detail why Texas teachers were absent from their classrooms.

Methodology

Previous relevant research, in general, used historically compiled data in district records comprised of paper forms and/or automated systems demanding answers that would fit into pre-selected answer choices. To date, no study has tried to investigate the true reasons behind teacher absences in a forum where teachers were free to divulge and discuss absences without the restrictions of pre-formatted answer choices or possible adverse administration action. The current study is unique in giving teachers the opportunity to discuss at length the true circumstances behind their absences.

Sampling Process

This study was a mixed methods study using a questionnaire with both single answer objective questions for tabulation as well as simple open-ended questions for more teacher-specific answers. Using email listings obtained from the Texas Education Agency website, initial requests for study participants were sent out to 7395 Texas school administrators in a mass emailing. School administrators who received this email were asked to disseminate the information about this study to any K-12 Texas teachers who may be interested in participating. Email addresses were updated by eliminating any that were returned as "undeliverable" as well as deleting any that requested to be deleted from participation. A

follow-up mass email was sent to 6148 non-respondents from the initial emails in an effort to elicit more respondents for this project.

Instrument

The questionnaire itself was available to the public online at Survey Monkey. The online survey format was used in order to protect the privacy of participants and to gather the most information possible in a limited amount of time. The questionnaire itself contained nine questions, including a consent-to-participate question, a confidentiality question, four demographic questions, and three open-ended questions regarding the participant's absences. The entire survey could be completed in less than 15 minutes.

The survey resulted in 624 respondents. According to Leedy and Ormrod (2013), to reflect the opinions of the group population of 5000 or greater, the recommended adequate sample size is 400 (p. 216). In this study, there were 624 responding, which is greater than the recommended adequate sample size of 400. This large sample size of 624 reflects with greater certainty that the answers will truly reflect the population of 7395.

Data Collection

Initially, the online survey questions were constructed and revised by the principal investigator. A panel of graduate research students conducted a peer-review of the instrument. There were no reliability or validity studies conducted beyond that. The survey was opened to responses before the mass emailing so that it would immediately available to respondents upon their receipt of the email information. Responses were electronically and automatically received and stored throughout the open range of the survey.

Data Analysis

The goal of this research was to collect data regarding Texas teacher absences and the reasons for them directly from the teachers involved in an effort to determine if there were any trends found in the data that would assist administrators in their efforts to lower teacher absenteeism rates by working with

the teachers. For purposes of this study, the demographic questions were not analyzed with respect to the reasons for teacher absenteeism. Only the actual teachers' reasons for absenteeism were analyzed.

Response Rates

The data collected was for the 2013-2014 school year. Out of 7,395 email requests, there were 1,258 emails that were considered out-of-scope, meaning they were undeliverable, partial responses, or refusals to participate. Once these were removed from the target population, the response rate was calculated. There were 613 valid responses, representing a response rate of 10% (Data Analysis Australia, 2015).

Number of Days Absent per Response

The total Number of Days Absent per Response for the participants of this study can be found in Table 1. Thirty-three respondents reported perfect attendance in their jobs. Eighteen respondents reported half-day absences, which, for purposes of this study, were rounded up to a full day of absence. The number of respondents whose half-days were adjusted are indicated with asterisks in the "Number of Responses" column. For the ease of reporting the results, those respondents indicating 11-68 days of absences were totaled, rather than reporting each participant's response. The responding 613 teachers missed a total of 3,916 days for an average of 6.4 days per each teacher.

Table 1

Number of Days Absent per Response

Number of Days Absent	Number of Responses
0	33
1	45*
2	70*
3	73*
4	68*
5	82
6	34*
7	34*
8	33
9	21***
10	40**
11-68	97***

Absences by Category

Individual participant responses were coded to develop categories for absenteeism reasons. Sixteen "reasons" categories emerged. The Number of Days Absent per Category (See Table 2) were tabulated for each of the emergent categories.

Approximately one-third (32.5%) of the total number of absences was related to illness, whether it was the teacher (752 days), family member (303 days), or unspecified (216 days). Miscellaneous/Unspecified absences (1007 days) comprised approximately one-fourth (25.7%) of the total number of absences. Another 16.5% of the reported absences were school related (417.5 days) and training/professional development (230 days).

Table 2

Number of Absences per Category

Category	Number of Days Absent
Miscellaneous/Unspecified	1007
Illness - self	752
School related	417.5
Illness - family member	303
Maternity leave	277
Training/Professional Development	230
Illness unspecified	216
Doctor/Dentist Appointments	166.5
Personal - Unspecified	140
Own child(ren) activities	82
Death/Funeral	62.5
Mental Health	55
Own College Courses	20
Birth of child/grandchild	18
Vacation	15
Paternity leave	5

Discussion

Two themes appear to be indicated by the data. One is that the reasons for teacher absences has expanded beyond what one would normally refer to as "sick" days with at least one-fourth of the absences

occurring under the unspecified or miscellaneous category which could be anything from just taking a day off for personal issues that the teachers did not wish to reveal. The second item appears to be that school related and professional development absences (647.5 days) almost matches the number of actual illness absences reported by the teachers (752 days)

An open-ended comment section was made available to the respondents. Concerns related to absences included "bullying" from superiors or peers, complaints about other teachers being absent, and a feeling that if they are not going to be paid for their unused sick leave, they should "burn" the days by using them before retirement or "losing" the days. There was a strong feeling that teachers should be paid for their unused sick days in an effort to reduce teacher absences. Teachers also felt pressure from both their own younger children and/or older parents needing their help.

Comments from participants revealed the increased use of mental health days to rest from stress or fatigue. One participant stated, "I try not to take days off unless necessary…but sometimes a couple of mental health days are nice to change your perspective on things. Teaching is a very stressful job as we well know it." Another participant stated, "The intense pressure of testing standards, fast moving curriculum, and lack of support/funding to keep up with the fast changing pace of technology, curriculum, and research tends to leave me stressed and frustrated. " A third teacher stated, "There are times when you are a teacher when you just have to take a day off for your mental sanity! This job is not only stressful on the body but also the mind."

Teachers blamed increased demands made on them at school, increased testing pressures, lack of administration support, lack of peer support, and not having a conference/planning period to do paperwork (the conference/planning period being used by administration for a variety of reasons). Some teachers felt that as they gained more experience, they needed fewer mental health days.   Others felt that they needed to use more absences as they accumulated more days and they felt less guilt in taking off. Some attribute their illnesses to stress. Others found that the increased number of hours in the workday, along with take-home work, was increasing, which then had a negative effect on staying healthy. They

also reported having less time to take care of personal business and appointments outside of classroom hours.

In addition, several respondents stated that they went to work even if sick because of the extra work needed to prepare for a substitute and the extra work that awaited them upon their return. One participant stated, "Missing a day of school is extremely hard. It's much easier to go to school sick than prep for a sub. This is what I usually do unless I am feverish or vomiting."   Another participant stated, "It is much easier to be at school than to miss due to making lesson plans a sub teacher can and will follow." A third participant stated, "Teaching is the only profession I can think of where it takes so much energy to call in sick." Some teachers stated that they were concerned about being absent because their absenteeism may lead to a lack of learning among their students.

Teachers take days off from work for personal, family and work related reasons.   However, many teachers hesitate to take time off from teaching even if needed because of the difficulties involved in planning for substitutes. One teacher stated, "I have found that the absence rates of the teachers is in direct positive correlation to their commitment to the academic success of their students … nothing is more important to the true teacher that the well-being of her children." Still, others take every day allotted to them. Many are taking days off for family or children's activities and are not choosing work priorities over family priorities. Most teachers are just trying to find a good balance between both work and family responsibilities.

Implications for Future Research

The objective of this study was to explore the true reasons for teacher absenteeism as reported confidentially by teachers. Unless the true causes for absenteeism are revealed, administrators and school boards lack direction to address these concerns in direct, effective, and useful ways.

Future research should endeavor to more strictly narrow down the reasons that teachers are absent. Survey directions should be more explicit as to the definition of "absent" (out of the regular

teaching classroom) as some teachers did not consider absences for training or professional development to be absences at all.

Based on the findings in this study, categories of possible reasons for absences should be given as multiple choice answers so that data can be more easily gathered and analyzed. Absences in specific categories should be explained in more detail, especially in such vague categories as "personal" and "illness."

A question asking for the opinion of the teacher respondent as to possible incentive programs that could be used to reduce teacher absences should also be included. In addition, future research should investigate demographic data as related to the number of absences. Gender, age, school location (urban, suburban, rural), and years of teaching with respect to the number of days absent should be explored.

Conclusion

One of the implications indicated by this study was that the reason for teacher absences has moved beyond just being ill. Family obligations, professional training and duties, and a number of smaller items have exceeded personal illness as the main reasons for teacher absences from the classroom. Perhaps it is time for school districts to re-examine their professional development schedules, sick leave and personal leave days in order to manage teacher absences more effectively.

This study paves the way for future research in the real reasons for teacher absenteeism and how administrators and school districts can address teacher absences. By conducting a confidential survey, specific trends in the reasons for teacher absenteeism may be investigated. Teachers show remarkable dedication to their profession; however, they find themselves in the middle of a dilemma. Schools and school districts are being held to higher accountability standards through their state's high stakes testing. At the same time, teachers need to meet their own needs and those of their families. Schools, school districts, and states provide specified numbers of days to their teachers for absences. However, teachers are being asked to minimize their taking these days for the sake of their students' stability and academic success. Districts are scrutinizing their budgets in efforts to conserve their financial resources.

Consequently, teachers are feeling the insurmountable pressures from external forces (family, accountability, student success, administrators, school boards, parents, and life) and need time to become re-energized.

Many teachers are changing the way they handle their responsibilities and are trying to find a better balance between work and family. While some believe that society has not raised responsible adults to teach in the classroom, others are redefining what it means to be both a dedicated teacher as well as being a wonderful parent, child, spouse, or grandparent. At least for the present, there is still a tightrope to walk in this area.

References

Albrecht, G. W. (2011). *A study of the relationship between teacher absenteeism and organizational health in a large south Texas school district* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (ATT 3501574)

Alcazar, L., Rogers, F. H., Chaudbury, N., Hammer, J., Kremer, M., and Muralidharan, K. (2006). Why are teachers absent? Probing service delivery in Peruvian primary schools. *International Journal of Educational Research, 45*, 117-136. doi: 10.1016/j.ijer.2006.11.007

Betelle, T. (2009). *Absenteeism, transfers and patronage: the political economy of teacher labor markets in India* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (ATT 3382684)

Chaudbury, N., Hammer, J., Kremer, M., Muldaridharan, K., & Rogers, H. (2004). Roll Call: Teacher Absence in Bangladesh. Retrieved from http://siteresources.worldbank.org/INTSOUTHASIA/Resources/Roll_Call_Teacher_Absence_Bangladesh.pdf

Cheng, A. (2013). Taking Attendance: Teacher Absenteeism across School Types. Retrieved from http://www.uaedreform.org/wp-content/uploads/2013/08/Cheng-EDRE-WP-2013-09.pdf

Clotfelter, C. T., Ladd, H. F., and Visdor, J. L. (2007). Are Teacher Absences Worth Worrying About in the U.S.? National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w13648.pdf

Dana, L. B. (2014). *Relationships among job satisfaction, professional efficacy, student and school performance, and teacher absenteeism* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (ATT 3584512)

Data Analysis Australia. (2015). Response Rates. Retrieved from http://www.daa.com.au/analytical-ideas/response-rates/

Emery, J. N. (1931). Problem of the absent teacher. *Journal of Education, 113*, 509-511.

Hanushek, E., Kain, J., & Rivkin, S. (2004). The revolving door: A path-breaking study of teachers in Texas reveals that working conditions matter more than salary. *Education Next*. Retrieved from http://education.next.org

Hubbell, C. (2008). Reducing teacher absenteeism. Retrieved from the Report to the Wisconsin Association of School Boards. Retrieved from website: www.smhc-cpre.org/download/12

Independent Advocacy Project. (2010). Teacher absenteeism in Nigerian Public Schools (TANPA). Retrieved from website: http://iap-nigeria.org/#/programmes/4540129763

Kallio, H. E. (2006). *Exploring Personal Characteristics of Teachers and School Climate Factors Related to Teacher Absenteeism* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (ATT 3221891)

Klusman, U., Kunter, M., Trautwein, U., Ludtke, O., & Baumert, J. (2008). Engagement and emotional exhaustion in teachers: Does the school context make a difference? *Applied Psychology: An International Review, 57*, 127-151.

Leedy, P.O., and Ormrod, J.E. (2013). *Practical Research: Planning and Design.* Boston: Pearson.

Loeb, S., Darling-Hammond, L., & Luczak, J. (2005). How teaching conditions predict teacher turnover in California schools. *Peabody Journal of Education, 80*(3), 44- 70.

McGinnis, W. C. (1935). Dealing with teacher absences. *Journal of Education, 118*, 531-532.

Miller, R. T., Murnane, R. J., and Willett, J. B. (2008). Do Teacher Absences Impact Student Achievement? Longitudinal Evidence From One Urban School District. *Educational Evaluation and Policy Analysis, 30*, 181-200. doi:10.3102/0162373708318019

Miller, R. (2008). Tales of Teacher Absence: New Research Yields Patterns that Speak to Policy Makers. Retrieved from http://cdn.americanprogress.org/wp-content/uploads/issues/2008/10/pdf/teacher_absence.pdf

National Council on Teacher Quality. (2014). Roll Call: The importance of teacher attendance. Retrieved from http://www.nctq.org/dmsView/RollCall_TeacherAttendance

Portland Public Schools. (2012). *Teacher Absences at Portland Public Schools: Opportunities for Savings*. Retrieved from http://www.pps.k12.or.us/files/board/PA_Teacher-Absences.pdf

Scott, L., Vaughn, C., Wolfe, M., and Wyant, C. (2007). Reducing Teacher Absences in North Carolina. Terry Sanford Institute of Public Policy at Duke University. Retrieved from http://www.ncpublicschools.org/docs/intern-research/reports/teacherabsences.pdf

Seibert, J. C. (2013). *Study of the Perceptions of Middle School Principals on Teacher Absenteeism Within an Urban School District* (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations. (ATT 3569861)

Shapira-Lishchinsky, O. and Rosenblatt, Z. (2010). School ethical climate and teachers' voluntary absence. *Journal of Educational Administration, 48*(2), 164-181. doi:10.1108/09578231011027833

Tingle, L. R., Schoeneberger, J., Wang, C., Algozinne, B., and Kerr, E. (2012). An analysis of teacher absence and student achievement. *Education, 133*(2), 367. Retrieved from http://go.galegroup.com/ps/i.do?id=GALE%7CA313160609&v=2.1&u=mlin_s_stonecol&it=r&inPS=true&prodId=AONE&userGroupName=mlin_s_stonecol&p=AONE&digest=0ce49d424eb6b21234c819242bf9e27d&rssr=rss

Unicomb, R., Alley, J., & Barak, L. (1992). Teacher absenteeism: A study of short term teacher absenteeism in nine Nova Scotia schools which shows that teachers are absent significantly less than workers in other professions. *Education Canada, 32*(2), 33-37.

Wisconsin Association of School Boards (WASB) Employment & Labor Law Staff. (2009). *Addressing Teacher Absenteeism.* Retrieved from 2009-2011 Bargaining Goals: WASB Position Paper Series website:https://www.wasbmemberservices.org/websites/employment_law_hr_services/File/position_papers/0911%20Reducing%20Teacher%20Absenteeism.pdf

EVALUATING THE IMPLEMENTATION OF CORE PRACTICES IN TEACHER EDUCATION PROGRAMS IN TEXAS

Luke C. Lyons, M.Ed.
  Texas A&M University

Jennifer G. Whitfield, M.S.
  Texas A&M University

Antonia Ketsetzi
  Texas A&M University

Hersh C. Waxman, Ph.D.
  Texas A&M University

Kenneth J. Fleming, M.Ed.
  Texas A&M University

Amy B. Ging, M.S.
  Texas A&M University

Matthew J. Etchells, M.Ed.
  Texas A&M University

Abstract

The purpose of this study is to compare and contrast the implementation of six core practices among 10 different teacher education programs in Texas. The six core practices represent a research-based conceptual framework of an exemplary teacher education program and include: field experience, educational coursework, content coursework, student-centered pedagogy, multicultural and diversity, & mentoring. Programs in the sample were evaluated against the designed instrument (rubric) and categorized by their relative strengths and weaknesses in each of the core practices. Findings indicate that although the programs in the sample shared many commonalities, there was a general lack of evidence of student-centered pedagogy and mentoring. There were distinct differences in how each program operationalized an emphasis on multicultural and diversity in preservice teacher coursework. Certification level also has a moderating effect on the program's rating on content coursework, with secondary scoring significantly higher than elementary certification programs. Further findings and implications are discussed.

Key words: preservice teacher, teacher education, core practices, conceptual framework, undergraduate.

Introduction

One of the recent challenges in teacher education is the assessment and evaluation of teacher preparation programs based on empirical evidence that their graduates have a positive impact on student learning (Betebenner et al., 2012; Worrell, et al., 2014). The use of such value-added measures to evaluate teacher education programs has been widely scrutinized by research organizations such as the

National Research Council, the Educational Testing Service, and other researchers because they have concluded that ratings of teacher effectiveness and program quality based on student test scores are too unreliable and measure too many things other than the teacher and the program to be used to make high-stakes decisions (Darling-Hammond, Amrein-Beardsley, Haertel, & Rothstein, 2012; Floden, 2012). Other critics of the use of value-added measures to evaluate teacher education programs are concerned that these measures do not distinguish between school quality and the effectiveness of teacher preparation program graduates (Mihaly, McCaffrey, Sass, & Lockwood, 2013). In addition, this emphasis on value-added assessment has shifted the focus away from investigating effective components and practices of teacher education programs and improving teacher preparation. Despite these concerns, other organizations like the American Psychological Association (Worrell, et al. 2014) have advocated that the use of value-added measures can be an important evaluation component that can inform teacher education programs.

Although there is an increased interest on research on teacher preparation programs, the research on characteristics of teacher education programs is quite limited (Cochran-Smith & Villegas, 2015; National Research Council, 2010). Furthermore, there have been very few theoretical or conceptual frameworks that have tried to summarize and capture the unique contributions of key areas of emphasis in preservice teacher education. For example, there is a large body of research that has focused on the importance of incorporating field-based experiences and teacher education programs (Cooper & Nesmith, 2013; Lastrapes & Negishi, 2012; Piro, Anderson, & Fredrickson, 2015). Similarly, there have been other studies that focus on the amount of coursework and the importance of content and coursework on preservice teacher preparation (Ball, Thames, & Phelps, 2008; Shulman, 1986). Despite the importance of several particular components and perspectives for preparing teachers, there is a great deal of variation among teacher education preparation programs and how they execute their degree plans. Various institutions have their own philosophies, sequence of coursework and areas of emphasis. Although teacher education programs are often held accountable for the number of pedagogy classes they include in

their programs due to state regulations, the quantity and degree to which such courses are included and emphasized within an individual program can vary to a great extent. Some programs may focus more on content-related coursework, others may focus on multicultural and diversity topics, while the methods of how to teach from the traditional teacher driven lesson to a more student-centered approach can vary greatly among preservice teacher preparation experiences (Pierce & Kalkman, 2003; Stover, 1990). Beyer (2001) argues that teacher education programs need to critically examine the principles and perspectives of their programs because these attributes of an effective teacher preparation program can "uncover hidden realities and the choices others and we have made and what they are linked to (p. 160)."

Purpose of Study

The purpose of this study was to illustrate how different teacher education programs actually implement these major frameworks and perspectives in their programs, thus developing their own conceptual framework for teacher education. The focus of the study was on 10 various programs from three different institutions across the state of Texas. By critically analyzing areas where these preparation programs are strong and weak, we were able to evaluate the degree that these teacher education programs emphasize common areas of excellence. By using this conceptual framework for teacher education across the state of Texas, we were also able to identify areas where further research would be of interest.

