First Year Teachers: Certification Program and Assigned Subject on Their Self-Efficacy

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In the United States, the demands of increased federal accountability have dramatically impacted the field of teaching. Teacher certification programs have been taxed with preparing first year teachers to assist increasingly diverse students to pass high-stakes state assessments. The purpose of this mixed methods study was to examine the influence of teacher certification programs and the assigned subject on the self-efficacy of first year teachers. A purposeful sample of 288 first year teachers employed across 20 southeast Texas public school districts were administered the Teachers' Sense of Efficacy Scale to assess their level of self-efficacy. Results from the independent t-test found insufficient evidence to suggest that teacher certification program and/or the subject matter assigned to teach had any influence on the self-efficacy of first year teachers. Teachers from traditional and alternative certification programs noted the importance of experience and mentoring as being crucial elements necessary to support their self-efficacy.

Keywords: alternative certification program, first year teachers, high-stakes testing, teacher certification, teacher self-efficacy, traditional certification program

Educating students from increasingly diverse social and economic backgrounds has created a challenging job for school districts in the United States (U.S.). To meet these students' educational needs may prove to be a daunting task for most teachers (Milner, 2010). According to the National Center for Education Statistics (NCES)[1], student enrollment in U.S. public schools is expected to increase to an estimated 53 million students by 2020 (NCES, 2011). When measured in 2006, the number of students who spoke another language other than English at home had increased to approximately 20% of all school age children. As a result, training for teachers to work with English language learners (ELLs) may very well be a necessity (Bunch, Aguirre, & Tellez, 2009). In addition, considering student racial backgrounds and the effect on student-learning opportunities in the classroom is essential for new teachers (Milner, 2012). Consequently, teacher-training programs may need to provide the knowledge and learning opportunities to build cultural responsiveness in new teachers so they can confidently meet student's needs (Darling-Hammond, 2010).

According to the National Commission on Teaching America's Future (NCTAF), it is expected that

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[1] The National Center for Education Statistics, located within the U.S. Department of Education and the Institute of Education Sciences, is the primary federal entity for collecting and analyzing data related to education in the US and other nations (NCES, 2012).

in the next eight years as many as a million and a half veteran teachers will retire (Carroll & Foster, 2010). Historically, traditional four-year certification programs have provided most of the teacher preparation (Steadman & Simmons, 2007). Given the loss of teachers coupled with rising student enrollments, increased demand for teachers has fueled the growth of teacher Alternative Certification Programs (ACPs). These programs provide an alternative to the traditional preparation programs for candidates who have already earned a Bachelor's degree (Darling-Hammond, Chung, & Frelow, 2002). Currently, 48 states have an alternate route to teacher certification and there are 136 state defined ACPs (National Center for Alternative Certification [NCAC]; 2010).

The demands of increased accountability have dramatically impacted the field of teaching. Since the passing of the federal mandate No Child Left Behind (NCLB) Act of 2001, student achievement expectations have increased (U.S. Department of Education, 2002) and thus students in grades 3 through 11 must pass high-stakes tests[2]. The American Educational Research Association (AERA) issued a position statement in July 2000 that described the impact of high-stakes testing on students as well as on school districts (Marchant, 2004). Now students and their respective schools are being judged based on the students' test performance. If students perform poorly, schools will face significant consequences. Given that it is expected that teachers are to positively influence students' classroom performance, many school districts have considered adding student performance to the teachers' appraisal system. As a result, school districts may have to give considerable attention to recruiting teachers from certification programs that equip them with the necessary skills to impact student performance (Brown, 2010; Darling-Hammond, 2006).

According to Darling-Hammond (2010), there is a direct relationship between a teacher's initial effectiveness and job retention rates and their teacher preparation. Several studies have examined the effectiveness of ACPs (Ballou & Podgursky, 2000; Darling-Hammond, 2006; Steadman & Simmons, 2007; Wayman, Foster, & Mantale-Bromley, 2003; Zeichner, 2006) and the findings reported are mixed. Flores, Desjean-Perrotta, and Steinmetz (2004) reported that those teachers who graduate from a traditional teacher preparation program feel better equipped to teach than their ACP counterparts. It is well known that traditional programs place a strong emphasis on pedagogy and student teaching experience (Darling-Hammond, 2010). In contrast, proponents of ACPs suggest that successful candidates use their work related experiences and

knowledge to successfully navigate the challenges of teaching (Robertson & Singleton, 2010).