Framework Development

The first aspect of our research was to develop an instrument to measure programs to establish a conceptual framework for teacher education. A review of research in preservice teacher preparation and various conceptual frameworks narrowed the scope of interest. We examined reviews of research in teacher education (e.g., Cochran-Smith & Vellegas, 2015; Cochran-Smith et al. 2015; National Research Council, 2010) as well as other experimental and theoretical studies that focused on conceptualizing exemplary teacher education programs (e.g., Darling-Hammond, 2006; Darling-Hammond & Bransford, 2005; McDonald, Kazemi, & Kavanagh, 2013). Based on our review, we chose the following six core teacher education practices: (a) Field Experience, (b) Educational Coursework, (c) Content Coursework,

(d) Student-Centered Pedagogy, (e) Multicultural and Diversity, and (f) Mentoring. To be considered an exemplary teacher education program, all of these core practices should be implemented to a high degree. For the purpose of our study, each core practice was measured as "Low", "Medium" or "High" based upon operational definitions determined by the research team, which will be described in detail in the following sections. Validation of the instrument was devised through extensive literature review and the research team completed a pilot phase with a larger sample size of programs. A consensus around the pilot phase findings was used to finalize the instrument, including adjustment to better highlight variability among programs. A summary the ranking criteria of each framework is provided in Table 1.

Field Experience

Noting the Texas state minimum requirement for field experiences is 30 hours, we rated field experiences by three attributes: (a) number of hours of field experiences, (b) nature of the experience, and (c) number of locations. Experiences can include and vary from observing classroom experiences to team teaching experiences to full control of the classroom. The nature of experience was hard to determine, thus the primary focus going forward would be based upon the number hours and placements in the field.

Deliberations and multiple calibrations allowed the research team to arrive at an operational definition of field experience in the context of this conceptual framework. Field experience included the number of hours preservice teachers have prior to placement in student teaching or internship along with the number of placements. While all programs that would be identified would include student teaching or an internship, these were omitted from field experience, as it was mandatory for the completion of all programs that were analyzed. "Low" field experience would be limited to one placement with 30 to 59 hours of logged during that placement. "Medium" would include the same amount of hours spanned in "Low" field experience, but be from 60 to 119 hours and include placements in multiple locations, rather than only one school setting. Preservice teachers experiencing over 120 hours of fieldwork prior to student teaching and two or more unique placements would be defined as "High" field experience (see Table 1).

Educational Coursework

The amount of education coursework deals with the quantity of hours or credits that a teacher education program offers that focuses on pedagogy. Pedagogy can be defined as the science of teaching that includes theory, practice, and methods for the facilitation of instruction. The operational definition of education coursework would be defined as collegiate classes that are offered through a College or School of Education or that are geared towards pedagogical practices. Collegiate coursework in education classes would include foundation courses in curriculum and instruction, education theory, classroom management, education psychology, educational technology, teaching to diverse students, and methods course work that may or may not be in conjunction with a field placement. Other university-based courses geared towards classroom practices or foundations in teaching and education may fall under the scope of education coursework (see Table 1).

"Low" educational coursework would be defined as 0 to 17 hours of coursework devoted to pedagogy and practice, while "Medium" would span between 18 and 35 hours of coursework in these areas. Programs to be defined as "High" would include coursework related to education at more than 36 hours during the course of study for a preservice teacher.

Content Coursework

Focusing on content knowledge, Shulman (1986) argued that knowing a subject for teaching requires more than knowing its facts and concepts. According to Shulman, the teacher has a special responsibility in relation to content knowledge and should possess depth of understanding in order to communicate what is essential about a subject and be able to provide alternative explanations of the same concepts or principles.

Although most will agree the importance of teachers having solid content knowledge and thoroughly understanding of the material they teach, we also realize that is not the same as knowing how to teach it. Thus being good at something does not carry with it the ability to unpack it for a learner (Ball & Forzani, 2010). In the debate over the importance of content knowledge or pedagogy to teacher quality,

the priority remains on the need for teachers' to know the subject matter they teach. This conceptualization of content knowledge allows the teacher to have a deeper understanding the content for dissemination during teaching. The reason is simple: Teachers who do not themselves know a subject well are not likely to have the knowledge they need to help students learn this content. Furthermore, with strong subject-matter knowledge, teachers are able to develop the capacity to understand ideas from the perspectives of others who are first encountering them (Ball, Thames, & Phelps, 2008). Teachers with great content specific understanding are able to conceptualize the discoveries and knowledge from scientists, mathematicians, literary greats and historians, thus making it comprehensible for students. Educators who have content specific training in their teaching field possess a trained expert level of knowledge in what they are teaching. This coupled with an expert level of pedagogical practice creates a teacher that not only can present and deliver instruction effectively, but convey the content in an authentic manner.

Content coursework would be operationally defined by the research team to include subject specific courses that were outside the basic degree requirements and considered to be additional hours in the related content field to the certification being sought after. "Low" content coursework would be between 0 to 11 hours of additional content coursework, typically less than four extra classes in the areas of certification concentration. "Medium" would span between 12 to 17 hours or credits of additional content coursework and a rating of "High" would only apply to programs that required students to have an additional 18 hours of coursework, over the minimum requirements, in each area of concentration (i.e., science, math, social studies or language arts). The 18-hour mark would be established due to this being a typical amount of coursework for one to earn a minor in a certain field of study that was outside of their basic requirements and coursework.

Student-Centered Pedagogy

With an emphasis on the promotion of inquiry and project-based learning, future teachers must be equipped to teach in a student-centered manner (Cochran-Smith & Lytle, 2009; Ortlieb & Liu, 2011). In

the past number of years research in this area has focused on moving towards more learner-centered and student-centered practices in the classroom (McDonald, Kazemi, & Kavanagh, 2013; Walters, et al. 2014). While these are common themes in many science and mathematics classrooms, the permeation into other concentration areas is proliferating, thus teacher preparation programs need to mirror this paradigm shift (Ilter, 2014; Ratzer, 2014). Student-centered classrooms are not becoming a classroom of tomorrow, but the one of the present. With classrooms focusing more on the learners' needs and how to engage students actively in the classroom; a shift must be made in how Preservice teachers are prepared to implement instruction.

While the amount of focus on student-centered pedagogy can differ per instructor for particular courses, this study aimed to focus on coursework definitions as provided by the degree plans of the universities. To define student-centered pedagogy as part of this conceptual framework for teacher preparation, the research team determined that it would focus on the number of courses that a student in a particular program would incur with a focus on student-centered practices at the root of the class. "Low" emphasis would be defined as 1 or fewer classes, 2 to 3 classes would be defined as "Medium" and "High" would include any programs with 4 or more classes devoted towards student-centered pedagogy.

Multicultural and Diversity

While there has been an increased focus over the last few decades for inclusion and teaching every child, including acts like the Elementary and Secondary Education Act of 1965 and No Child Left Behind, there is still a high disparity among teacher preparation programs on how they promote multicultural and diverse viewpoints of learners (Elementary and Secondary Education Act of 1965; No Child Left Behind Act of 2002; Cochran-Smith, 2003; Cochran-Smith, et al. 2009; McDonald & Zeichner, 2009). Coursework devoted to multicultural aspects and diversity across student populations is a necessary part to any preservice teacher preparation program. This emphasis has been a topic of many research initiatives and research shows that it is essential to teach to everyone, not just the majority.

Classes were determined to have a multicultural and diversity emphasis based on the title and official course description. Courses focused on culture, special populations, diversity, second languages and other related areas were determined to be multicultural and diversity focused. Individual assignments and lessons during a semester are not representative of a course objective, thus course syllabi were not included in the determination of a class being considered as having a multicultural and diversity emphasis. A "Low" rating was given to programs with 1 or fewer courses dedicated to multiculturalism and diversity. A "Medium" rating was designated by 2 to 3 courses and a "High" rating was assigned to programs with more than 4 courses focused on multicultural and diversity topics.

Mentoring

Mentoring is another area of educational research interest and has been shown to help with the process of maturation in preservice teachers. Mentoring has been found to be critical as a component of teacher education due to its ability to bridge the gap between teacher preparation and teacher induction (Ingersoll & Strong, 2011).

Mentoring was defined by interactions with a university supervisor or mentor outside of coursework, specifically designated in the field. The quality of the interactions was not considered for the study, thus limiting the mentoring aspect of the study to visitation counts. "Low" mentoring was determined by 1 or fewer supervisor/mentoring interactions, with "Medium" being defined as 2 interactions and more than 3 interactions was determined to be rated as "High" for mentoring.

Table 1

Criteria for Each "Framework" Ranking

	Field Experience	Education Coursework	Content Coursework	Student Centered	Multicultural Diversity	Mentoring
Low	30-59 hours 1 Placement	0-17 hours	0-11 hours	0-1 courses	0-1 courses	0-1 courses
Medium	30-59 hours 1-2 Placements	18-35 hours	12-17 hours	2-3 courses	2-3 courses	2 courses
High	30-59 hours 2+ Placements	36+ hours	18+ hours	4+ courses	4+ courses	3+ courses

Methods

Selection of Programs

After the development of the instrument, the research team identified teacher education programs across the state of Texas. The purposive selection of programs was an attempt to capture multiple viewpoints of teacher education throughout the state of Texas, but in a capacity that would allow the research team to be critical regarding the six key principles in each program. Each member of the research team had some affiliation, experience, or familiarity with each of the three universities selected and the 10 programs. Within the three universities selected, the large state university included four different programs with different certification levels, while the regional state university and private university both included three program types.

The study only focused on university-based preservice teacher preparation programs, thus all programs that were alternative-certification routes not grounded at a university were excluded from the study. Out of the 10 programs selected, two programs were at the graduate school level for preservice teachers who had already completed either a Bachelor of Science or Bachelor of Arts in the area of concentration. One program was a preservice teacher preparation program that was in conjunction with the College of Science at the specific university geared towards teaching in a secondary school environment. The other seven programs were traditional preservice teacher preparation programs found in the College or School of Education. The more traditional teacher education paths varied in concentration areas of elementary, middle and secondary education with various fields of content education.

Areas of concentration included specific concentrations for the three less traditional routes based upon the degree attained or to be attained by the student. The areas of concentration for the seven traditional preservice teacher programs examined included early childhood to 6th grade, grades 4 through 8 and secondary certifications. Different institutions focused on grades 4 through 8 in multiple ways by grouping concentrations (i.e., Math/Science or Language Arts/Social Studies), while others separated the

programs by one specific area of concentration. However, for the focus of the study to be concise and not convoluted, the research team decided to examine each "program" based on grade banding and include descriptions of various differences.

"Institution One" is a large state research-based university and programs "A" through "D" are included with affiliation to this university. "Institution Two" of the universities selected is a public regional comprehensive state university with a history of teacher education and included programs "E" through "G." "Institution Three" is a private university and programs "H" through "J" are connected to this university. Descriptions of the programs can be found in Table 2.

Table 2

Programs Selected for Conceptual Framework in Teacher Education

Program	Concentration Area	Institution	Level
A	EC – 6 Generalist	1 – Public	Undergraduate
B	4 – 8 Combination[1]	1 – Public	Undergraduate
C	Secondary	1 – Public	Undergraduate
D	Secondary	1 – Public	Graduate
E	EC – 6 Generalist	2 – Public	Undergraduate
F	4 – 8 Combination[1]	2 – Public	Undergraduate
G	Secondary	2 – Public	Graduate
H	EC – 6 Generalist	3 – Private	Undergraduate
I	4 – 8 Specific[2]	3 – Private	Undergraduate
J	Secondary	3 – Private	Undergraduate

1 – Combination refers to certification in Math/Science or Language Arts/Social Studies; 2 – Specific refers to individual areas of concentration (Math or Science or Language Arts or Social Studies)

Data Collection

Data collection for the study came in the form of open access records, experiences with programs and conversations. Open-access records included degree plans and records of study for the programs selected. These were attained through the institutions website and are open to the public. Experiences with the program vary from being a product of the program, teaching within the program, affiliation with

the program or general knowledge of how the program is executed. Conversations included informal talks with faculty about the courses and the extent to how a program performs.

Data Analysis

Analysis of the programs consisted of the previously mentioned rating of "Low," "Medium," and "High." It was determined that the research team had a high, above 90%, inter-rater reliability. Each member of the research team coding all ten programs during a simultaneous coding session determined this rating. Reliability was able to be high due to the reconvening and group discussions that determined the rankings of each program that was assessed. Much deliberation went into assigning the final rankings and were completed by a research team of seven members who were taking a doctoral-level research course in teacher education at a large, research-based university. Programs were ranked per "framework" in a sequential order before advancing to the next "framework" in an effort to maintain consistency.

Results

The findings from our analyses suggest there is minimal variability among the categories of "Field Experience", "Educational Coursework", and "Mentoring." There is great variability however, in some of the other important components such as "Content Coursework", "Student-Centered Pedagogy", "Multicultural and Diversity." The components of content and student-centered pedagogy have the most variation with several programs being rated high and several programs low. Student centered pedagogy seems to be rated somewhat moderately to low in all of the programs.   These findings suggest there is some variability across programs within the state although there are similarities where you would expect none in field experience, content, and mentoring.

Table 3 displays the results of the 10 selected teacher preparation programs against each of the six "frameworks." The "frameworks," described above, were ranked for each program and rated as "Low," "Medium," or "High."   Overall, the EC – 6 teacher education programs (A, E, and H) all are very similar across the board with the biggest difference being that program H appears to have less emphasis on multiculturalism- and diversity-related coursework. The only other difference is that Program "A" has a

little more content related coursework outside of the basic requirements; however, it was still less than some of the other programs and was only rated as a "Medium." The two graduate programs (D and G) were relatively similar as well, with the only difference being in that program "G" included more mentoring experiences. "Education Coursework" and "Mentoring" were consistent across the various undergraduate programs with very little variability.

There were different degrees of measure amongst the programs for "Content Coursework," with the only commonality being that undergraduate secondary programs (C and J) had a high emphasis on content. The two graduate programs were not rated as high because due to the nature of the program all coursework in these programs was focused on pedagogy and not content, as these preservice teachers would have already attained a Bachelor of Arts or Bachelor of Science in their concentration area. The framework "Multicultural and Diversity" also had varying degrees of differences among the programs with the non-secondary certification undergraduate programs at the public universities (A, B, E and F) placing more emphasis in this area of focus.

"Student-Centered Pedagogy" was determined to be "Low" to "Medium" across the scope of all programs. Also, the framework for "Education Coursework" was rated as "High" amongst 7 of the 10 programs, with the other three receiving a rating of "Medium."

Table 3

Ratings of Selected Programs against Conceptual Framework for Teacher Education

Program	Field Experience	Education Coursework	Content Coursework	Student Centered	Multicultural Diversity	Mentoring
A	High	High	Medium	Medium	High	Medium
B	High	High	Medium	Medium	High	Medium
C	High	Medium	High	Low	Low	High
D	Low	High	Low	Low	Low	Low
E	High	High	Low	Medium	High	Medium
F	High	High	High	Medium	Medium	Medium
G	Low	High	Low	Low	Low	Medium
H	High	High	Low	Medium	Low	Medium
I	High	Medium	High	Medium	Low	Medium
J	High	High	High	Medium	Low	Medium

Program Concentration Levels: EC-6 = A, E, H; 4-8 = B, F, I; Secondary (8-12) = C, J; Master Degree Alternative Certification Programs = D, G

Implications

Our research shows many similarities between public institutions that are bound by state regulations. Some of the areas where the public universities are lacking may be due to constraints in current degrees plans and the amount of courses available. This could explain the lower ratings in "Content Coursework," thus it may not be an area that can change much.

Similar to prior research, we found that there was more variation *within* programs at the same university than there was *between* universities (Cochran-Smith & Vellegas, 2015; National Research Council, 2010). We could hypothesize that the similarities between universities may be due to the fact that our analysis is limited to one state (i.e., Texas) that has one governing body for teacher preparation and certification.

The results from this study establish a conceptual framework for effectively preparing teachers at the university level and what must be included to accomplish this goal. Education is constantly evolving, thus our teacher preparation programs need to echo these changes. Courses dedicated to building teachers

content knowledge and student-centered pedagogy practices need to be emphasized more in preservice teacher instruction. The study also found a lack of consistency when preparing teachers for a culturally diverse classroom. This inconsistent emphasis of instruction is something that needs to be addressed to better prepare all university-trained teachers for the diverse, student-centered and rigorous content laden classroom of today.

In the future, we would like to extend our research to examine other important questions such as do these core practices relate to other outcomes such as teacher attrition, quality of graduates' classroom instruction, and graduates' confidence and teaching efficacy. We are aware there may be some limitations related to the measurement of these core practices, but we feel our approach was fairly easy to use and yielded very reliable findings. We also feel that our approach is much more reputable than other attempts to evaluate teacher education programs that have focused exclusively on reported syllabi, such as the National Council for Teacher Quality reports. In addition to degree plans and course descriptions via publicly available online materials, we used our knowledge and experience and the testimony of experience faculty to determine the ratings of the programs. Through the evaluation of these programs, we were also able to establish each program's conceptual framework for teacher education. There are many avenues into which future research may venture from here including the analysis of more programs throughout the state, outside of the state, and the identification of areas of needed emphasis for research and development to create better teacher preparation programs.

References

Ball, L. D. & Forzani, M. F. (2010). What does it take to make a teacher? *Phi Delta Kappan, 92*(2)*,* 8-12.

Ball, L. D., Thames, H. M, & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education, 59*(5), 389-407.

Betebenner, D., Braun, H., Corcoran, S., Darling-Hammond, L., Friedman, J., Goldhaber, D., Rothstein, J. Institute of Education Sciences. (2012). Learning from recent advances in measuring teacher effectiveness (Washington, DC, August 9, 2012). *Institute Of Education Sciences*.

Beyer, L. E. (2001). The value of critical perspectives in teacher education. *Journal of Teacher Education, 52*(2), 151-163.

Cochran-Smith, M. (2003). The multiple meanings of multicultural teacher education: A conceptual framework. *Teacher Education Quarterly*, *30*(2), 7-26.

Cochran-Smith, M., & Lytle, S. L. (2009). *Inquiry as stance: Practitioner research for the next generation*. New York: Teachers College Press.

Cochran-Smith, M., Shakman, K., Jong, C., Terrell, D. G., Barnatt, J., & McQuillan, P. (2009). Good and just teaching: The case for social justice in teacher education. *American Journal of Education, 115*, 347-377.

Cochran-Smith, M., & Vellegas, A. M. (2015). Framing teacher preparation research: An overview of the field, Part 1. *Journal of Teacher Education, 66*(1), 7-20.

Cochran-Smith, M., Villegas, A., Abrams, L., Chavez-Moreno, L., et al. (2015). Critiquing teacher preparation research: An Overview of the field, Part II. *Journal of Teacher Education, 66*(2), 114–118.

Cooper, S., & Nesmith, S. (2013). Exploring the role of field experience context in preservice teachers; Development as mathematics educators. *Action in Teacher Education*, *35*(3), 165-185.

Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco, CA: Jossey-Bass.

Darling-Hammond, L., & Bransford, J. (Eds.). (2005). *Preparing teachers for a changing world*. San Francisco, CA: Jossey-Bass.

Darling-Hammond, L., Amrein-Beardsley, L., Haertel, E., & Rothstein, J. (2012). Evaluating teacher evaluation: Popular modes of evaluating teachers are fraught with inaccuracies and inconsistencies, but the field has identified better approaches. *Phi Delta Kappan, 93*(6), 8–15.

Elementary and Secondary Act of 1965, P.L. 89-10, 20 U.S.C 20 § 201 (1965).

Floden, R. E. (2012). Teacher value added as a measure of program quality: Interpret with caution. *Journal of Teacher Education, 63*(5), 356-360.

Ilter, I. (2014). A study on the efficacy of project-based learning approach on social studies education: Conceptual achievement and academic motivation. *Educational Research and Reviews*, *9*(15), 487-497.

Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 81*(2), 201-233.

Lastrapes, W., & Negishi, M. (2012). Foundational field experiences: A window into preservice teachers' cultural consciousness and self-efficacy for teaching diverse learners. *SRATE Journal*, *21*(1), 37-43.

McDonald, M., Kazemi, E., & Kavanagh, S. (2013). Core practices and teacher education pedagogies: A call for a common language and collective activity. *Journal of Teacher Education, 64*, 378–386.

McDonald, M., & Zeichner, K. (2009). Social justice teacher education. In W. Ayers, T. Quinn, & K. Stovall (Eds.), *Handbook of social justice in education* (pp. 595–610). New York: Routledge.

Mihaly, K., McCaffrey, D., Sass, T. R., & Lockwood, J. R. (2013). Where you come from or where you go? Distinguishing between school quality and the effectiveness of teacher preparation graduates. *Education Finance and Policy, 8*(4), 459-493.

National Research Council (2010). *Preparing teachers: Building evidence for sound policy*. Washington, DC: National Academy of Sciences.

No Child Left Behind Act of 2001, P.L. 107-110, 20 U.S.C. § 6319 (2002).

Ortlieb, E. T., & Lu, L. (2011). Improving teacher education through inquiry-based learning. *International Education Studies, 4*(3), 41-46.

Pierce, J. W., & Kalkman, D. L. (2003). Applying learner-centered principles in teacher education. *Theory Into Practice*, *42*(2), 127-32.

Piro, J. S., Anderson, G., & Fredrickson, R. (2015). Quality and early field experiences: Partnering with Junior Achievement. *Teacher Educator*, *50*(1), 31-46.

Ratzer, M. B. (2014). Opportunity knocks! Inquiry, the new national social studies and science standards, and you. *Knowledge Quest*, *43*(2-), 64-70.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, *15*(2), 4-14.

Stover, L. T. (1990). Modeling a student-centered approach in the secondary teacher education program. *ActioniIn Teacher Education*, *12*(1), 35-42.

Walters, K., Smith, T. M., Leinwand, S., Surr, W., Stein, A., & Bailey, P. (2014). *An up-close look at student-centered math teaching*. Quincy, MA: Nellie Mae Education Foundation.

Worrell, F., Brabeck, M., Dwyer, C., Geisinger, K., Marx, R., Noell, G., & Pianta, R. (2014). *Assessing and evaluating teacher preparation programs*. Washington, DC: American Psychological Association.

PRESERVICE TEACHER PREPARATION IN TEXAS: TRAINING GENERAL EDUCATORS TO TEACH STUDENTS WITH DISABILITIES

Amanda Renee Hurlbut, Ph.D. Candidate
University of North Texas

Abstract

Students with disabilities are increasingly receiving the majority of instruction in the general education classroom as a result of the reauthorization of the Individuals with Disabilities Education Act of 2004 and No Child Left Behind 2001. Research suggests that many teachers have historically held negative attitudes towards inclusion and feel underprepared to work with students with specialized learning needs. The purpose of this study was to examine how universities in Texas prepare pre-service teachers to work with exceptional students through degree plans, course objectives, and assignment requirements. Degree plans and syllabi were analyzed in multiple certification areas. Several programs required teachers to take the same special education courses. Results indicate that most elementary teachers receive at least one special education exceptionalities course, while many secondary programs do not require any such course. Secondary programs typically integrated special education content within a more generalized course on instructional strategies. Course goals, inclusion of RTI, and assignments depended upon the type of course and individual university implementation of the course.

Keywords: teacher certification, general education, special education, RTI

Introduction

There is a wide range of student learning needs in the general education classroom. General education teachers must be knowledgeable and prepared to teach students from diverse cultural and religious backgrounds, students who speak other languages, and students with a variety of specialized learning needs or exceptionalities (Gehrke & Cocchiarella, 2013). In 2001, Congress reauthorized the Elementary and Secondary Education Act known as No Child Left Behind (NCLB). In this legislation, all students, including those that have disabilities, are required to have access to and succeed in the general education curriculum. Prior to the passage of NCLB, students with disabilities were often excluded or exempt from general education curriculum requirements including State and local assessments (Klehm,

2014). In 2004, the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004) renewed emphasis on including students who have disabilities in the general education classroom by providing appropriate educational experiences using classroom modifications, accommodations, and assistive technology to help students with disabilities; this is referred to as mainstreaming or inclusion.

The number of students with disabilities receiving all or the majority of their education in the general education environment has increased dramatically in the last decade. According the latest annual report to Congress on the implementation of IDEA in schools, approximately 95% of students with disabilities receive instruction in the general education classroom for at least part of the school day, with approximately 81% receiving the majority of instruction in the regular classroom (Office of Special Education, 2013). Additionally, the percentage of elementary and secondary aged students with disabilities educated through inclusion in the general education classroom for 80% or more of the school day increased from 46.5% in 2000 to 63.7% percent in 2010. Prior to the passage of NCLB in 2001, the percentage had remained relatively unchanged (U.S. Department of Education, Department of Education Statistics, 2013). Due to this rise in inclusion practices and placement of students with disabilities in the general education classroom, it is imperative that pre-service teachers receive appropriate experiences and learning opportunities to prepare them for this certainty, including preparation in strategies to best work with students who are at risk for learning difficulties or who have disabilities.

Literature Review

Research has traditionally indicated that general education teachers at both the elementary and secondary level do not feel adequately prepared to work with students who have disabilities, despite the rising number of students included in the mainstream classroom (Conderman & Johnston-Rodriguez, 2009; Goodlad & Field, 1993). Additionally, research has demonstrated that pre-service teacher preparation, including short term courses and field experiences, can positively impact teachers' attitudes towards inclusion practices and working with students who have disabilities (McHatton & Parker, 2013). This suggests that courses specific to special education topics are necessary for positive instructional

approaches related to mainstreaming and inclusion.

Some researchers have concluded that pre-service preparation is the best time to address concerns, attitudes, and perceptions about inclusive practices (Forlin, et al., 2009; Harvey, Yssel, Bauserman, & Merbler, 2010). Hadadian and Chiang (2007) found that formal coursework in special education topics had a positive impact on early childhood and elementary pre-service teachers' attitudes towards inclusion. Shade and Stewart (2001) studied attitudes of both general and special education pre-service teachers and found positive gains in attitude scores towards inclusive practices following the participation in a special education introductory course. McCray and Alvarez McHatton (2011) discovered similar results by studying elementary and secondary pre-service teacher attitudes towards inclusion before and after a course on including students with disabilities in the general education setting. Results indicated that attitudes toward inclusion were more positive after course completion among both elementary and secondary participants. McHatton and Parker (2013) reported in their study that pre-service participants experienced increased favorable attitudes towards inclusion following the participation in a general education/special education collaborative course that included field experiences. Furthermore, pre-service general education teacher participants in a single special education introductory course demonstrated significantly decreased levels of anxiety and hostility towards teaching students with disabilities in the regular classroom (Ajuwon, Lechtenberger, Griffin-Shirley, Sokolosky, Zhou & Mullins, 2012; Shippen, Crites, Houchins, Ramsey & Simon, 2005).

Some research has indicated a difference between elementary and secondary teachers in terms of perceptions about inclusive practices and how they are prepared in their teacher education programs. Specifically, McHatton and McCray (2007) found that secondary teachers tended to be less positive about inclusion as an effective educational practice. Conderman and Johnston-Rodriguez (2009) reiterated this finding with secondary teachers more often reporting that they were underprepared to work with students in inclusive settings than their elementary teacher counterparts. A study by Cooper, Kurtts, Baber, and Vallecorsa (2008) reported that secondary teacher education programs addressed inclusion,

mainstreaming, and special education issues to a much lesser extent than elementary programs. Preparation in inclusive practices depends largely upon the teaching level (elementary or secondary), the area of certification (general education or special education), and the design of the program to include field experiences that have inclusive practices built in to them (Gehrke & Cocchiarella, 2013; Kim, 2011).

Studies have shown that pre-service teacher preparation is an optimal time to address teacher attitudes towards inclusion (Forlin, et al., 2009; Harvey, Yssel, Bauserman, & Merbler, 2010). Since research has demonstrated a positive link between pre-service coursework and teacher attitudes towards inclusion and that elementary teachers tend to receive more extensive preparation in inclusion practices than secondary equivalents, a study into the pre-service training practices at Texas universities is certainly warranted.

Purpose and Research Questions

The purpose of this study was to analyze how Texas universities address the issue of preparing pre-service general education teachers to work with students with disabilities and other specialized learning needs through degree plan offerings, types and goals of courses, and assignment requirements as indicated by degree plans and syllabi. The following questions guided this study:

1. How many and what types of courses are offered in preparing general education elementary and secondary teachers to work with students who have disabilities?

2. What are the overall trends in course goals, objectives, and assignments?

Methodology

According to Texas Administrative Code, TAC 19 §228.30, educator preparation programs in the State of Texas must be founded upon the educator standards adopted by the State Board for Educator Certification (SBEC) and the Texas Essential Knowledge and Skills (TEKS) for each subject or certification area. The TAC also states that the curriculum for each educator preparation program should rely on "scientifically based research to ensure teacher effectiveness" (TAC 19 §228.30). In addition, curriculum for educator preparation programs must address TAC 19 §228.30 (10) classroom assessment

for instruction and diagnosing learning needs and (12) special populations. This means that universities and other certification agencies must prepare pre-service teachers to assess learning needs in order to adjust instruction, usually through a Response to Intervention (RTI) or similar process; provide awareness and deliver strategies to effectively work with special populations of students, including students who are at risk for academic difficulties or who have disabilities. However, there is a wide assortment of implementation tactics to accomplish these goals. Universities can offer specialized classes on the topics of learning needs and special populations or can choose to integrate these educational goals within a course on learning methodologies or other foundations of education; Lombardi and Hunka (2001) labeled this the "strand" approach. This approach was used to identify courses that were not specific special education courses.

Course degree plans and syllabi were obtained through website and email solicitations from a sample of ten large Texas universities in the certification areas of Early Childhood through Sixth grade Generalist (EC-6), Fourth through Eighth grade subject-specific (4-8), and Eighth through Twelfth grade subject-specific (8-12) during a long semester of the 2013-2014 academic school year. For the purposes of this study, the 4-8 and 8-12 degree plans focused on a route for generic content or subject certification, although most of the subject-specific degree plans were fairly identical in the educational related course offerings, meaning other subject certification areas required the same education courses while substituting only the content courses. University syllabi samples were chosen based on overall enrollment and size, location, reputation of the teaching program, and availability of the syllabi. Private schools were considered for the study, but there was limited access to these samples.

Data Analysis

Sixty syllabi were analyzed, six from each university: two from the EC-6 programs, two from the 4-8 programs, and two from the 8-12 programs. However, when searching the degree plan and course descriptions it became apparent that many of the classes lacked course content significant to the purpose of the study. Course syllabi that did not explicitly or implicitly apply to the research topic were not

included in the analysis. Additionally, many of the degree plan course requirements were identical at the EC-6, 4-8, and 8-12 level. Thus, the sample size used in this study consisted of a total of 27 syllabi, with 15 syllabi being shared among two or all certification plans, eight unique at the EC-6 level, two unique at the 4-8 program level, and two unique at the 8-12 level. A document analysis of each syllabus was completed to reveal trends related to the degree plans, including the number, type, and goals of the course, instructional delivery, and required assignments.

The degree plans were sorted by class designation. Classes with an obvious focus on special education were offered by the special education or educational psychology department and were designated as special education specific courses or SPED courses. If the degree plan did not appear to contain such a class, further inspection found classes that had a general education psychology or similar focus to determine how these classes covered the topic of teaching students with exceptionalities. Many of the degree plans included courses such as education or child psychology, human learning theory, diverse learning methodologies, or child development that could potentially address such a topic; these courses are referred to as integrated courses.

Results

EC-6 Teacher Preparation

Degree plans. Students seeking to teach elementary grade levels can choose from a variety of certification options. Students can obtain Generalist certification in all content areas, and can also get additional certifications to teach English as a Second Language (ESL), Bilingual education, or Special Education (SPED) if the degree plan is available. Many universities require students to choose a specialized route by only offering an EC-6 option with either ESL, Bilingual, or SPED by adding extra, specialized courses to the regular EC-6 Generalist option.

Only courses specific to either the EC-6 Generalist or the EC-6 with ESL degree plan were considered for this study. Pre-service teachers receiving certification in the EC-6 with the SPED option would assumingly receive necessary preparation to teach students with disabilities, usually in the form of

added coursework and field experiences specific to teaching students in a special education setting and would not meet the overall aim to study the preparation of general education practitioners. Furthermore, EC-6 with Bilingual certification degree plans were considered but not used since this certification route is highly specialized, less common, and nearly identical to ESL plans.

There was a higher availability of the ESL option and Generalist option in comparison to the SPED option; all ten universities offered an ESL option versus only seven offering a SPED option. Seven universities offered a generic EC-6 Generalist degree plan while seven also offered a SPED supplemental option in addition to or in exchange for the Generalist degree plan. Three universities did not offer a SPED certification. Table 1 demonstrates the various certification options offered at each university, including the number of SPED specific courses, integrated courses, and ESL courses within the EC-6 Generalist plan based upon published degree plans from each university.

Table 1

EC-6 Degree Plan Comparison

University	University offers an EC-6 Generalist with SPED Option	No. of SPED Specific Courses in EC-6 Generalist Option	No. of Integrated courses that have related content in EC-6 Generalist Option	No. of ESL courses in EC-6 Generalist Option
A	Y	1	0	2
B	Y	2	0	1
C	N	0	2	2
D	Y	2	0	1
E	N	1	1	1**
F	Y	1	1	2**
G	Y	1	1	2
H	Y	2	0	1
I	N*	1	1	2**
J	Y	1	1	2

Note. *Offers an EC-12 SPED option; **Based upon the EC-6 with ESL Supplemental Degree Plan

Course offerings were analyzed next. Nine out of the ten programs offered at least one specialized course in teaching students with exceptionalities while three universities required two courses. University C was the only program that did not include a specific course on teaching students with exceptionalities, although this was a topic in both of the generic or integrated courses. The number of ESL courses was included to examine how universities prepare pre-service teachers to work with students of various language backgrounds in comparison with students who have disabilities. A total of 12 SPED specific courses were offered at all of the universities combined while 16 courses were available in ESL instruction.

Program and course goals. Every course included at minimum, generic course goals that could be loosely based upon SBEC educator standards, or goals from another organization. Many of the SPED course goals were based upon the Council for Exceptional Children (CEC) Initial and Advanced Preparation Standards approved by the National Council for the Accreditation of Teacher Education (NCATE) (Council for Exceptional Children Website, 2013). Additionally, four universities housed NCATE certified teacher preparation programs according to the NCATE website and, three of these four universities listed the NCATE approved CEC standards on their syllabi. The only university that did not was University C; this institution does not have a special education department or program and did not include SPED specific courses in the degree plan.

In each case, courses specific to instructional preparation in working with students with exceptionalities contained course goals that were either explicitly or generically tied to the SBEC standards for EC-12 special education certification, to the Common Core standards, or the CEC Initial and Advanced Preparation Standards for special educators; this is what defined these courses from integrated courses. Tables 2 and 3 illustrate the main differences between the course goals of the SPED specific courses from the integrated courses that may have covered special education topics as part of the course, but were not the overall substance of the course.

Table 2

EC-6 Program and Course Goals Comparison of Special Education Specific Syllabi

University	Syllabus Course Goals	SPED Course Goals	Behavior and SPED	SPED Law or Legal Issues	Philosophical or Historical Foundation of SPED	RTI in Syllabus	Learn terminology & disability categories
A	1 – Generic	1 – Generic	1	1	1	0	1
B	1 – CEC	1 – CEC	1	2	1	1	1
	1 – Generic	1 – Generic					
C	-	-	-	-	-	-	-
D	1 – CEC	1 – CEC	2	2	1	1	1
	1 - Generic	1 - Generic					
E	1 – Generic	1 – Generic	0	1	1	0	1
F	1 – SBEC	1 - SBEC	1	1	2	1	1
G	1 – Generic	1 – Generic	0	1	1	1	1
H	2 – Generic	2 – Generic	1	1	1	1	1
I	1 – CEC	1 – CEC	1	1	1	1	1
J	1 – SBEC	1 – CC; CEC	1	1	1	1	1

Note. 0 = No Courses, 1 = 1 course, 2 = Both Courses, - no course available; CEC=Council for Exceptional Children; RTI=Response to Intervention; SBEC=State Board for Educator Goals; CC= Common Core Standards;

Special education specific courses focused on preparing students for utilizing behavior strategies and providing students with a foundation in special education legal issues and litigation, a historical and philosophical look of special education, and an introduction to the disability identification categories. Alternately, the integrated courses emphasized topics such as overall child psychology, diversity in learning, learning and motivation theories, and generic behavior management concerns. In both sets of course syllabi comparisons, RTI was a factor to determine if the courses were covering prevention and identification methods for students who have not been diagnosed, but who are potentially at risk for developing a specific learning disability. Many SPED specific courses covered RTI as a topic although RTI is typically regarded as a general education phenomenon (Mastropieri & Scruggs, 2005).

Table 3

EC-6 Program and Course Goals Comparison of Integrated Courses

University	Course Goals	Educational Psychology	Exceptional Learners Part of Course	Learning Theory/ Motivation Theory	Diverse Learners	RTI in Syllabus	General Behavior Strategies
A	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-
C	1 – Generic	0	2	2	2	1	1
D	-	-	-	-	-	-	-
E	1 – Generic	1	0	1	1	0	0
F	1 - Generic	1	0	1	1	0	0
G	1 - SBEC	0	0	0	1	0	0
H	-	-	-	-	-	-	-
I	1 – Generic	0	1	1	1	1	0
J	1 – Generic	1	0	1	1	0	1

Note. 0 = No Courses, 1 = 1 course, 2 = Both Courses, - no course available; CEC=Council for Exceptional Children;

RTI=Response to Intervention; SBEC= State Board for Educator Certification

In sum, nine out of ten universities provided SPED specific coursework through the form of a specialized course in understanding and working with students who have disabilities. The amount of coursework is evident in the number and nature of the courses with many of the universities providing at minimum one to two courses specific to the topic. University C was the only program that did not offer a specialized course on learning exceptionalities although the topic is entwined within two other, integrated courses. This raises the question on whether the quality of training general education teachers to work with students who have learning exceptionalities is related to the amount of preparation and time devoted towards the topic.

Course assignments. There was a wide range of required assignments in the course offerings. Various assignments included: chapter readings and/or learning reflections, interviews with educators in

the field, interviews or case studies about a person with a disability, movie and book reviews about living with exceptionalities, current event reviews concerning special education topics, observations and/or fieldwork in classrooms where students with disabilities are present, researching and presenting a disability category to fellow classmates, attending a campus professional development event, writing journal article reports, and writing and/or modifying lesson plans designed to meet the needs of exceptional students. Fieldwork and/or observation hours were only included when the syllabi explicitly stated the purpose was to identify, observe, teach or work with a student with learning difficulties or a disability. Thus, several courses that required generic observations or fieldwork were not included as part of the assignment section.

The course assignments did reveal some trends in the types and nature or purpose of the assignment. The most standard assignment that occurred was a chapter reading or course reflection. This occurred through student reflection journals, online discussion posts, or written papers that were submitted to the instructor periodically throughout the semester. One category, contained assignments that were designed to assist students in understanding the underlying needs, concerns, and difficulties of being a person with a disability. These assignments facilitated an opportunity to reflect upon disability awareness and included projects such as interviewing a person with a disability, completing a case study about a student with an exceptionality, or reading a book or watching a move about a real or fictional character with a disability.

Many of the courses had assignments relating to disability awareness. Another common assignment among university programs involved having pre-service teachers write, modify, or adapt a lesson plan for specific instructional needs of a student with a disability in the general education classroom. Four universities required pre-service students to attend a district professional development event in the form of a formal special education planning meeting or RTI early intervention team meeting. Three programs required students to interview an educator regarding to how that person teaches and modifies instruction for students with exceptionalities.

Many programs did not require actual observation hours or fieldwork hours while the programs that did require hours were not specific with the time requirement in the syllabus. This could be due to the timing of the special education courses in the degree plan; many of the courses were required as part of the students' university coursework rather than during their field experience or student teaching internship. In some instances, when the course was taken during the fieldwork portion, assignments focused more on reflection activities rather than logging observation hours or teaching students with disabilities. University I required 15 hours of actual fieldwork in observing, teaching, and working with students who have disabilities. Additionally, the course requiring this experience occurred prior to the field experience, suggesting that the program was designed to provide pre-service teachers with longitudinal, continuous experiences in working with children with a variety of learning needs.

4-8 Teacher Preparation

Degree plans. The number of courses specific to special education in 4-8 degree plans decreased. At the EC-6 level, a total of 12 courses were offered at nine universities, while at the 4-8 level this decreased to nine courses at six universities. However, programs without a special education specific course tended to more often integrate the topic of exceptionality and diverse learning needs within an integrated course (eight courses at six universities). At all universities, each 4-8 degree plan contained one or more special education specific or integrated courses, indicating that each university at least covered the topic of teaching students with exceptionalities at a minimum level.