Since 1994, first year teacher attrition has been steadily increasing. During the first five years, over 30% of teachers leave the profession (Carroll & Foster, 2010). One method for teacher evaluation, when completed within the first several years of teaching, is teacher self-perception. Given that this variable is highly correlated with effectiveness, self-perception affords a teacher the opportunity to share information about their perceptions of preparedness (Darling-Hammond et al., 2002). According to Darling-Hammond et al. (2002), "Teachers' ratings of their overall preparedness are significantly related to their sense of efficacy about whether they are able to make a difference in student learning" (p. 294). Teachers with a high sense of self-efficacy work harder and are more successful with difficult students (Redmon, 2007). Successful experiences create a strong sense of self-efficacy. A low sense of self-efficacy may be crated if failure is experienced before self-efficacy is established (Bandura, 1994). Teacher performance and ultimately student achievement are related to teachers' self-perceptions (Darling-Hammond et al., 2002; Redmon, 2007; Tschannen-Moran & Woolfolk Hoy, 2001).

Recent research addressed the relative effectiveness of traditional and ACP teacher preparation programs and examined those that provided the tools and opportunities needed to meet the challenges of teaching a more diverse population (Darling-Hammond et al., 2002; Peterson & Nadler, 2009; Qu & Becker, 2003). Since the NCLB Act and its subsequent reauthorization in 2004, school districts have increased their expectations on those teachers responsible for student performance. First year teachers are held equally accountable for their student's performances as their veteran colleagues when assigned to teach a high-stakes tested subject. Research shows that teacher self-efficacy influences teacher effectiveness; especially in a teacher's first year (Flores et al., 2004; Ludlow, 2010; Tschannen-Moran & Woolfolk Hoy, 2001) and that teacher self-efficacy levels have a direct relationship to student learning and performance (Ballou & Podgursky, 2000; Goa & Stickler, 2008; Wayne & Youngs, 2003). However, there is inadequate research to determine whether being assigned a high-stakes subject as a first year teacher has any effect on self-efficacy and whether it is influenced by the teacher's certification program (Darling-Hammond et al., 2002; Flores et al., 2004). As a result, the purpose of this study was to examine the influence of the teacher certification training program (traditional vs. ACP) and subject matter assigned to teach (high-stakes vs. non high-stakes) on the self-efficacy of first year teachers.

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[2]Tests mandated by NCLB that have important consequences, such as promotion to the next grade or graduation from high school, for the individual taking the tests (Education.com, 2012).

Related Research
Effective Teacher Training Programs

In 1996, NCTAF issued a report that had far-reaching implications for teacher recruiting and training programs (Ballou & Podgursky, 2000). The report entitled *What Matters Most: Teaching for America's Future* charged that public schools employ unqualified teachers because of poorly enforced standards for training and licensing. Some of the recommendations cited were mandatory accreditation for all teacher training programs by the National Council on Accreditation of Teacher Education (NCATE), "master teacher" standards, and the establishment of professional boards in all states to address teacher licensing. In addition, the NCTAF recommended that teachers receive better training before they enter the classroom (Ballou & Podgursky, 2000).

Teachers are accountable for student performance with more diverse student populations. Despite the increasing difficulty of meeting the needs of each student, accountability standards for student performance continue to rise. High quality instruction is not possible without high quality teachers (Ball & Forzani, 2010; Darling-Hammond, 2010; Hinchey, 2010). According to federal guidelines of the NCLB, a highly qualified teacher must have: (a) a bachelor's degree, (b) full state certification or licensure, and (c) subject competency in the subject they teach (United States Department of Education, 2002). Ultimately, each of the 50 states independently governs teacher certification requirements (e.g., prerequisites, teaching certification examinations).

Strengthening teacher education programs is a focus for training programs (Darling-Hammond 2006; Zeichner, 2006). The need to identify teachers that can increase student achievement has focused the research to prepare effective teachers. Ballou and Podgursky (2000) examined the relationship between teacher characteristics and student outcomes as well as the evidence to support needed reforms and recommended in a 1996 brief to the NCTAF that their needs to be an increase in coursework and pre-service training prior to teachers entering a classroom. The National Council for Accreditation of Teacher Education (2008) standards require teacher preparation programs to provide instruction that support teachers' abilities to increase student performance. The *Race to the Top* funds those states that track and compare the impact of new teachers on student achievement. Additionally, it links the teacher back to their training program with the goal of improving teacher training programs and to better support student achievement (Duncan, 2010).

Darling-Hammond (2006) argued that strategies for evaluating teacher program outcomes have become increasingly important. In her article, *Assessing Teacher Education* (2006), Darling-Hammond discusses different tools for evaluating teachers and teacher preparation programs and offers plans for the assessment of new teacher performance. She also describes the importance of tracking new teacher learning that is based on both student performances on pre- and post-tests and continuous observations and assessments by supervisors and concludes that these strategies must focus on measuring teacher education outcomes to yield improved performance in the classroom. Ball and Forzani (2010) discussed the criteria necessary to develop an effective teacher citing the importance of content knowledge and opportunities for practice as key elements. Recommendations were provided for examining other professional preparation programs, as models for teacher training, where there were requirements to "practice the trade" in clinical settings before being allowed to work directly with clients. The teaching profession allows teacher trainees opportunities to work directly with students and assume the responsibility for their learning. The concern is the impact on student learning with an inexperienced teacher.