Seven special education specific courses were shared between the EC-6 and 4-8 programs at five universities. Table 4 demonstrates the specific 4-8 degree plan requirements, course options, and patterns between the EC-6 and 4-8 degree plans. Due to the nature of the 4-8 plan most often being content-specific, there was not a great deal of variability in course or certification offerings, meaning that there were no formal degree plan options to pursue extra ESL or special education courses that would lead towards extra certification. The next section will review the unique course syllabi contained in the 4-8 degree programs.

Table 4

4-8 Degree Plan Comparison

University	No. of SPED Specific Courses in 4-8 Degree Plan	No. of Integrated courses that have related content in 4-8 Degree Plan	No. of SPED courses that are shared with the EC-6 Generalist Degree Plan	No. of Unique SPED or Integrated courses in 4-8 Degree Plan compared to EC-6
A	1	0	1	0
B	2	0	0	0**
C	0	1	0	1*
D	2	0	2	0
E	0	1	0	0
F	0	2	0	1*
G	1	1	1	0
H	2	0	2	0
I	0	2	0	2*
J	1	1	1	0

Note. *Shared with 8-12; **Not available for review – possible outdated degree plan

Unique syllabi. There were only a total of four new or unique syllabi to analyze after omitting shared courses with the EC-6 programs. Five universities contained identical degree plan options in regards to special education specific or integrated courses. Of the four unique syllabi, only one course was a SPED specific course. This course from University F contained generic course goals and was identified as a SPED specific course. The course emphasized using behavior strategies for all students and including students with potential or diagnosed disabilities. Assignments for this course followed a consistent pattern of the integrated courses with assignments including course readings, class discussions and participation, teacher interviews about classroom management practices, reading and presenting a book review on classroom management strategies, writing a personal management style essay, and creating a written classroom management plan. The course goals appeared to focus more on general classroom management strategies rather than strategies specific to including students with serious behavior issues and disabilities; however, the course was offered through the special education department at the university.

The unique course from University C contained a generic syllabi designed to incorporate the inclusion and instruction of students with learning disabilities within the course. A goal statement from the course catalog said, "topics include developmental characteristics of pre-adolescents and adolescents including exceptional learners and students with special needs" (University C sample, p. 1). The main assignment for this course was a service-learning project in which students completed field experience hours and reflections about their experiences. However, the project was designed to work in a middle school classroom in general and not necessarily specific to students with special needs.

The remaining two unique syllabi from University I were more generic courses designed to reach all students and provide a background in learning theories, educational psychology and field experiences designed to work with students in the classroom environment. The assignments focused on reading and field experience reflections, lesson plan projects, and the creation of a portfolio of assignments completed during fieldwork. The extent that pre-service teachers were required to observe, interact, or work with students who had specialized learning needs or exceptionalities was unknown in these courses. Finally, RTI was not covered in the sole special education course at University F or the three integrated courses at Universities C and I. RTI is often a strategy for schools to target early interventions in the elementary grades and may not be covered in depth at the secondary level (Fletcher & Vaughn, 2009).

8-12 Teacher Preparation

Degree plans. Trends seen in the analysis of the 4-8 degree plan compared to EC-6 degree plans continued in the 8-12 certification options. There were only two SPED specific courses required for 8-12 subject certification among all ten universities. The two universities offering the courses shared the same requirements with the EC-6 and 4-8 degree plans. Additionally, the number of integrated courses increased slightly to nine courses at six universities with many of these courses being shared with the 4-8 degree plan. Table 5 illustrates the course offerings in the 8-12 degree plan compared to the offerings in the previously discussed plans at each university. In the 8-12 degree plan analysis there were only two new or unique related content course syllabi to examine.

Table 5

8-12 Degree Plan Comparison

University	No. of SPED Specific Courses in 8-12 Degree Plan	No. of Integrated courses that have related content in 8-12 Degree Plan	No. of SPED courses that are shared with the EC-6 or 4-8 Generalist Degree Plan	No. of Unique SPED or Integrated courses in 8-12 Degree plan compared to EC-6 or 4-8
A	1	0	1	0
B	0	0	0	0
C	0	2	0	1*
D	0	1	0	1
E	0	1	0	0
F	0	2	0	0
G	1	1**	1	0
H	0	0	0	0
I	0	2	0	0
J	0	0	0	0

Note. *English majors only; **Students have a choice between this class and another non-related class on the degree plan

Unique syllabi. The first of the two unique 8-12 integrated courses was a course required only for English majors. The catalog description and course goals indicated a course focus on designing effective instruction, assessment, and management of students in diverse educational settings, including working with students with exceptionalities. Course goals were tied to the Texas Examination of Educator Standards (TExES) EC-12 Pedagogy and Professional Responsibilities (PPR) certification exam and the National Council for Teachers of English. Assignments in this course included creating a school profile detailing student data, environmental policies, and diversity analysis. Students were also required to complete class readings, reflections, exams, and a book review on the topic of poverty.

The remaining syllabus from University D was a secondary-specific course designed to assist students desiring to teach high school content in delivering effective instruction in various formats, including students from diverse backgrounds. The course goals were aligned with TExES PPR competencies, but there was no mention of pre-service teachers specifically working with students who have exceptionalities. Assignments in this course included course readings and reflections, interviewing

and observing a teacher in the field, writing appropriate lesson plans, and analyzing instruction after teaching a lesson.

Findings from this study indicate wide discrepancies in the number and types of courses that pre-service teachers receive regarding inclusion practices and working with students who have exceptionalities. Elementary teachers take more SPED specific courses while secondary programs tend to integrate special education content within other education courses that cover a broad range of topics. Additionally, course goals vary upon the type of course (SPED or integrated) and assignments in the course varied greatly, with SPED classes tending to focus more on disability categories, best behavior and instructional strategies for students with disabilities, and disability awareness. Integrated courses had more generic course goals and assignments that included broader philosophical understandings and instructional strategies not explicitly connected to teaching students with exceptionalities.

Discussion

Pre-service elementary teachers in Texas appear to receive a basic background in working with students who have disabilities, including strategies for intervention and prevention. Middle and high school programs reveal a different story. Once degree plan programs focus more on the content or subject taught and eventually leave the education department altogether at the secondary level, the amount of preparation in working with students who have exceptionalities seemingly diminishes. This is evidenced by the reduced number of courses offered by the degree plans at each university. At the EC-6 level, 12 special education specific courses are available at the universities, with nine of the ten universities having at least one special education specific course. At the 4-8 level, only six universities require at least one special education course and at the 8-12 level, only two universities require a special education course. Figure 1 details an illustrated case of the course offerings at all ten universities.
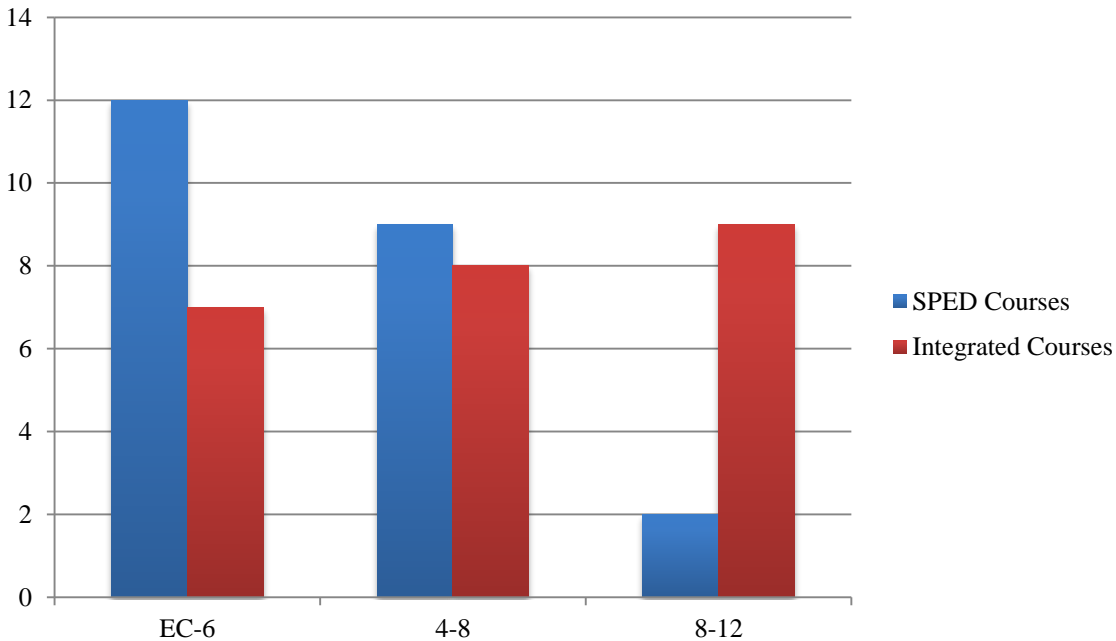
Figure 1. Graph depicting the combined number of SPED and Integrated courses among all ten Texas universities.

The degree to which universities offer generic informational content about teaching students with exceptionalities in non-special education (integrated) courses is more limited as the degree plans change from elementary to secondary, with many middle school and high school programs lacking evidence of extensive coverage for teaching students with special needs. Typically, integrated courses encompass a wide range of educational topics such as language modifications, cultural diversity, learning theory, historical foundations, etc. This means that teaching students with specialized learning is only one small part of a course on multiple topics and coverage is questionable at best. The literature has revealed a relationship between the amount of courses taken that addresses teaching students with disabilities and the teachers' perceptions and attitudes relating to teaching or including these students in the general education classroom (Bender, Vail & Scott, 1995; Shippen, Crites, Houchins, Ramsey, and Simon, 2005).

Middle school and secondary teachers often report having less positive attitudes than their elementary counterparts in working with students who have exceptionalities (Lambert, Curran, Prigge & Shorr, 2005; McHatton & McCray, 2007). In the case of this study, it is certainly feasible that reduced

course requirements in special education specific courses could potentially contribute to less positive attitudes among secondary teachers. Thus, it is vital that university programs consistently prepare all educators for best inclusion practices in the general education classroom. Scruggs and Mastropieri (1996) concluded as part of their research synthesis on teacher perceptions about mainstreaming or inclusion that, "the lack of improvement in perceptions of teacher preparedness for 'mainstreaming' over time suggests that teacher education programs may be no more effective at preparing teachers for 'mainstreaming' that we were more than two decades ago" (p. 71). Furthermore, Allday, Nielsen-Gatti, and Hudson (2013) stated that the current literature does not adequately address how pre-service general education teachers are being prepared to work with students receiving inclusion services; they found in their sampling of coursework from universities that most programs do not offer extensive coursework regarding inclusion practices.

Limitations

There are several important limitations to consider in this study. First, the results are indicative of information from a sample of ten Texas universities, thus the sample size was small in comparison with the sheer number of colleges and universities in Texas. Additionally, nine of the ten universities are public institutions and five of these reside within a relatively close distance to each other in the north Texas metropolitan area. Many of the universities are rather large in size according to population and size of the teacher program. More information is needed especially from small teaching programs. This study did not take into consideration other degree plan options (i.e. Bilingual Certification) or rapidly growing alternative certification options which are gaining popularity, but would benefit from such an analysis. Furthermore, degree plan offerings, number of courses, syllabus goals, and assignments cannot be used as an indication of the quality of a program. Rather, this study serves as mainly a catalyst for understanding how teachers receive preparation in working with students who have disabilities in a post-NCLB and IDEA 2004 era. Finally, the study did not focus on teacher effectiveness once students graduate from their respective pre-service setting and move into their teaching careers. More research is needed to determine

how teachers are using preparation strategies that they receive at the university setting to translate their knowledge into the teaching practice and on teacher attitudes' in working with students who have disabilities.

Implications

There appears to be a discrepancy in how pre-service teachers are being prepared to work with students who have specialized learning needs. According to the latest report of the Office of Special Education Programs (2013), students with learning and other moderate disabilities are increasingly receiving all or the majority of their instruction in the general education classroom. Based on the sampling in this study, elementary teachers in the state of Texas for the most part receive at least one course devoted solely to the practice of working with students who have disabilities while secondary teachers tend to receive no such course. Since research has suggested a link between pre-service training and teachers' attitudes towards inclusion (Ajuwon, et al., 2012; Hadadian & Chiang, 2007; McCray and Alvarez-McHatton, 2011; McHatton and Parker, 2013; Shade & Steward, 2011; Shippen, et al., 2005), pre-service preparation programs must work harder to incorporate inclusive practices within coursework and field experiences to ensure that teachers are prepared to work with this diversity in their classrooms.

References

Ajuwon, P. M., Lechtenberger, D., Griffin-Shirley, N., Sokolosky, S., Zhou, L., & Mullins, F. E. (2012). General education pre-service teachers' perceptions of including students with disabilities in their classrooms. *International Journal of Special Education, 27*(3), 100-107.

Allday, R. A., Neilsen-Gatti, S., Hudson, T. M. (2013). Preparation for inclusion in teacher education pre-service curricula. *Teacher Education and Special Education, 36*(4), 298-311.

Bender, W. N., Vail, C. O., & Scott, K. (1995). Teachers' attitudes to increased mainstreaming: Implementing effective instruction for students with learning disabilities. *Journal of Learning Disabilities, 28*, 87-94.

Conderman, G., & Johnston-Rodriguez, S. (2009). Beginning teachers' views of their collaborative roles. *Preventing School Failure, 53,* 235-244.

Cooper, J., Kurtts, S., Baber, C., & Vallecorsa, A. (2008). A model for examining teacher preparation curricula for inclusion. *Teacher Education Quarterly, 35,* 155-176.

Council for Exceptional Children Website. Initial and Advanced Preparation Standards (2013, August 12). Retrieved from http://www.cec.sped.org/Standards/Special-Educator-Professional-Preparation/CEC-Initial-and-Advanced-Preparation-Standards?sc_lang=en.

de Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education, 15,* 331-353.

Fletcher, J. M., & Vaughn, S. (2009). Response to intervention: Preventing and remediating academic difficulties. *Child Development Perspectives, 3*(1), 30-37.

Forlin, et al. (2009). Demographic differences in changing pre-service teachers' attitudes, sentiments, and concerns about inclusive education. *International Journal of Inclusive Education, 13*(2), 195-209.

Fuchs, D., & Fuchs, L. S. (2006). Introduction to response to intervention: What, why, and how valid is it? *Reading Research Quarterly, 41*(1), 93-99.

Gehkre, R. S., & Cocchiarella, M. (2013). Preservice special and general educators' knowledge of inclusion. *Teacher Education and Special Education, 36*(3), 204-216.

Goodlad, J. I., & Field, S. (1993). Teachers for renewing schools. In J. I. Goodlad & T. C. Lovitt (Eds.), *Integrating general and special education* (pp. 229-252). New York: Merrill.

Hadadian, A., & Chiang, L. (2007). Special education training and preservice teachers. *International Journal of Special Education, 22*(1), 103-106.

Harvey, M., Yssel, N., Bauserman, A., & Merbler, J. (2010). Pre-service teacher preparation for inclusion: An exploration of higher education teacher-training institutions. *Remedial and Special Education, 31*(1), 24-33.

Individuals with Disabilities Education Improvement Act, 20 U.S.C. § 1414 in et seq. (2004).

Kim, J. (2011). Influence of teacher preparation programmes on preservice teachers' attitudes toward inclusion. *International Journal of Inclusive Education, 15,* 355-377.

Klehm, M. (2014). The effects of teacher beliefs on teaching practices and achievement of students with disabilities. *Teacher Education and Special Education, 37*(3), 216-240.

Lambert, C., Curran, C.M., Prigge, D.J., Shorr, D. (2005). Addressing inclusion in an era of education reform: Dispositions of secondary and elementary pre-service educators in the pipeline. ERIC Online Submission No. ED490026. Retrieved from http://eric.ed.gov/?id=ED490026.

Lombardi, T. P., & Hunka, N. J. (2001). Preparing general education teachers for inclusive classrooms: Assessing the process. *Teacher Education and Special Education, 24*(3), 183-197.

Mastropieri, M. A., & Scruggs, T. E. (2005). Feasibility and consequences of Response to Intervention: Examination of the issues and scientific evidence as a model for the identification of individuals with learning disabilities. *Journal of Learning Disabilities, 38*(6), 525-531.

McCray, E. M., & Alvarez-McHatton, P. (2011). "Less afraid to have *them* in my classroom": Understanding pre-service general educators' perceptions about inclusion. *Teacher Education Quarterly, 38*(4), 135-155.

McHatton, P. A. & Parker, A. (2013). Purposeful preparation: Longitudinally exploring inclusion attitudes of general and special education pre-service teachers. *Teacher Education and Special Education, 36*(3), 186-203.

McHatton, P., & McCray, E. (2007). Inclination toward inclusion: Perceptions of elementary and secondary education teacher candidates. *Action in Teacher Education, 29,* 25-32.

National Council for the Accreditation of Teacher Education Website (2013, August 12). Accredited Institutions Search. Retrieved from http://www.ncate.org/tabid/176/Default.aspx.

No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).

Office of Special Education Programs (2013). To assure the free appropriate education of all children with disabilities. *35th Annual report to Congress on implementation of the Individuals with Disabilities Education Act.* Washington, DC. Retrieved from http://www2.ed.gov/about/reports/annual/osep/2013/parts-b-c/35th-idea-arc.pdf.

Scruggs, T.E. & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63, 59-74.*

Shade, R. A., & Stewart, R. (2001). General education and special education pre-service teachers' attitudes towards inclusion. *Preventing School Failure, 46,* 37-41.

Shippen, M. E., Crites, S. A., Houchins, D. E., Ramsey, M. L., & Simon, M. (2005). Pre-service teachers' perceptions of including students with disabilities. *Teacher Education and Special Education, 28*(2), 92-99.

Texas Legislature Online. House Bill 2504 (2009). Retrieved from http://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=81R&Bill=HB2504.

U.S. Department of Education, National Center for Education Statistics (2013). *Digest of Education Statistics, 2012* (NCES 2014-015), Chapter 2. Retrieved from http://nces.ed.gov/pubs2014/2014015.pdf.

TEACHERS' PERCEPTIONS OF CHARACTERISTICS OF GIFTED HISPANIC BILINGUAL STUDENTS: PERSPECTIVES FROM THE BORDER

Katie D. Lewis, Ed.D.
   Texas A&M International University

Angela M. Novak
   DC Public Schools

Jennifer M. Coronado
   Texas A&M International University

Abstract

As the Hispanic population in the nation is exploding, the gifted Hispanic population is remaining stagnant. Gifted and talented programs should mirror the total student population, and the underrepresentation of gifted Hispanic Bilingual students in gifted programs should be of great concern across the nation. This is of concern, as a large portion of the student popluation may not be identified for gifted and talented programs. The following research study focused on the impact of teacher perceptions of gifted Hispanic bilingual students on the identification process. Teachers who were surveyed rated characteristics of the Hispanic bilingual gifted student based on Irby & Lara-Alecio's (1996) screening instrument (HBSGI). Research questions addressed in this study: 1) To what extent are teachers knowledgeable about the characteristics of gifted Hipsanic students? 2) To what extent do teacher perceptions of the characterisitcs of gifted Hispanic bilingual students impact the identification process? Overall findings indicated positive correlations between teacher perceptions and the identification of Hispanic bilingual gifted students.

Keywords: culturally lingustically diverse, underrepresentation, Hispanic gifted students, bilingual students, teacher perceptions, teacher identification, gifted and talented programs

Introduction

As a nation, there is a trend for gifted and talented programs to underrepresent culturally and linguistically diverse student populations; this is potentially due to identification procedures, biased identification instruments, teacher attitudes & beliefs, and teacher identification (Castellano, 2011; Irby & Lara-Alecio, 1996; Szymanski & Shaff, 2012). This study focused on a teacher-centric underlying

potential cause of underrepresentation: the teacher identification process and underlying teacher attitudes and beliefs. Districts rely heavily on teacher recommendations for the identification of gifted and talented students (Coleman & Gallagher, 1992; Esquierdo & Arreguin-Anderson, 2012; Moon & Brighton, 2008). As teachers are the initial step in the identification process it is critical that teachers be trained not only in the characteristics of giftedness, but also in how these traits present themselves differently in the cultural and linguistic minorities.

When considering the characteristics of gifted English language learners (ELL) the Iowa Department of Education (2008) identified the following:

- acquires a second language rapidly,

- shows high ability in mathematics,

- displays a mature sense of diverse cultures and languages,

- code switches easily (think in both languages),

- demonstrations an advanced awareness of American expressions,

- translates at an advanced level (oral),

- navigates appropriate behaviors successfully within both cultures. (p. 12)

These gifted ELL characteristics are important for teachers to recognize and understand when they are recommending students for gifted and talented programs. Teachers who are not aware of the various signs of giftedness in cultural and linguistic minorities, may overlook a gifted ELL student.

This descriptive research study explored the following research questions:

1. *To what extent are teachers knowledgeable about the characteristics of gifted Hispanic bilingual students?*

2. *To what extent do teacher perceptions of the characteristics of gifted Hispanic bilingual students impact the identification process?*

Literature Review

Giftedness Defined

There has been much debate to the definition of giftedness. The National Association for Gifted Children (NAGC) defines giftedness as individuals who "demonstrate outstanding levels of aptitude or competence in one or more domains" (NAGC, 2010). The federal definition of giftedness are children who provide "evidence of higher performance capability in such areas as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who require services or activities not ordinarily provided by the schools in order to develop such capabilities fully" (No Child Left Behind Act, 2004). Finally, the "National Excellence: A Case for Developing America's Talent" (1993), a US Department of Education report, focused on outstanding talent in all cultural groups, economic groups, and all areas of human endeavor.

At the state level, each state defines giftedness differently and provides services for students based on their definitions. In the state of Texas, giftedness is defined as a child "who performs at or shows the potential for performing at a remarkably high level of accomplishment when compared to others of the same age, experience or environment and who (1) exhibits high performance capability in an intellectual, creative, or artistic area; (2) possesses an unusual capacity for leadership; or (3) excels in a specific academic field" (Texas Education Code 29.121).

Gifted definitions also vary amongst field experts. Renzulli (1986; 2005) posits that giftedness occurs when there is an interaction between three rings: above-average general and/or specific abilities, high levels of task commitment, and high levels of creativity. Gagné (1985, 2008) theorizes that students demonstrate gifts in one of 6 domains (intellectual, creative, social, perceptual, muscular and motor control). These gifts occur in the top 10% of the population, and are initially untrained and spontaneous, but through environmental catalysts (such as people, and special provisions), intrapersonal catalysts (such as motivation and personality), and development process (such as activities), lead to talents in a variety of fields. The top 10% of those individuals demonstrating natural gifts exhibits these talents.

Along with varying definitions of giftedness, there are many different characteristics of giftedness, as well as many possible combinations of the characteristics. Traditionally, the characteristics of giftedness include: superior reasoning powers or abilities, persistent intellectual curiosity, wide range of interests, superior written and oral language and vocabulary, avid reader, quick learner, enjoys reasoning and logic, creative abilities, ability to concentrate for an extended period of time, self-critical, shows creative thinking and initiative, responsive to new ideas, communicates well, excited by intellectual challenges, and keen sense of humor (NAGC, 1990; No Child Left Behind Act, 2004). These characteristics can be reflected differently amongst different cultural and linguistic groups, which make it important for educators to be aware of the varying ways giftedness may be presented.

Giftedness Differentiated: Characteristics of Gifted Hispanic Bilingual Students

Giftedness may present itself differently in culturally and linguistically diverse groups, which in turns leads to variations in the definitions of giftedness. The Irby and Lara-Alecio (1996) framework for identifying gifted and talented Hispanic bilingual students provides a strong foundation for understanding the uniqueness of this culturally linguistically diverse student population. Irby and Lara-Alecio adapted Renzulli's three ring conceptual model of giftedness (Renzulli, 1986; Renzulli, 2005) adding an outside ring with Socio-Cultural-Linguistics characteristics to use as a model to identify gifted Hispanic bilingual students. These characteristics of culturally and linguistically diverse giftedness, identified by Irby & Lara-Alecio, include: motivation for learning, social and academic language in both Spanish and English, cultural sensitivity, strong family connections, preference for collaboration, highly imaginative, high academic achievement, creativity, seeking out a supportive environment, problem solving, and internal locus of control (Irby & Lara-Alecio, 1996; Lara-Alecio & Irby, 2007).

Motivation for learning is presented in the child's persistent desire for learning and a solid school attendance rate. The social and academic language is seen in the child's use of vivid, detailed, expansive, and fluent behaviors; both oral and written, in both Spanish and English. Cultural sensitivity is seen in the child's pride in his culture's traditions and first language. Strong familial connections are demonstrated

by the child's relationships with his family, as well as acting as a caretaker of family members, including acting as the link between school and home. This child also has a preference for collaboration, is well adjusted, takes on leadership roles, and demonstrates a vivid imagination, which is revealed in oral and written language through storytelling. The gifted Hispanic bilingual child also has high academic achievement and creative performance, both of which are supported by original ideas and vast amounts of content knowledge. Furthermore, this child is an effective problem solver, but typically does not rush the process; rather taking time to engage peers in the process, partly due to the characteristic desire to seek out support from the community. A final characteristic is an internal locus of control, which supports positive self-images and belief in one's abilities (Irby & Lara-Alecio, 1996).

It is critical for educators to be aware of how giftedness is presented in Hispanic bilingual gifted students, as many of these characteristics are not considered typical of gifted children (Esquierdo & Arreguin-Anderson, 2012). This lack of familiarity with gifted traits exhibited by Hispanic bilingual students can impact the identification of these students for gifted programming, especially when teachers without appropriate knowledge or training in these characteristics are the initial gatekeepers for the program (Esquierdo & Arreguin-Anderson, 2012). Even beyond the more general knowledge of gifted Hispanic bilingual traits is the need to recognize how these traits are further differentiated in the more than 20 cultures that form the Hispanic population (Castellano, 2011).

To further compound the issue of identification, one must not only consider the ethnic group to which a student belongs, but also a student's home language. Students who are not native English speakers may not be identified as gifted because of their struggles with learning the new language. As the Hispanic population grows in the United States, so does the Hispanic bilingual population. In 2012, the Hispanic population was 53 million. 37.6 million of the US residents who were 5 and older spoke Spanish in the home. This is a 117% increase from 1990 (U.S. Census Bureau, 2013). Twenty-two percent of the students enrolled in K-12 education in 2012 were Hispanic (U.S. Census Bureau, 2013). Eight million of these students spoke Spanish in the home (U.S. Census Bureau, 2013); early identification can help to

foster these students from an early point, helping them to build success over the course of their educational career.

Castellano's (2011) perseverance model postulated 11 challenges that Hispanic students potentially face in gaining access to gifted programming. The basic tenet of the model is that the "further away from mainstream America poor Hispanic students are, the more resiliency and perseverance they need to demonstrate in order to overcome the challenges of gaining access to gifted education programs" (p. 258). The 11 variables to access include identification, assessment and evaluation, socialized environment, home dynamics, school dynamics, language patterns, acculturation, socioeconomics, perceptions, attitudes and stereotypes, funding, and the gifted education field. With the exponential growth of the Hispanic bilingual community there is a need to examine and improve the identification process for these students. This study focused on identification procedures and the knowledge demonstrated by principal gatekeepers, teachers, regarding gifted characteristics specific to bilingual students.

Identification Instruments

The identification process of Hispanic bilingual students for gifted and talented programs may be biased due to the selection of testing instruments, especially with regard to standardized tests (Ford, 2007; Whiting & Ford, 2009). According to Frasier, Garcia, and Passow (1995), tests are, for various reasons; such as content validity or construct validity, prejudiced or unfair to ethnic minorities and individuals whose first language is not English. Traditional tests such as the Wechsler Intelligence Scale for Children (Wechsler, 2003) or Stanford-Binet (Becker, 2003) Intelligence Scale tests are sometimes replaced in districts with a heavy minority population with tests that are touted as culture fair, such as the Naglieri Nonverbal Ability Test (Naglieri, 2011), Ravens Advanced Progressive Matrices (Raven, 2003), and the Woodcock-Muñoz Language Survey (Woodcock, Muñoz-Sandoval, Ruef & Alvarado, 2005).

Standardized tests are not the sole identification instrument used for gifted identification. Effective identification includes the use of multiple criteria; scales and checklists of gifted traits and

behaviors are often used to supplement (and occasionally supplant) ability or aptitude testing (Frasier, Garcia & Passow, 1995; Ford, 2007). Several scales are widely used, including the Scales for Identifying Gifted Students (Ryser & McConnell, 2004) and Scales for Rating the Behavioral Characteristics of Superior Students (Renzulli & Smith, 2010). One such rating scale, however, is specific to Hispanic bilingual students. Lara-Alecio and Irby (1996) created the Hispanic Bilingual Gifted Screening Instrument (HBGSI) to address characteristics specific to gifted Hispanic bilingual students. This instrument uses 11 clusters of attributes specific to Hispanic bilingual students: social and academic language, cultural sensitivity, familial, motivation for learning, support, creative performance, problem solving and locus of control. This 78-item inventory has significant reliability for grades K-3 and can help to identify gifted Hispanic bilingual students for gifted programs. Strong inter-rater reliability of the HBSGI clusters 1, 3, 6, 7, 8, 9 and moderate inter-rater reliability for clusters 2, 4, 5, 10, and 11 were found over a four-year period. This confirms the validity of the HBGSI (Contreras-Vanegas, Lara-Alecio, & Tong, 2012).

The HBGSI was found to have concurrent validity with the Naglieri Nonverbal Ability Test (NNAT) and the Woodcock Language Proficiency Battery-Revised (WLPB-R). The NNAT is an assessment designed to evaluate general ability levels of children ages 5-17, including those from culturally and linguistically diverse backgrounds. The WLPB-R measures an overall language proficiency and assessment of the oral and written reading/writing skills, both in Spanish and English. Significant correlations were found between the HBGSI 11 clusters as well as the total score and the NNAT, $p < .01$ (Esquierdo, 2006). The HBGSI clusters four, six, seven, eight, ten, and eleven were also found to have statistically significant correlations, $p < .01$ with the WLPB-R (Esquierdo). Additionally, statistically significant differences were found in the number of students identified/not identified using the HBSGI versus the NNAT and WLPB-R (Esquierdo). This study validates the use of the HSBGI to identify gifted Hispanic bilingual students.

Teacher Attitudes and Beliefs

One of the major influences on the underrepresentation of Hispanic bilingual students in gifted and talented programs is teacher attitudes toward and knowledge about minority students (Frasier, Garcia, & Passow, 1995). In many instances, teachers may not have a thorough understanding of what institutes gifted and talented behavior and therefore misidentify students Within the American public schools, giftedness is associated largely with traditional school skills and characteristics measured by traditional intelligence and achievement tests--advanced vocabulary, highly developed verbal skills in written and oral expression in Standard English, and early and advanced reading skills (Gallagher & Gallagher, 1994). If schoolhouse giftedness is the only type of giftedness being identified; one is at risk of overlooking those students who are gifted in other ways (Castellano, 1998; Lara-Alecio & Irby, 2007; Renzulli, 2005).

Teacher Training

Teacher's beliefs about conceptions of giftedness and the abilities of their students have been shown in research to play a pivotal role in the identification process. It is especially true in the elementary school setting where teacher referrals often are a significant portion of the identification process (Moon & Brighton, 2008; Gross, 1999). One nationwide study examined the policies for identifying gifted students; this study revealed that 40 of the 50 states relied first on teacher recommendations for student referral (Coleman & Gallagher, 1992). With the heavy reliance on teacher referrals, one must examine how qualified the teachers are to identify gifted students. While there has been a plethora of research on teacher identification, the results have greatly varied (Hodge & Kemp, 2008; Pfeiffer & Petscher, 2008; Pfeiffer & Jarosewich, 2003; Renzulli, Siegle, Reis, Gavin & Reed, 2009). The ability of a teacher to accurately identify a gifted child is directly linked to the teacher's training on the characteristics, and identification of gifted children. Without proper training, teachers may not recognize a gifted child in the classroom who does not fit within their perception of giftedness.

The problem becomes further compounded when a teacher is not trained in working with culturally and linguistically diverse gifted students. Teachers who are not aware of the unique characteristics of gifted Hispanic bilingual students and how cultural backgrounds affect the portrayal of giftedness may incorrectly identify these students as low achievers stereotyping the students based on their low economic status, lack of parental support, or being English language learners (Esquierdo et al., 2012). Teachers tend to categorize culturally and linguistically diverse students according to deficit models (Esquierdo et al.). Without training, teachers may overlook a bilingual gifted student simply because they do not fit the conventional definition of giftedness. Likewise, it is not enough for a classroom teacher to be certified as a bilingual educator, one must have the gifted identification training as well (Esquierdo & Arreguin-Anderson, 2012).

Gifted & Talented Programs in Texas

Gifted and Talented programs have been developed across the nation to meet students' needs. In the state of Texas, the first legislation providing funding for gifted programs was passed in 1979. Gifted programs remained optional, however, until 1987, when a mandate was passed that all districts must identify and serve students at all levels. In 1990, Texas adopted the Texas State Plan for the Education of Gifted & Talented Students and created the Texas Performance Standards Project for Gifted & Talented Students (TPSP) in 1999, and revised in 2009 (Texas Education Agency, 2009). These documents provided districts with standards and proficiency levels for the gifted and talented program. Within the document, the state clearly outlined the certification requirements for teachers of the gifted and talented. Texas law requires the teachers of gifted students to initially earn a minimum of 30 hours of professional development focused on the needs of the gifted learner; including curriculum and instruction, assessment and social/emotional needs. Additionally, yearly the teachers must earn six additional hours of professional development in gifted education. Teachers of the gifted are encouraged by the state to earn Gifted & Talented certification (Texas Education Agency, 2000).

Gifted and Talented training is critical for those educators who service gifted and talented students since the identification process relies heavily on teacher recommendations. Given the population of Texas, teachers need to be cognizant of characteristics of gifted and talented students, as well as specific characteristics that may pertain to culturally and linguistically diverse students. The demographic data for the state of Texas in 2011 shows the total Hispanic population to be 9,794,000, which is 38% of the total state population. 2,355,000 Hispanics were enrolled in K-12 schools, which is 48% of all K-12 students. Seventy-six percent of this population spoke a language other than English at home (Pew Research Center, 2014). The culturally and linguistically diverse student population of Texas schools is an indication of what the gifted and talented student population should mirror.

Methods

The current investigation was a descriptive study designed to determine teachers' perceptions of the characteristics of gifted Hispanic bilingual students, as well as to examine the impact of these perceptions on the identification process.

Participants

The research population consisted of 268 teachers currently employed in two different school districts who were teaching kindergarten through grade four. The participants consisted mainly of Hispanic bilingual teachers living along the Texas-Mexico border. One hundred eighty seven surveys were completed, returned and included in this study. Descriptive statistics were utilized to examine the demographic data of the participants. One hundred eighty-two (97.33%) participants were Hispanic and 5 (2.57%) were non-Hispanic. The data indicated that 135 (72.19%) had earned the Texas Gifted Supplemental Certificate; 165 (88.24%) had received at least 30 hours of gifted professional development; 124 (66%) had 6 or more hours of gifted professional development beyond the required 30 hours. For purposes of this study, the participants were placed in two groups based on their demographic data. The groups were: teachers with 0-5 years of teaching experience in the gifted setting and teachers with 6 or more years of experience in the gifted setting. The reason for separating the participants into

groups was to determine if the years of experience working with gifted children had any impact on the knowledge level of the participants.

Survey Instrument

The survey instrument consisted of 11 demographic data questions and the Hispanic Bilingual Gifted Screening Instrument (HBGSI), which consists of 78 items. The HBGSI is intended as a referral tool for Hispanic bilingual students to be identified for placement in a gifted and talented program. An agglomerative hierarchical cluster analysis was performed by Irby and Lara-Alecio (1996) and the results revealed the existence of 11 clusters. In order to determine reliability, Irby and Lara-Alecio administered the instrument to 61 elementary bilingual teachers using the HBGSI. The results produced a Cronbach's Alpha with coefficients ranging between .62 and .91. These results showed a fairly high correlation between the characteristics typically seen as representative of gifted Hispanic bilingual students and those illustrated by the HBGSI (Fultz, Lara-Alecio, Irby, & Tong, 2013). The 11 clusters include: social academic language, cultural sensitivity, familial, motivation, collaboration, imagery, achievement, support, creative performance, problem solving, and locus of control. The HBGSI is normed for grades K-4th (Irby & Lara-Alecio, 1996). For the purposes of this study, the instructions to the participants for responding to the HBGSI were adjusted. Participants were asked to score each item, using a 5-point likert scale, according to the degree that they thought a gifted student (without qualifiers, e.g., gifted Hispanic or gifted English Language Learners (ELL), simply a gifted student) exhibited the stated behavior or characteristic (1-never exhibits behavior/characteristic, 2- seldom exhibits behavior/characteristic, 3- sometimes exhibits behavior/characteristic, 4- often exhibits behavior/characteristic, 5- always exhibits behavior/characteristic). Participants were asked to complete a survey form of the instrument along with demographic questions.

Results

Because teachers frequently are responsible for writing recommendations or nominating students for gifted and talented programs, this study sought to determine how well the participants were able to

recognize characteristics of gifted Hispanic bilingual students. Descriptive statistics were run on the data in order to determine the total score of teacher responses for the 78 items on the HBGSI instrument. Teachers with 0-5 years of experience had a sum of 151.39/ 75 = 2.02. Teachers with six or more years of experience had a sum of 154.54/ 112= 1.38. These low means may suggest that teachers are not consistently recognizing the characteristics of gifted Hispanic bilingual students. Furthermore, there is little difference between teachers based on their years of experience in working in gifted settings, which is of note, considering the required yearly professional development for gifted teachers in Texas.

A comparative analysis was run on the two groups of teachers to determine the extent to which teachers recognize the characteristics of gifted Hispanic bilingual students according to the HBGSI clusters (see Table 1). The overall means for teachers with 0-5 years of experience ranged from 1.20 to 2.44, with an overall mean of 1.87. The overall means for teachers with six or more years of experience ranged from 1.62 to 2.46, with an overall mean of 2.00. These results show that when the characteristics of giftedness are clustered and teachers are grouped according to their experience, they consistently do not recognize the characteristics of gifted Hispanic bilingual students as designated on the HBGSI.

Table 1

Characteristics of Gifted Hispanic Bilingual Students

Clusters		*M*
Social Academic Language	Teachers with 0-5 years of experience	2.02
	Teachers with 6 or more years of experience	2.00
Cultural Sensitivity	Teachers with 0-5 years of experience	2.24
	Teachers with 6 or more years of experience	2.24
Familial	Teachers with 0-5 years of experience	2.00
	Teachers with 6 or more years of experience	2.06
Motivation	Teachers with 0-5 years of experience	1.95
	Teachers with 6 or more years of experience	1.62
Collaboration	Teachers with 0-5 years of experience	1.69
	Teachers with 6 or more years of experience	1.86
Imaginary	Teachers with 0-5 years of experience	1.57
	Teachers with 6 or more years of experience	1.71
Achievement	Teachers with 0-5 years of experience	2.18
	Teachers with 6 or more years of experience	1.90
Support	Teachers with 0-5 years of experience	2.00
	Teachers with 6 or more years of experience	2.06
Creative Performance	Teachers with 0-5 years of experience	2.44
	Teachers with 6 or more years of experience	2.46
Problem Solving	Teachers with 0-5 years of experience	2.17
	Teachers with 6 or more years of experience	2.20
Locus of Control	Teachers with 0-5 years of experience	1.86
	Teachers with 6 or more years of experience	1.85

Teachers with 0-5 years of experience gave highest ranking to the following clusters: creative performance, cultural sensitivity, achievement, and problem solving, indicating that these were the most agreed upon traits of gifted Hispanic bilingual students between teachers and the HBGSI. The lowest ranking clusters were: collaboration, imagery, familial, and support (see Table 1). Teachers with six or more years of experience ranked the following clusters highly: creative performance, cultural sensitivity, and problem solving. The lowest ranking clusters were: motivation, imagery, familial, and support (see Table 1). Three clusters are of special note, as both groups poorly ranked them: imagery, familial, and support. Imagery indicators include statements about student ability to use imagery verbally and in writing, and the student's imaginativeness in storytelling. Familial items include having a caretaker personality, having strong parental role models, and having emotional support from family. Support cluster items include a preference for alternative assessments over tests, more positive performance with teacher-expressed confidence, and showing interest in one primary academic area.

In order to examine the impact of the teacher perceptions on gifted Hispanic bilingual students, descriptive statistics were used to examine the districts' student population data (see Table 2). Table 2 indicates that the total gifted student population is proportional to the total student population in both districts; as well as mirrors the ethnic status of the total student population. The target percentage of gifted students should be between 5 and 7% of the total student population according to the 1972 *Marland Report to Congress*. In school district 1 the percent of students enrolled in the Gifted and Talented program is 12.92%, and district 2 is 6.51%. The gifted Hispanic population is greater than 97% for both districts, which reflects the total student Hispanic population (see Table 2).

Table 2

Student Identification Data

	School District 1 f (%)	School District 2 f (%)
Total Student Population	43,055 (100.00%)	24,686 (100.00%)
Hispanic Student Population	41,365 (98.30%)	24,527 (99.40%)
English Language Learner Student Population	16,857 (39.18%)	14,330 (58.23%)
Bilingual/LEP Student Population	14,532 (29.62%)	13,363 (18.47%)
Students Enrolled in Gifted and Talented Program	5,562 (12.92%)	1,607 (6.51%)
English Language Learners Enrolled in Gifted and Talented Program	489 (8.80%)	298 (1.21%)
Bilingual/LEP Students in Gifted and Talented Program	346 (12.4%)	236 (10.5%)
Hispanic Students Enrolled in Gifted and Talented Program	5,411 (97.30%)	1,588 (99.92%)
Non-Hispanic Students Enrolled in Gifted and Talented Program	91 (2.70%)	19 (.08%)

(Source: District Student Information System)

In regards to students participating in the bilingual program, this data indicates an underrepresentation in both districts. In school district 1 only 12.4% of the gifted students enrolled are in the bilingual program, compared to the 29.62% of the total student population. In school district 1 only 8.8% of the gifted students are English Language Learners, compared to 39.18% in the total student population (see Table 2). In school district 2 only 10.5% of the gifted students enrolled are in the bilingual program, compared to 18.47% of the total student population. In school district 2 only 1.21% of the gifted population are English Language Learners, compared to 58.23% of the total student population (see Table 2).These percentages reinforce the research that suggests a lack of knowledge of Hispanic bilingual characteristics can be a factor in disproportionality (Esquierdo & Arreguin-Anderson, 2012).

Commonly used in medical research, risk ratio is a measure that can be used in educational research to investigate disproportionality in special education (Linn & Hemmer, 2011). A relative risk ratio reveals that there is a disproportionate underrepresentation of bilingual and ELL students in both

school districts gifted programs. To determine relative risk ratio, the risk, or in this case the instance, of bilingual students in gifted programs is compared to the instance of Hispanic students in gifted programs. A risk ratio of 1.0 indicates a normal representation within the groups, a value greater than 1 indicates a disproportionate overrepresentation, while a value less than 1 indicates a disproportionate underrepresentation. In both school districts the risk ratios are less than .075, indicating underrepresentation or disproportionality (Westat, 2003); for school district 1 the risk ratio for English language learner populations is .23, and in school district 2 the risk ratio is .33. The risk ratio for the Bilingual/LEP population is .39 in School District 1, and .28 in School District 2.

Discussion

Teacher identification often plays a major role in the identification process (Castellano, 2011; Moon & Brighton, 2008; Gross, 1999). Elementary teachers often initiate the identification process, yet are not always knowledgeable about the characteristics of giftedness, and even less knowledgeable about the characteristics of gifted Hispanic bilingual students (Castellano, 2011; Esquierdo & Arreguin-Anderson, 2012; Irby & Lara-Alecio, 2000). Results of this study show that teachers do not agree with the indicators on the HGBSI to recognize the characteristics of Hispanic bilingual gifted students with overall means of 1.87 for teachers with 0-5 years of experience and 2.00 for teachers with six or more years of experience. While these numbers cannot definitively correlate to the research, they may indicate support for the research (Castellano, 1998; Fraiser, Garcia, & Passow, 1995; Moon & Brighton, 2008), indicating teachers may show little understanding of characteristics of Hispanic bilingual giftedness potentially impacting their efficacy in identifying gifted students.

Some of the potential causes for poor teacher recognition of gifted characteristics include the amount of professional development, years of experience and personal bias (Castellano, 1998; Fraiser, Garcia, & Passow, 1995; Moon & Brighton, 2008). The participants in this study varied in their years of teaching experience; however, there was little difference between their agreement with the HGBSI indicators (see Table 1). A possible interpretation of this data suggests that teachers may not be

recognizing the traits of gifted Hispanic students. There is a concern with the data, which indicates that 72.19% of teachers hold the Texas Gifted & Talented Supplemental certificate, 88.24 % received at least 30 hours of professional development, and 66 % have professional development hours beyond the state requirement of 30 (see Table 1). While professional development is a positive component of the Texas state regulations, if the teachers are indeed not accurately identifying gifted students, the training requirements may need to be adjusted to include more targeted professional development on the characteristics of giftedness, as well as the characteristics of gifted Hispanic bilingual students. Personal bias is also mentioned in the literature as a potential cause for underrepresentation (Castellano, 1998; Frasier, Garcia, & Passow, 1995). Even though the majority (97.33%) of the participants in this study were Hispanic, they did not agree with the indicators on the HBGSI, potentially demonstrating a struggle to recognize giftedness within their ethnic group.

The results of this study may indicate that teachers do not have a strong knowledge base of the characteristics of gifted Hispanic bilingual students. Given this interpretation, the number of students identified for the gifted and talented program (see Table 2) showcases the extent to which these perceptions potentially impact the identification process. In the two districts in the study, there is a proportionate representation of Hispanic students identified for the gifted program, as compared to the overall demographics of the district, perhaps partly due to the district demographics: the majority of the student population is Hispanic (see Table 2). However, when one examines the number of bilingual students being identified (see Table 2) there is a clear disproportionality, as evidenced by the risk ratios. The lack of teacher perceptions of characteristics of gifted Hispanic bilingual students may be impacting the number of English Language Learners (ELL) students being identified. The data supports the literature, which cautions that teachers must not only be trained in the characteristics of giftedness, but those of gifted bilingual students (Esquierdo & Arreguin-Anderson, 2012).

Conclusion

Based on the findings of this study, there is an underrepresentation of the population of Hispanic bilingual students in gifted programs. The survey results indicate that teachers, even those with gifted endorsements that receive ongoing professional development in gifted education, are not consistently agreeing with the characteristics of gifted Hispanic bilingual students as indicated on the HBGSI, which may demonstrate a lack of recognition of the traits of these students. Districts might benefit from professional development geared to identification and the characteristics of gifted Hispanic bilingual students in order to reduce this gap. One recommendation of this study is that districts train all teachers to recognize giftedness in bilingual students as identified by Irby and Lara-Alecio. One direction for future study is an analysis of the quality and quantity of the professional development offerings as required by the Texas statutes. Additionally, this study used one measure of characteristics, the HGBSI. Future studies would benefit from a comparison of teacher ratings of a typical rating scale (such as Renzulli's SRBCSS) with the instruments on the HGBSI to determine if there is a discrepancy in characteristics of gifted students overall, or if the lack of knowledge is specific to the Hispanic bilingual population.

References

Becker, K. A. (2003). History of the Stanford-Binet intelligence scales: Content and psychometrics. *Stanford-Binet Intelligence Scales, 5(1).*

Castellano, J. (1998). *Identifying and assessing gifted and talented bilingual Hispanic students.* Charleston, WV: Eric Clearinghouse on Rural Education and small schools. (ERIC Document Reproduction Service No. ED423104).

Castellano, J. (2011). Hispanic students and gifted education: New outlooks, perspectives, and paradigms. In J. Castellano & A.D. Frazier (Eds.), Special populations in gifted education: Understanding our most able students from diverse backgrounds (pp. 249-269). Waco, TX: Prufrock Press.

Coleman, M., & Gallagher, J. (1992). *Report on state policies related to the identification of gifted students* (Evaluative/Feasibility No. EC301094). Chapel Hill, NC: University of North Carolina at Chapel Hill. (ERIC Document Service NO. ED344368).

Contreras-Vanegas, A., Lara-Alecio, R., & Tong, F. (2012). The inter-rater reliability of the hispanic bilingual gifted screening instrument (HBGSI). *National Forum of Applied Educational Research Journal, 25*(3), 1-13.

Esquierdo, J. (2006). Early identification of hispanic English language learners for gifted and talented programs. (unpublished doctoral dissertation). Texas A&M University, Texas.

Esquierdo, J.J. & Arreguin-Anderson, M. (2012). The "Invisible" gifted and talented bilingual student: A current report on enrollment in gifted and talented programs. *Journal for the Education of the Gifted, 35*(1), 35-47. doi: 10.1177/0162353211432041

Ford, D.Y. (2007). Intelligence testing and cultural diversity: The need for alternative instruments, policies, and procedures. In VanTassel-Baska, J.L. (Ed.), Alternative assessments with gifted and talented students (pp. 107-128). Waco, TX: Prufrock Press and the National Association for Gifted Children.

Frasier, M. M., García, J. H., & Passow, A. H. (1995). *A review of assessment issues in gifted education and their implications for identifying gifted minority students* (RM95204). Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Fultz, M., Lara-Alecio, R., Irby, B.J., & Tong, F. (2013). The Hispanic bilingual gifted screening instrument: A validation study. *National Forum of Multicultural Issues Journal, 10*(1), 1-26.

Gagné, F. (1985). Giftedness and talent: Reexamining a reexamination of definitions. *Gifted Child Quarterly, 29,* 103-112. doi:10.1177/001698628502900302

Gagné, F. (2008). *Building gifts into talents: Brief overview of the DMGT 2.0.* Retrieved from http://nswagtc.org.au/images/stories/infocentre/dmgt_2.0_en_overview.pdf

Gallagher, J.J., & Gallagher, S.A. (1994). *Teaching the gifted child* (4th ed.). Boston: Allyn & Bacon.

Gross, M.U.M. (1999). Small poppies: Highly gifted children in the early years. *Roeper Review,* 21, 207-214.

Hodge, K.A., & Kemp, C. R. (2008). Recognition of giftedness in the early years of school: Perspectives of teachers, parents, and children. *Journal for the Education of the Gifted, 30*(2), 164-204.

Iowa Department of Education (2008). *Identifying gifted and talented English language learners*.Des Moines, IA: Author.

Irby, B., & Lara-Alecio, R. (1996). Attributes of Hispanic gifted bilingual students as perceived by bilingual educators in Texas. *SABE Journal, 11,*120-140.

Lara-Alecio, R., & Irby, B. (2007). The culturally and linguistically diverse gifted. In C. Reynolds (Ed.) *Encyclopedia of special education* (p. 506-510). New York, NY: John Wiley.

Linn, D. & Hemmer, L. (2011). English language learner disproportionality in special education: Implications for the scholar-practitioner. *Journal of Educational Research and Practice, 1*(1), 70-80. doi:10.5590/JERAP.2011.01.1.06

Marland, S. P., Jr. (1972). Education of the gifted and talented: Report to the Congress of the United States by the U.S. Commissioner of Education and background papers submitted to the U.S. Office of Education, 2 vols. Washington, DC: U.S. Government Printing Office.

Moon, T., & Brighton, C. (2008). Primary teachers' conceptions of giftedness. *Journal for the Education of the Gifted, 31*(4), 447-480.

Naglieri, J. A. (2011). Naglieri Nonverbal Ability Test. *Pearson Assessment*.

National Association for Gifted Children. (1990). *Giftedness and the gifted: What's it all about?* ERIC Digests: Reston, VA. Retrieved from http://www.nagc.org/index.aspx?id=121

National Association for Gifted Children. (n.d.) *What is gifted?* Retrieved from http://www.nagc.org/

National Association for Gifted Children (2010). Redefining Giftedness for a New Century: Shifting the Paradigm. Retrieved from http://www.nagc.org/sites/default/files/Position%20Statement/Redefining%20Giftedness%20for%20a%20New%20Century.pdf

No Child Left Behind Act, P.L. 107-110 (Title IX, Part A, Definition 22) (2002); 20 USC 7801(22) (2004).

Pew Research Center. (2014). Retrieved from http://www.pewhispanic.org/states/state/tx/

Pfeiffer, S. I. & Jarosewich, T. (2003). *Gifted Rating Scales.* The Psychological Corporation: San Antonio, TX.

Pfeiffer, S. & Petscher, Y. (2008). Identifying young gifted children using the gifted rating scales-preschool/kindergarten form. *Gifted Child Quarterly, 52*(1), 19-29. doi:10.1177/0016986207311055

Raven, J. C. (2003). Raven s Advanced Progressive Matrices. *Pearson Clinical Psychology.*

Renzulli, J. (1986). The three ring conception of giftedness: A developmental model for creative

   productivity. In R. J. Sternberg and J. E. Davidson (Eds.), Conceptions of giftedness (pp.
   53-92). New York: Cambridge University Press.

Renzulli, J. S. (2005). The three-ring conception of giftedness: A developmental model for promoting
   creative productivity. In R. J. Sternberg & J. E. Davidson (Eds.), Conceptions of Giftedness (pp.
   246-279). New York: Cambridge University Press.

Renzulli, J.S., Siegle, D., Reis, S.M., Gavin, M.K., & Reed, R.E.S. (2009). An investigation of the
   reliability and factor structure of four new scales for rating the behavioral characteristics of
   superior students. *Journal of Advanced Academics, 22*(1), 84-108.

Renzulli, J. S. & Smith, L. H. (2010). Scales for Rating the Behavioral Characteristics of Superior
   Students. *Prufrock Press, Inc.*

Ryser, G. R., & McConnell, K. (2004). Scales for Identifying Gifted Students, Ages 5 Through 18: SIGS.
   Prufrock Press.

Szymanski, T. & Shaff, T. (2012). Teacher perspectives regarding gifted diverse students. *Gifted
   Children, 6*, 1, Article 1. Retrieved from http://docs.lib.purdue.edu/giftedchildren/vol6/iss1/1

Texas Education Agency (2000). *Texas administrative code: Rule* §89.2. Retrieved from
   http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&ptloc=&p
   _ploc=&pg=1&p_tac=&ti=19&pt=2&ch=89&rl=2

Texas Education Agency (2009). *Texas State Plan for the Education of Gifted/Talented Students.*
   Retrieved from http://tea.texas.gov/index2.aspx?id=6420

U.S. Census Bureau (2013). *Profile America facts for features: Hispanic heritage month*. Retrieved from
   https://www.census.gov/newsroom/releases/archives/facts_for_features_special_editions/cb13-
   ff19.html

Wechsler, D. (2003). Wechsler Intelligence Scale for Children. *Pearson Clinical Psychology.*

Westat (2003). *Special populations study: Final report.* Washington DC: U.S. Department of Education,
   Office of Special Education Programs.

Whiting, G. & Ford, D. (2009). Cultural bias in testing. Retrieved from
   http://www.education.com/reference/article/cultural-bias-in-testing/

Woodcock, R. W., Muñoz-Sandoval, A. F., Ruef, M. L. & Alvarado, C. G. (2005) Woodcock-Muñoz
   Language Survey. *Riverside Publishing.*

PLAYING WITH MATH

Elizabeth K. Ward, Ph.D.
   Texas Wesleyan University

Elisabeth Johnston, Ph.D.
   Plymouth State University

Abstract

This paper describes the formation and evolution of a K-5/university partnership designed to enhance elementary students' mathematics achievement and the mathematical pedagogical content knowledge (PCK) of pre-service teachers. Two key considerations are central to the partnership. First, the mathematics activities in the intervention are based on best practices for mathematics instruction from the National Council of Teachers of Mathematics (NCTM, 2000) and are based on the needs identified by the teachers of the elementary students (Tomanek, 2005). Second, best practices in mathematics education are modeled for the pre-service teachers in the program (National Council for Accreditation of Teacher Educators, 2008; NCTM, 2007). The results from this research can be used to design high-quality mathematics field experiences for pre-service teachers in other settings.

Introduction

The Camp Math program is the result of a partnership between a private university and a local elementary school. Due to its proximity to the university, this school has a long history of collaboration with the university's education faculty. Located in an urban setting, the student body is approximately 90% Hispanic, 8% African-American, and 2% White. More than 94% of the students are economically disadvantaged, and 74% are identified as English Language Learners (ELLs) (Texas Education Agency, 2011).The Camp Math program was initiated in the spring of 2011 by a teacher at the school who was concerned about the third graders and how they would perform on the upcoming state math assessment. He approached the first author about conducting a math "boot camp" in the weeks prior to testing. From this initial camp, an ongoing collaboration has developed where at-risk elementary students get the opportunity to improve their math knowledge, both conceptually and procedurally, while pre-service teachers experience first-hand the effective use of group activities and games to teach mathematics. The

purpose of this paper is to describe how this program evolved over time and how participating in this field experience influenced the pre-service teachers' understandings of how to teach elementary mathematics.

Theoretical Framework

Our elementary school partners were looking for challenging games/activities that allowed students to develop the intended mathematical skills in a risk-free and supportive environment (Krashen, 1981; Vygotsky, 1978). Camp Math games/activities are grounded in the National Council of Teachers of Mathematics principles of equity, teaching, and learning and emphasize the process standards of problem-solving and communication (NCTM, 2000). By design, Camp Math fosters development of mathematical communities where students have time to engage in mathematical conversations through problem-solving games/activities (Crandall, 1987). The cooperative nature of the games/activities is especially valuable for ELLs, because use of the native language is seen as a resource and is used to support mathematical discussions (Gandara & Contreras, 2009; Moschovich, 2007).

A crucial feature of the program was to ensure that our pre-service teachers were given the opportunity to put the NCTM standards (2000) into action in their own practice. Many elementary pre-service teachers enter the field with the "apprenticeship of observation" (Lortie, 1975, p. 61) and believe that mathematics is most effectively taught using teacher-oriented, step-by-step instructional practices. Especially in urban settings, researchers have found that pre-service teachers believe that the most effective mathematics instruction for urban students revolves around rote learning, repetition, and basic skills (Anyon, 1997; Breitborde, 2002; Gilbert, 1997; Walker, 2007). We wanted our pre-service teachers to see the power of teaching mathematics using methods that engage students in exploration of and discussion about the mathematics they were learning. The Camp Math field experiences provide pre-service teachers with the opportunity to align course material to field experience and gives university instructors at the field site the opportunity to engage in "teachable moments" (Allsopp, DeMarie,, Alvarez-McHatton, & Doone, 2006). Pre-service teachers who engage in structured field experiences are more likely to be prepared to teach the content than those who engage in unstructured field experiences

(Brannon & Fiene, 2013). These types of field experiences are also crucial to the development of pre-service teachers' feelings of competence in teaching mathematics (Capraro, Capraro, & Helfeldt, 2010). Moyer and Husman (2006) found that pre-service teachers in an integrated field experience focused more on student learning and that student success increased the pre-service teachers' confidence in their own mathematics teaching ability. Early, positive field experiences with culturally diverse populations that are completed under the guidance of successful educators may positively influence pre-service teachers' viewpoints about their ability to work with diverse populations (Lastrapes & Negishi, 2011-2012).

In addition, we wanted to model for our students how to take student assessment data provided by the school and develop games/activities to remediate and extend students' understanding of the targeted mathematical content (Tomanek, 2005). Finally, we wanted to emphasize to our students the importance of reflecting on their students' learning as well as their own in order to improve student outcomes and improve their own instructional effectiveness (NCATE, 2008).

Program Design

Year One

The initial program occurred in the four weeks immediately prior to the state mandated assessment of mathematics. We divided the responsibilities for implementing Camp Math between the school and the university. The school created the schedule, secured classrooms, communicated with parents, registered students for the program, divided students into groups, and provided prizes for weekly drawings. The university faculty organized the pre-service teacher volunteers, designed the games/activities, and supervised the camp.

In order to determine which Texas Essential Knowledge and Skills (TEKS) we needed to focus the games/activities on, the school administered a released version of the Third Grade Mathematics assessment to the students. Using this data, the authors met to lay out the topics for each session. Subsequent meetings were devoted to locating existing materials that targeted the specific topic or developing new games/activities. Given the high percentage of ELLs in Camp Math, all of the

games/activities were designed to be partner or group activities. This allowed students to discuss the games/activities in both their native language and English, which helped foster acquisition of the mathematical content and academic language (Gandara & Contreras, 2009; Moschovich, 2007). All third graders were invited to participate in Camp Math and approximately 80% of the students participated. We met with the students for two hours on four consecutive Friday afternoons. Since the semester had already begun, pre-service teacher volunteers were recruited from several education courses. Each week, the pre-service teachers were provided with materials and were briefed as to how the games/activities should be conducted. The pre-service teachers worked in small groups leading the games/activities, with support from the two authors and the school liaisons. The students rotated through four activities each week. In each rotation, the students engaged in the game/activity for 25 minutes and completed a one-item assessment during the last five minutes. At the end of the day, the school conducted a drawing for participating students, during which they could win small prizes.

We were pleased with our initial results. The students, as a whole, engaged in the games/activities and commented to the pre-service teachers how much they were learning through the activities. In addition, the pre-service teachers commented during our weekly debriefs about how this experience helped them internalize the NCTM principles through putting them into practice.

Despite our successes, we noted three major challenges. First, we were concerned whether the math gains were going to be long-term, since the intervention was staged in the weeks immediately prior to the state assessment. Second, based on our observations and input from the pre-service teachers, we realized that the length of time for each activity was too short for students to adequately engage in and/or complete the game/activity. Finally, we decided that the weekly drawing detracted from the math being learned and merely served as an extrinsic motivator. The pre-service teachers commented that the last activity was the hardest to lead and usually the least successful of the four, due to the students' anticipation of the prize drawing.

Year Two

When preparing for the second year, we implemented four changes. Three changes were directly related to the structure of the Camp Math program and the fourth change was related to the pre-service teacher involvement in the program. First, we reduced the number of activities from four to three. Because we were using activities that stressed critical thinking and problem-solving skills, 25 minutes did not give students enough time to fully engage in the games/activities. Second, we eliminated the assessment item at the end of each activity because it did not provide useful information and took away from the time devoted to math. Third, we discontinued the drawing in order to focus on our goal of helping students develop an intrinsic motivation to be successful in mathematics. Fourth, the Camp Math program was embedded into the math methods course, to better allow for the integration of the course material and the field experiences. In addition, we planned to provide in-service to the school's teachers on how to include the games into their math instruction.

The 2011-2012 school year brought new challenges for our school partners. Based on state assessment results, the school fell into the lowest ranking, according to the Texas Education Agency's accountability system. As a result, the school administration was under great pressure from both the state and the district to improve scores. This situation, coupled with the fact that Texas was changing from the Texas Assessment of Knowledge and Skills (TAKS) to the State of Texas Assessment of Academic Readiness (STAAR), meant that the school would have this low ranking for two consecutive years. As a result, we expanded the program to include students in second through fifth grades who were enrolled in the district's after-school program at this school. The students enrolled in this program were at-risk for one or more of the following reasons: were economically disadvantaged, failed one or more subjects the previous year, had been retained, failed TAKS in one or more subjects the previous year, or were ELLs.

Due to programmatic changes at the university, the first author embedded Camp Math into the math methods course as a required assignment. This allowed for a year-long intervention, since the math methods course is taught in both semesters each year. In class, we modeled for the pre-service teachers

how the games/activities were designed to remediate the Texas Essential Knowledge and Skills (TEKS) in which students were deficient, while simultaneously working toward the current grade level expectation(s). The capability to differentiate each activity based on students' abilities and support the needs of ELLs was two features we emphasized with the pre-service teachers. In addition, we taught the pre-service teachers how to take a multiple-choice question and design an activity around it, as opposed to preparing students for state assessments with multiple-choice worksheets. Finally, we required the pre-service teachers to complete a three-question qualitative reflection about how this field experience impacted their formation as math teachers.

The resulting program targeted students in grades two through five who participated in three 40-minute math rotations each session over the course of the school year. Five afterschool sessions were held in the fall semester and five afterschool sessions were held in the spring semester (prior to the state assessment). However, because of a scheduling conflict with an afterschool reading program, many of the students missed approximately 20 minutes of the first activity in each session. As a result, students who were not in the reading program received 120 minutes of mathematics instruction, while students who were in the reading program received 100 minutes of math instruction.

We were encouraged by the changes made in the program. Students continued to demonstrate a positive affect toward the math games/activities and were eager to participate in the program. In addition, the time spent in the methods course better prepared the pre-service teachers for Camp Math as evidenced by comments made in their weekly reflections. Our ongoing class discussions enhanced the impact of the field experience by allowing the pre-service teachers to connect their field experience to the NCTM principles being learned in class. Furthermore, the pre-service teachers had the opportunity to work with multiple grade levels, giving them a better perspective as to how teaching math is similar and different depending upon the age of the student.

We still faced challenges. First, two hours of additional time at school on a Friday afternoon was more than the second graders could manage. Second, the students coming into the first rotation late from

the reading intervention made it difficult to maintain continuity in the first activity. Third, even though Camp Math was embedded in the math methods course, classroom time constraints and limited materials did not always allow time for the pre-service teachers to practice the games/activities to a mastery level before implementing them. Finally, due to additional requirements placed on the school by the state and the district because of the accountability rating, we were not able to conduct the teacher in-service as originally planned.

Year Three

Based on our experience in year two, we modified Camp Math for the third year. We maintained the year-long program with five sessions in the fall and five sessions in the spring. However, we dropped the second graders from the program. Staying after school until 5:30 pm on Friday afternoons was very difficult for the second graders. We focused on students in grades three through five, since these grades were subject to the requirements of annual state testing in mathematics. In addition, we decreased the number of activities from three to two, so that students coming from the reading program did not have to enter the first activity late. This change allowed us to increase the activity time to 45 minutes for each rotation, although the total time spent in Camp Math decreased by 30 minutes. Finally, the instructor made changes within the math methods course to allow more time for the pre-service teachers to practice the games/activities in class. The acquisition of additional supplies also allowed the pre-service teachers to take materials home for additional practice with the games/activities prior to implementation.

We were pleased with the third year of the program. The students enjoyed participating in Camp Math. Frequently, the students would say how excited they were to be in Camp Math and how much they enjoyed playing the games. Additionally, since there were only three grade levels participating in the program, the pre-service teachers often had the opportunity to work with the same students week to week. In our debriefing sessions, the pre-service teachers would comment on the growth in confidence and mathematical reasoning that they had noticed in the students. Additionally, the reduction in the number of activities allowed the pre-service teachers to become more fluent in each activity, increasing their

confidence in their mathematics teaching ability. These results were expressed in our weekly debriefs or documented in the pre-service teachers' reflections. Based on these results, we maintained this structure for Camp Math in the 2013-2014 and the 2014-2015 school years.

Example Activity

As mentioned, we realized the importance of providing Camp Math students with learning experiences connected to the TEKS being targeted by the program. For example, in order to help students gain a better understanding of estimation and rounding, as well as reinforcing their addition and subtraction skills, we developed a game called *Shopping with $10*. In this game, two-four players use a set of Shopping Cards (see Figure 1). Each player receives five cards and using his/her estimation skills selects three cards that he/she would like to "buy" to get as close as possible to $10. After each player has selected three cards, he/she shows the cards to the other players. Using the dry erase boards, each player adds the dollar amounts on the three cards together and the group decides which player got closest to $10.

Figure 1. Example of shopping cards from *Shopping with $10*

Students often completed multiple problems while evaluating combinations of cards that would get them closest to $10. One of the pre-service teachers reflected on the mathematical thinking required in this game:

I really saw deep mathematical thinking with the money card game. The children really had to think which cards made it closer to ten dollars. It would take them a while because they would pick different cards and debate which cards were the best. I would tell them to make sure there wasn't a better option and they would double check their cards and re-evaluate their choices. When I would ask them if their answer made sense and why, [it] really gave me an idea of what they were thinking through the process of their problem solving.

Students had the opportunity to think deeply about the mathematics in this game as well as participate in mathematical discussions with their peers and the pre-service teachers.

Findings

Once Camp Math was embedded in the math methods course, a course assignment required the pre-service teachers to debrief each session through three open-ended questions:

1. For each activity: Please name the activity you directed and describe the strengths and weaknesses of the activity.

2. Describe in detail one instance that you saw deep mathematical thinking in one child or a group of children.

3. What did you learn today about effective mathematics teaching?

These reflections provided feedback on the strengths and weaknesses of each of the games/activities as well as insight into potential changes in the pre-service teachers' understanding of high quality mathematics instruction.

Although all three questions included data demonstrating the pre-service teachers' understanding of effective mathematics teaching, the following discussion focuses on the key points the pre-service teachers' addressed in the third question: *What did you learn today about effective mathematics teaching?* Several themes emerged from the pre-service teachers' responses to this question (Table 2).

Table 2

Themes from Pre-Service Teachers' Responses to the Question: What did you learn today about effective mathematics teaching?

Common Themes	Quotation
Mathematics can be fun.	*I think when you make math fun and into a game then they want to do the problems.*
Teachers should have patience with students.	*...patience is a key in teaching.*
Mathematics should be hands-on or active learning.	*Active learning (like games) is very helpful to students.*
Students can learn from one another.	*I really enjoyed watching the students help one another when they did not understand the game. That made me learn how children learn more with hands-on activities that are based with group work.*
Students will have different ability levels.	*Every child is different and learns at a different pace.*
Teachers need to be prepared to answer students' questions or modify the activity.	*I learned that you have to always have something in mind to improve the activities if they are not being completely successful. It's like you have to be absolutely prepared at all times for anything.*
Teachers allow students time to discover the correct answer.	*I need to let the children figure it out on their own, not answer the question for them but let them think about it and guide them the way we want them to start thinking so they can find the correct answer.*

A key theme indicated the importance of preparing for each activity ahead of time and how this helped in the facilitation of the game/activity. One pre-service teacher wrote, "I need to know ahead of time what I am doing so I can figure out multiple ways of explaining it to the students who don't understand." This statement addresses an important aspect of teaching mathematics, especially for teachers new to the profession or those who do not feel confident in their own mathematical understanding. A teacher must think about the concepts being addressed in a lesson and the possible ways that students might think about these ideas. This preparation will help the teacher to guide students' mathematical learning in a positive and effective manner.

The effectiveness of cooperative groups to facilitate mathematics learning was another key theme. For example, one pre-service teacher wrote,

> *Kids are [at] different levels of mathematics, but with the use of teams/groups, all students can benefit. The more advanced students can lend a helping hand to the others, while boosting themselves. Plus, different people see different ways to solve things, and together we learn more possibilities.*

Another reflected,

> *The students communicated well with one another to come up with the answer and when they disagreed one fully explained why the other student was wrong. This showed me that he was really thinking about the math problem and not just guessing an answer choice.*

The ideas in these statements address many of the key components NCTM highlights as essential factors in high quality mathematical opportunities. This insight is particularly powerful for pre-service teachers whose own mathematical experience was teacher-directed, with little input from their peers.

Discussion

Many students experience math as merely content to be learned. In addition, many pre-service teachers believe that math is most effectively taught using teacher-directed procedures. However, the NCTM principles and standards emphasize the importance of providing time for students to engage in discussions about mathematics in a supportive environment where all students can be successful (NCTM, 2000). Camp Math is an example of how the principles and standards can be implemented in a math methods course. The on-going findings from the Camp Math program reiterate the importance of providing pre-service teachers with the opportunity to connect theory to practice in an environment in which they are likely to experience success (Allsopp, DeMarie, Alvarez-McHatton, & Doone, 2006; Capraro, Capraro, & Helfeldt, 2010). The structured and supportive environment allows the pre-service teachers to simultaneously build their confidence and competence in teaching mathematics to diverse learners (Brannon & Fiene, 2013; Lastrapes & Negishi, 2011-2012). The result is that both elementary

students and pre-service teachers experience the power of learning mathematics in this way. One student

summed up the benefits of Camp Math like this, "I think I'm better in math than I was before I came. I

used to think that math was hard, but after coming here, I now think it is easy!"

References

Allsopp, D. H., DeMarie, D., Alvarez-McHatton, P., & Doone, E. (2006). Bridging the gap between theory and practice: Connecting courses with field experiences. *Teacher Education Quarterly, 33*(1), p. 19-35.

Anyon, J. (1997). *Ghetto schooling: A political economy of urban education reform.* New York: Teachers College Press.

Brannon, D. & Fiene, J. (2013). The effect structured participation experiences have on pre-service teachers' preparedness to teach reading. *Education*, *134*(2), p. 185-194.

Breitborde, M. (2002). Lesson learned in an urban school: Preparing teachers for the educational village. *The Teacher Educator, 38*(1), 34-46.

Capraro, M. M., Capraro, R. M., & Helfeldt, J. (2010). Do differing types of field experiences make a difference in teacher candidates' perceived level of competence? *Teacher Education Quarterly, 37*(1), p. 131-154.

Crandall, J. (Ed.), (1987). *ESL through content area instruction: Mathematics, science, and social studies.* Englewood Cliffs, NJ: Prentice Hall Regents/Center for Applied Linguistics.

Gándara, P. & Contreras, F. (2009). *The Latino education crisis: The consequences of failed social policies.* Cambridge, MA: Harvard University Press.

Gilbert, S. L. (1997). The "four commonplaces of teaching": Prospective teachers' beliefs about teaching in urban schools. *The Urban Review, 29*, 81-96.

Krashen, S. (1981). *Second language acquisition and second language learning.* Oxford: Pergamon.

Lastrapes, W. & Negishi, M. (2011-2012). Foundational field experiences: A window into preservice teachers' cultural consciousness and self-efficacy for teaching diverse learners. *Southeastern Regional Association of Teacher Educators*, *21*(1), p. 37-43.

Lortie, D. (1975). *Schoolteacher: A sociological study.* Chicago: University of Chicago Press.

Moschkovich, J. N. (2007). Using two languages while learning mathematics. *Educational Studies in Mathematics, 64*(2), 121-144.

Moyer, P. S., & Husman, J. (2006). Integrating Coursework and Field Placements: The Impact on Preservice Elementary Mathematics Teachers' Connections to Teaching. Teacher Education Quarterly, 33(1), 37-56.

National Council for Accreditation of Teacher Education (2008). *Professional standards the accreditation of teacher preparation institutions.* Washington, DC: NCATE.

National Council of Teachers of Mathematics, (2000). *Principles and standards for school mathematics*. Reston, VA: NCTM.

Texas Education Agency. "2010-2011 Academic Excellence Indicator System." Accessed July 30, 2013. http://ritter.tea.state.tx.us/perfreport/aeis/2012/campus.srch.html

Tomanek, (2005). Building successful partnerships between K-12 and universities. *Cell Biology Education, 4*(1), 28-29.

Vygotsky, L. (1978). *Mind in society.* Cambridge, MA: Harvard University.

Walker, E. (2007). Preservice teachers' perceptions of mathematics education in urban schools. *The Urban Review, 39*, 519-540.

ETHICS IN THE CLASSROOM: DISCUSSIONS WITH PRESERVICE TEACHERS

Rebecca A. Wentworth, Ph.D.
  Sam Houston State University

Robert M. Maninger, Ed.D.
  Sam Houston State University

Abstract

This study investigates trends in pre-service teachers' attitudes toward potential dilemmas between personal and profession ethics. Using data captured in a survey course intended to introduce prospective teachers to the realities of a career in education, the researchers considered trends in ethical decision-making among pre-service teachers. Participants were 156 pre-service teachers whose individual decision-making vignettes containing an ethical component were coded into one of twelve thematic strands justifying crossing professional ethics when they conflict with personal ethics. Justifications included but were not limited to Intent, Extent, Quid Pro Quo, Subjectivity, Setting, Soft versus Hard Costs, Empathy, and Past Personal Experiences. The findings demonstrated success in raising students' awareness of the scope of the Code of Teacher Ethics in the State of Texas.

Keywords: Ethics, Pre-service teacher ethics, Teaching Ethics

Introduction

In the teaching profession situations involving an ethical component are present in daily decision-making (Dotger & Theoharis, 2008). Educational practitioners are asked to weigh the good of individual students against such factors as: the good of the group, a measure of parity for all students, and published student codes of conduct. Additionally, social mores, community practices, and personal ethical codes must be considered. In an attempt to standardize behavior, ethical codes are prominent in many professions. In educational settings, ethical codes arose from a culture in which poor judgment led to notable and newsworthy actions by practitioners, which in turn led to legislation of minimal ethical standards for teachers (TEA, 2010). The underlying tenet of many educator codes of ethics seems to be

that effective teachers should be individuals whose actions are grounded in values and beliefs that reflect caring positive relationships embedded in high levels of trust and ethical conduct (Boon, 2011).

The insertion of ethics discussion into academic curricula is a contentious topic. According to Warnick and Silverman (2011) professional ethics is a neglected subject in teacher preparation programs. Part of the debate is seated in who should take the lead in these academic-to-practice discussions. Ethicists would prefer students have a classic philosophical education regarding ethical theory and practice (Rizzuti, 2006). However, given the demand on students regarding available course work as mandated by state departments of education little time is free for such training. As education professionals, therefore, we often try to fill the instructional gap with practice-based discussions derived from real-world scenarios.

Schools are a complex sociological experiment in which difficult human decisions are sometimes constrained by social and cultural boundaries constructed by our communities (Shapira-Lishchinsky, 2009). Teaching and the ethical component of day-to-day routines within the schools does not occur within a vacuum. This indicates that while teachers are working within their personal ethical framework, they are also held accountable to professional ethics, cultural standards, and contextualized practices that may be in conflict with one another (Handelsman, Gottlieb, and Knapp, 2005). Barrett, Casey, Visser, and Headley (2012) argue that a greater emphasis in educator preparation programs on the topic of ethics as well as a profession-wide common code of ethics would increase pre-service teacher's understanding of and ability to navigate situations that contain an ethical component. Requiring pre-service teachers to use ethical codes to autonomously arrive at intelligent resolution of dilemmas, conceived from real-world scenarios, will aid in their ability to identify the ethical component in decision-making situations and act in a more ethical manner.

Integration of explicit instruction of teacher ethics can make a positive difference in the understanding of not only the professional code of ethics, but the personal ethical code of pre-service teachers as well. This study of pre-service teachers' reflections on professional ethics provides an

opportunity to discuss connecting personal ethics to professional ethics and how aspiring professionals can navigate the areas of disconnect. The current research is based on the underlying question: When professional ethical codes conflict with personal ethical codes, which code will pre-service teachers identify as the guide for acceptable behavior? Additionally, we investigated the circumstances under which pre-service teachers would allow personal ethical codes to override professional ethical codes and the justifications given for such an override.

Literature Review

As former public school teachers, both of us have dealt with multiple ethical dilemmas throughout our careers. We have witnessed actions in others that clearly crossed personal and professional ethical boundaries, and we both admit to actions that could have been interpreted as having been in conflict with professional ethics. Subsequently, we have a well-developed view of how professional ethics and personal ethics can both compliment and conflict with one another. Although there is not a deep pool of literature directly related to ethics in teacher education from which to draw, the following review discusses literature germane to our study.

Ethics Education

Pre-service teachers at the university where this study was conducted begin their educator training in their junior year of academia, by which time they have a set of moral ethics they believe is normal. This study assumes, as did Lampe (1996) that the academic environment can influence undergraduate students ethical development therefore professional ethics should be addressed in educator preparation programs. Lampe also stresses that, "It is important that every teacher be a role model for his or her students" (p. 15). While there is no direct link between ethics education and ethical decision-making and behavior in professionals (Fishman, 2011), ethicists tend to agree that ethics education at least makes professionals more aware of their choices and more conscientious of their behaviors (Fisher, 2011).

Furthermore there does not always exist a clear-cut line between right and wrong. It is in these gray areas between ethical and unethical choices where professionals must make ethical decisions (Handelsman, Gottlieb, and Knapp, 2005) while understanding that their decisions and actions are subject to the judgments of students, peers, administrators, school boards, and the public at large (Barrett, Casey, Visser, & Headley, 2012). Teachers, therefore, must develop a sound and useful system of ethical decision-making behaviors that can withstand such scrutiny.

Rios-Velazguez, Frey, Jaramillio-Giraldo, and Echeverry-Solarte (2013) propose beginning ethical education with clearly defined scenarios, those with straightforward black-and-white solutions. This allows educators to transition to more ambiguous situations that may confront professionals in the workplace. Although class time does not usually permit contemplation of all ethical dilemmas that could arise in professional contexts, diligence should be used to include a variety of scenarios for students' consideration. One interesting component of the teaching profession is the variety of ethical challenges one might face, which indicates ethical preparation must be thorough. As an educational system, we spend a great deal of time teaching our students the content they will teach and how to succeed in test-taking and writing assignments. It can be argued that as a system we do not spend adequate time and effort teaching students to reason morally using a sense of developed ethics (Sternberg, 2011).

Need For Ethics Preparation

As educators of pre-service teachers, we must begin to have conversations about moral and ethical values and the vocabulary that defines them (Shapira-Lishchinsky, 2011; Boon, 2011). There is much to do in the training of pre-service teachers, but failing to include conversations about the complicated ethical contexts in which they will practice fails to prepare them for one of their daily tasks: making ethical decisions regarding their students. The schools our pre-service teachers will one day help run and maintain are complex and, as teachers, they will inevitably need to negotiate diverse values and ethical dilemmas (Husu & Tirri, 2007). When a teacher's personal sense of right or wrong is confronted

by the complexity of the educators' code of ethics and is tested in everyday practice, even basic training in ethical decision-making could help them sort through difficult situations (Shapira-Lishchinsky, 2011).

Discussion concerning the teaching of ethics in academia has several tangents and is being considered around the world (Boon, 2011). Of specific debate is whether learning objectives be centered on theory or on practice. McGraw and colleagues (2012) question the nature of ethics as an academic discipline in light of applied ethics being taught by content-specific academics rather than philosophers and theologians. Warnick and Silverman (2011) stress the need to build the objectives of professional ethics education centered on a professional code of ethics. The ongoing debate over how to infuse ethics instruction across the curriculum is evidence that while a solution has not yet been reached, it is necessary if academics are to continue preparing students with a foundation in ethical knowledge (Warnick and Silverman, 2011).

In the field of education, the debate is ongoing over what ethical training should look like (Boon, 2011; Shapira-Lishchinsky, 2011). There are codes of ethics available nationally through teacher associations and at the state level from departments of education (TEA, 2010). Asking pre-service teachers to read and agree to one or more of these ethical codes is a good first step in preparing candidates for the ethical context in which they are to become practitioners; however, there is support for encouraging pre-service teachers to think autonomously on these topics, and to consider what behaviors are actually addressed in these codes (Warnick and Silverman, 2011; Boon, 2011; Shapira-Lishchinsky, 2011). Once pre-service teachers become practitioners, they must navigate ethical codes relating to bureaucracy, their peers, students and parents, often without benefit of professional guidance or the luxury of adequate time to properly reflect on the implication of decisions to be made. These codes governing professional ethics are imbedded in professional relationships and often must be used to steer behavior and communication (Thomas, 2012).

The teaching profession is quite unique as it deals with ethical decisions on a multi-layered perspective. Warnick and Silverman (2011) state in regards to teaching, "it must generate solutions that

are not only correct in educationally sensitive ways, it must be true to larger disciplinary concerns and standards, and it must be connected to the larger teaching profession" (p. 283). This study will add to the conversation focused on teaching professional and personal ethics to pre-service teachers in an educator preparation program at the university level.

Methods

Studying to become a certified secondary teacher at the university where this study took place consists of two components. The first component, the student's major, is the content the pre-service teachers will teach. The other component, secondary education (SED), is a minor field of study involving 24 credit hours. The first course in the SED minor, and the course in which the data were collected for this study, is called *The Teaching Profession,* and is a survey course intended to introduce prospective teachers to the realities of a career in education. To that end, a wide variety of topics are covered, including but not limited to the history of education, the current state of education in Texas, copyright and fair use laws, lesson planning, evaluating and grading, and professional ethics.

Students enrolled in *The Teaching Profession* course are primarily in their junior year of college and have chosen a content major and an SED minor. Students have a variety of majors, including but not limited to Music, Kinesiology, Math, Science, English, and History. At the regional university where this study took place, over 50% of the student population is comprised of first generation students and includes approximately 19% African American and 18% Hispanic students.

An additional component of this course is 10 hours of passive observations in public high schools. For securing placement for these observations, students must apply for admission into the teacher preparation program, which includes a background check, and e-signing the Texas Educators' Code of Ethics (TECE; Texas Board of Education, 2010). With our digital 'I have read and agree to' culture in which people rarely read online forms they e-sign, students in this program admit they do not carefully read or consider the TECE before submitting their e-signature. As classroom instructors and education

professionals, one of our charges is to prepare students for the professional world into which they will enter, including the ethical context public schools present.

To encourage more careful consideration and reflection concerning the ethical culture into which they are entering, students were asked to consider whether or not they would ever break specific parts of the TECE if they felt their actions were in the best interest of their students. As instructors, we chose to focus on those parts of the TECE with which we had experienced ethical violations, either personally or with someone with whom we worked. In class, we related these ethical violations, including as much detail as possible, being sensitive to confidentiality issues. After each story, students were asked to discuss with their peers whether the actions of the teacher in the narrative crossed an ethical line and if the teacher should be dismissed from his or her position given the behavior. Students were then asked to reconsider their earlier response, imagining a situation in which *they* may break the TECE while maintaining their personal ethical guidelines.

Data Collection

Armed with these discussions, the code of ethics, and their own sense of right and wrong, students were then asked to write a reflection paper in which they discussed situations in which they may judge it acceptable to break the ethical code in their professional practice. The assignment offered the options of using predictions of personal behavior, media reports of teacher behavior, discussion of ethical theories and theorists, or other supporting arguments as appropriate. Students were encouraged to talk to practicing teachers for stories, ideas, comments, and opinions and to use those conversations in their reflection. These in-class experiences in six sections of *The Teaching Profession* course over two semesters produced 150 essays, each containing up to three vignettes, which comprises our data pool.

Anonymity

While the course instructors try to build an atmosphere of trust in the classroom using pro-social communication and self-disclosure (Finn, 2012), large-group instruction lends itself easily to feelings of vulnerability at the hands of teachers who traditionally have the power in the classroom. In an attempt to

reassure students that the instructors were interested in honest reports of their opinions, students were given a cover sheet that asked for a student number rather than a student name. Students were asked to attach the cover sheet to their reflection but to include no identifying information on the reflection paper itself. Students were also assured that unless they admitted to violent crimes or crimes involving minors, once the reflection was scored the cover sheet would be separated from the reflection, student numbers would be matched with student names, and grades would be recorded.

Once cover sheets were removed from student reflections, there was very little chance of authors' identities being discovered. This allowed us to review the 433 vignettes while keeping confidential the identity of the samples' authors. Although students were instructed to not place identifiers on their essays, several contained student numbers and other identifying marks in headers, footers, cover-sheets, etc. To insure anonymity of students, all personal identifiers were removed and photocopies were made to further ensure student writers could not be identified. Originals with identifying markers were destroyed to eliminate the potential for later identification.

Sample Marking

Before beginning with data analysis, student reflections were each given a unique three-digit identifier between 001 and 156. Next, each individual vignette was identified and enclosed visually, then labeled a, b, c, d, e, or f. (Note that while not all discussions included vignettes, the authors will use the term *vignette* to indicate a single discussion point within each student paper.) This ensured that both researchers were considering the same data sample when excluding a vignette from the data set or when thematically coding the data. From the full data set, 15 papers were chosen to serve as calibrating samples for coding. Because two researchers would be coding data, we felt it was valuable to attempt inter-rater reliability by separately coding up to 45 vignettes (3 vignettes from 15 papers) then comparing and discussing those codings.

Researchers identified several causes for excluding vignettes from the data set. The first cause for exclusion was that the vignette was a derivative restatement of in-class discussions; either the student

used a slight variation of a situation addressed in class, or the student referred to class discussion directly, such as, "Like Dr. Bob said in class. . ."

Other reasons for excluding potential data included rhetorical arguments with no real vignette or statement of conclusion; unclear or confusing writing style that rendered a reflection difficult to understand; reflection was off topic, often by admonishing the very idea of knowingly breaking the ethical code; and misunderstanding of the ethical code. Whenever necessary, the researchers met to discuss inclusion or exclusion of potential data. After initial coding for exclusion, 230 vignettes remained.

Discussion

The 230 remaining vignettes were analyzed and coded thematically. Researchers identified 12 themes that emerged repeatedly in the data. Table 1 lists and defines these 12 themes. Several of the vignettes were coded with more than one theme, indicating that the pre-service teachers identified either explicitly or implicitly multiple justifications for the actions described. (In the following discussion, excerpts from essays are identified by the three-digit identifier and lettered vignette label.)

Table 1

Operational Definition of Themes

Themes	Operational Definition
Intent	It is the intent of the educator to create a positive learning environment for the students
Extent	The extent of the infraction is minor enough to not be worthy of notice
Quid Pro Quo	The infraction is offset by something the educator gave to or did for the students or the school
Subjectivity of the Code	The portion of the TECE in question is subjective, leaving room for personal interpretation
Setting	The infraction takes place off school property
Soft vs. Hard Costs	The infraction accrues only soft costs that are difficult to quantify
Empathy	The student is able to empathize with the person breaking the code of ethics
Past Personal Experiences	Student had experienced something similar as a public school student
Logistics	Following the code to the letter poses a logistical difficulty that would cost excessive time, money, or effort to overcome
Job Satisfaction/Productivity	The infraction leads to improved focus and productivity
Expected Behavior	The behavior is part of a set of culturally normative behaviors that persist without question
The Ends Justify the Means	Given the outcome of the situation, in retrospect the behavior was appropriate

One of the first themes to emerge we labeled 'intent'. We define intent as 'the intent of the educator is to create a positive learning environment for the students'. For example, one pre-service teacher, when discussing "Standard 3.8. The educator shall maintain appropriate professional educator-student relationships and boundaries based on a reasonably prudent educator standard," (Texas Education Agency, 2010), told a story about a teacher allowing a student from an unstable home to live with him. Although the pre-service teacher felt doing so broke Standard 3.8, he wrote:

By breaking this standard and allowing this student into his home, the student will end up getting

a college degree and will always have a place to call home. If I am able to make as big of a

difference as my coach did in this young man's life, I will consider my career a success. (006a)

As education professionals, we may question whether the coach in this vignette crossed any ethical

boundaries. What is noteworthy is the pre-service teacher feels the boundaries have been crossed and is

able to justify the actions due to the intent of the coach.

In a similar way, pre-service teachers justified breaking the TECE by indicating 'expected

behavior', meaning that the 'behavior is part of a set of culturally normative behaviors that persist without

question.' In Texas, it is quite common for public school personnel to display religious artifacts and

engage in religious practices, defying federal separation of church and state laws that are supported by

"Standard 1.7. The educator shall comply with state regulations, written local school board policies, and

other state and federal laws" (Texas Education Agency, 2010). One former athlete wrote:

Before every game, some coaches gather their team and tell them to take a knee and recite the

"Our Father" prayer. . . .Many coaches do this despite being against the code because it is

something that athletes have always done and has become an important part of their own values,

especially in the south. (071a)

Although the pre-service teacher believes this behavior violates the code of ethics, justification steeped in

cultural norms allows the behavior to persist in his opinion.

Several of the vignettes were coded with more than one theme because the pre-service teacher

described more than one justification for unethical behaviors. One noteworthy example concerns

"Standard 1.13. The educator shall not consume alcoholic beverages on school property or during school

activities when students are present" (Texas Education Agency, 2010).

During our trips to competitions, we would also go out to eat where my directors would occasionally order an alcoholic drink with one of their meals. . . .I think just a small drink is fair with a meal, as long as it is not obsessive, not on school property, and not giving drinks to a student on the trip, even if it is their child. (010b)

Within this short passage, the pre-service teacher condones her director's behavior based on 'extent', meaning 'the infraction is minor enough to not be worthy of notice' (small drink, not obsessive), and 'setting', meaning 'the infraction takes place off school property' (not on school property). Again, the pre-service teacher identifies the behavior as something addressed by the TECE but offers justifications for not adhering to the code.

Using extent as a justification as in the above example is related to the justification of 'soft vs. hard costs', defined as 'the infraction accrues only soft costs that are difficult to quantify'. When discussing the drama teacher's actions relating to "Standard 1.2. The educator shall not knowingly misappropriate, divert, or use monies, personnel, property, or equipment committed to his or her charge for personal gain or advantage," (Texas Education Agency, 2010), one pre-service teacher wrote:

For Halloween, my instructor asked all of the theatre kids to help her look for a small costume for her daughter's night of trick-or-treating. Was it wrong for her to use her own department's costumes, only for one night? I don't think so. Her actions technically went against the code of ethics for teachers, but when looked at through the lens of reality, there was nothing wrong with what she did. (068a)

Again we see that a prospective teacher is able to justify unethical behavior while understanding that the behavior is unethical, in this case stating that 'unethical' is not necessarily 'wrong'. The soft cost of wear to the costume is offset by what the pre-service teacher calls 'the lens of reality'.

The final vignette to be discussed here is lengthy but powerful and addresses "Standard 3.2. The educator shall not intentionally, knowingly, or recklessly treat a student or minor in a manner that adversely affects or endangers the learning, physical health, mental health, or safety of the student or

minor," (Texas Education Agency, 2010). In this case, the pre-service teacher uses 'The end justifies the means—given the outcome of the situation, in retrospect the behavior was appropriate.'

> *It happened the night of an important game that would send the winner to the playoffs. We came in confidant but soon realized we were not playing a bunch of scrub football players. We were soon up against the ropes just wanting the beating to stop. Now desperate times call for desperate measures is the saying normally used, but is it okay to get in a child's face at half time before we walk into the locker room and say that you're the reason we are losing 21-0, and you need to fix it. Then proceed to push the child by the face off a set of five stairs to the nice soft concrete below? I was insanely angry! I felt disrespected beyond a level I can describe to you! I felt like punching someone! But strangely enough, never in my emotions did I think about our coach and what he just did to me. All of that was directed at the other team. I went back into that second half and I became a man possessed with rage. As the quarterback I looked to my team and we rallied back to win 28-21. A very emotional win for all of us, including the school and town since our town hadn't seen the playoffs in nine years. After the game on the field my head coach came up to me and said, "I knew you had it in ya, I just hadn't figured out a way to get it out of you. I'm proud." My reply was, "Next time just ask. You don't need to throw me down a flight of stairs." I was wrong in that respect. Him just not going to those extreme measures would not have done anything to spark what he did that night. . . .His methods are completely outdated and I guarantee that there are not too many dinosaurs like him left in many schools. But that coach taught me that I do have it in me even if he has to risk his job to get it out. (084c)*

Although the player understands that the coach's behavior crossed ethical boundaries and endangered the safety of the student, he is able to justify those behaviors because of the outcome of the situation: they won the football game and made it to the playoffs. The player even credits the win to the coach's behavior, stating they would not have won had the coach not thrown him down the stairs.

In the data collected, many participants admitted they could justify someone breaking the ethical code. Although the extent to which the code in question was breached varied significantly and the justifications ranged from seemingly culturally acceptable to grossly inappropriate, all of these vignettes with the associated justification have one thing in common: They were all presented by future educators.

Limitations

There are limitations to this qualitative study that impact the ability to apply the findings to other contexts. First, codes of ethics and ethical behaviors are contextual, tied to the culture(s) in which we live (Handelsman, Gottlieb, and Knapp, 2005). The behaviors described and discussed here may or may not be similar to behaviors that would be discussed in other cultural settings, including other national, regional, or community settings. Additionally, the pre-service teachers have limited experience as adults in public school settings. Adults with varying amounts of experience in schools may react differently to the situations given and not offer justifications for the behaviors described. Finally, the data were collected from six classes over two semesters; with a data collection period of only 9 months, cultural influences such as media coverage of unethical behaviors in professional contexts may have impacted the data collected.

Implications & Conclusions

As teachers, we have both been faced with decision-making scenarios with an ethical dilemma. We have each behaved in ways that we felt were justified even though we were aware that our actions could have been interpreted as unethical, and we could have suffered sanctions according to others' interpretations of that code. Fortified by strong personal codes of ethics, we stand behind our actions as having been in the best interest of our students.

As teacher educators, we must try to cultivate professional practice in our students by helping them understand the professional ethical context into which they will be entering. Conversations such as the ones we foster in our classrooms beg pre-service teachers to consider those times when their personal ethics and professional ethics will conflict (Handelsman, Gottlieb, and Knapp, 2005), and by asking

students to wrestle with their ethos in controlled settings, we help to arm them with an understanding of the ethical realities awaiting them. This in turn can help them navigate ethical decision making before facing ethical dilemmas in their professional practice (Husu & Tirri, 2007).

Our intent with these discussions in our classroom with pre-service teachers was to prepare them for encounters in which they would face decisions with an ethical component. We hoped that by exposing students to the ethical code and illustrating the types of behaviors that are covered by the code, those students as teachers will have an academic experience that can inform their professional behavior (Fisher, 2011). As Fishman (2011) indicated, however, we might never know whether these discussions impact professional behavior and help to inform a more ethically acting body of professional educators. Although this research study in limited in its generalizability, educator preparation programs should consider including similar discussion with their teaching candidates, helping all future educators to see beyond the simple black and white of the written codes of ethics to the grey area in which they will navigate their professional lives.

References

Barrett, D. E., Casey, J. E., Visser, R. D., & Headley K. N. (2012): How do teachers make judgments about ethical and unethical behaviors? Toward the development of a code of conduct for teachers. *Teaching and Teacher Education* 28, 890-898.

Boon, H. (2011). Raising the bar: Ethics education for quality teachers. *Australian Journal of Teacher Education, 36*(7), 76-93.

Dotger, B. & Theoharis, G. (2008). From disposition to action: Bridging moral/ethical reasoning and social justice leadership. *Values and Ethics in Educational Administration, 6*(3), 1-7.

Finn, A. (2012). Teacher use of prosocial and antisocial power bases and students' perceived instructor understanding and misunderstanding in the college classroom. *Communication Education, 61*(1), 67-79.

Fisher, J. (2011, Nov. 2) "Case study: Petite play things." Society for Ethics Across the Curriculum: St. Louis, MO.

Fishman, T. (2011, Nov. 2). "Does teaching ethics impact practice?" Society for Ethics Across the Curriculum: St. Louis, MO.

Handelsman, M. M., Gottlieb, M. C., & Knapp, S. (2005). Training ethical psychologists: An acculturation model. *Professional Psychology: Research and Practice, 36*(1), 59-65.

Husu, J., $ Tirri, K. (2007). Developing whole school pedagogical values – a case of going through the ethos of "good schooling". *Teaching and Teacher Education, 23*, 390-401,

Lampe, M. Increasing effectiveness in teaching ethics to undergraduate business students. *Teaching Business Ethics* 1.1. (1996): 3-19. Web. 20 Jan. 2014

McGraw, D. K., Thomas-Sanders, D., Benton, M., Tang J., & Biesecker, A. (2012). Who teaches ethics? An inquiry into the nature of ethics as an academic discipline. *Teaching Ethics, 13*(1), 129-140.

Rios-Velazguez, C., Frey, W. J., Jaramillio-Giraldo, E., & Echeverry-Solarte, M. (2013). Accepting the likelihood of ambiguity and disagreement on moral matters: Transitioning into the "Gray World." *Teaching Ethics, 13*(2), 55-72.

Rizzuti, C. J. (2006). Who should teach ethics? *New Directions for Teaching and Learning, 1983*(13), 53-59. DOI:10.1002/tl.37219831309

Shapira-Lishchinsky, O. (2011). Teachers' critical incidents: Ethical dilemmas in teaching practice. *Teaching and Teacher Education* 27, 684-685.

Shapira-Lishchinsky, O. (2009). Towards professionalism: Ethical perspectives of Israeli teachers. *European Journal of Teacher Education, 32*(4), 473-487.

Shepard, J. M., Goldsby, M. G., & Gerde, V. W. (1996). Teaching business ethics through literature. *Teaching Business Ethics, 1*(1), 33-51.

Sternberg, R. J. (2011). Ethics from thought to action. *Educational Leadership, 68*(6), 34-39.

Shapira-Lishchinsky, O. (2011). Teachers' critical incidents: Ethical dilemmas in teaching practice. *Teaching and Teacher Education, 27,* 648-656.

Texas Board of Education. (2010). 19 Texas Administrative Code Part 7.247 §247.2. *Office of the Secretary of State.*

Texas Education Agency (2010). Code of Ethics and Standard Practices for Texas Educators. Retrieved from http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=19&pt=7&ch=247&rl=2

Thomas, L. (2012). New possibilities of thinking, speaking and doing: Early childhood teachers' professional identity constructions and ethics. *Australasian Journal of Early Childhood, 37*(3), 87-95.

Warnick, B. R., & Silverman, S. K. (2011). A framework for professional ethics courses in teacher education. *Journal of Teacher Education, 62*(3), 273-285.

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