Teacher training programs have also examined the question of how to better prepare teachers for high-stakes testing. In a study conducted by Costigan (2002), six first year teachers were interviewed to determine how high-stakes testing impacted their practice. The participants related that that they were concerned about the potentially harmful effects of high-stakes testing on their students and the inability to negotiate best practice teaching with having to teach to a test. Additionally, the teachers indicated that their teacher training had not prepared them for this type of testing culture.

Brown (2010) compared teacher candidate experiences with candidate teachers that had taken high-stakes tests as students. Employing teacher candidates that had taken the Texas Assessment of Academic Skills (TAAS) from 1990-2002, Brown asked whether these experiences affected their conceptions of teaching high-stakes test subject. Findings indicated that even for teacher candidates that had taken high-stakes tests, the instructional strategies required to teach students were not implicit from their own experiences. Brown further determined that teacher candidates need to be taught that their job includes teaching what is on the test, as well as how to be effective in their delivery of instruction.

Abrams, Pedulla, and Madaus (2003) reported that the threat of district and campus sanctions is the motivating force behind promoting quality of teaching, and that high-stakes testing limits the scope of classroom instruction and thus, student learning. These findings were based on the results from a nationwide survey completed by teachers in states with state-mandated testing programs. Additionally, it was determined that the high-stakes test was more of an influence on teaching practices than the state standards. Consequently, teachers from high-stakes states spent more time on test preparation activities than did their counterparts from

low-stakes states. The authors also reported that almost twice as many teachers in states with high stakes testing wanted to transfer out of those grade levels in which there were state administered tests as compared to states with low-stakes testing. Herein lies the difficulty of assessing what teacher effectiveness looks like, as it may look very different for teachers assigned a high-stakes subject to teach versus those assigned a non-high-stakes subject to teach.

Effectiveness Debate Between Certification Programs

Traditional teacher education programs are undergraduate university based programs designed to provide a teacher certification that require students to meet specific educational degree requirements. In addition, under the supervision of university faculty, teaching pedagogy, methodology, and student teaching are completed (Flores et al., 2004). On the other hand, alternative teacher certification programs provide individuals who have already received a bachelor's degree in another field the opportunity to become certified teachers (National Center for Education Information [NCEI], 2012). Alternative certification teachers typically are transitioning from a different career for a variety of reasons and have several years of experience from other areas of the workforce (Flores et al., 2004)[3]. According to the NCEI (2012), people who have chosen to teach through an ACP include more men, tend to be older, and include more people of color.

Extensive discussions and debates have surrounded the relative effectiveness of ACPs and traditional certification programs (Darling-Hammond et al., 2002; Flores et al., 2004; Steadman & Simmons, 2007). Proponents of traditional certification programs stress that the traditional certification provides the appropriate and necessary preparation of teachers, which includes rigorous academic coursework with supervised internships. According to Darling-Hammond (2010),

> Many alternative programs skip student teaching altogether - giving their recruits no opportunity to receive direct modeling from expert teachers… One thing that is clear from current studies of strong programs is that learning to practice in practice, with expert guidance, is essential to becoming a great teacher of students with a wide range of needs. (p. 40)

Although Darling-Hammond (2010) argues that teacher education programs have the responsibility for preparing teachers to become strong practitioners, she also states that there is a need for ACPs to meet the gap in providing teachers for minority and low-income schools.

Campus administrators believe that teachers trained by an ACP will need more mentoring (Steadman

& Simmons, 2007)[4]. Steadman and Simmons (2007) not only examined the mentoring differences between the different teacher certification programs, but also the amount of time it took experienced teachers to mentor new ACP teachers. They shared their concerns that new alternatively certified teachers, not afforded a student teaching experience, would require intensive mentoring. It was also determined that students taught by traditional certification preparation programs out-performed those taught by non-university certified program trained teachers.

Research on ACPs documents the benefits of the program. These programs vary in their requirements. According to Petersen and Nadler (2009), ACPs open the door for more minority teachers. Their research documents the importance of recruiting minority teachers in order to raise the achievement of minority students. They found that "in 14 states, the percentage minority for those alternatively certified exceeds by a wide margin the percentage minority of the state's teaching force as a whole" (p. 59). Wayman et al. (2003) argued that ACPs must be recognized as an important route for recruiting teachers if they provide quality teachers for hard-to-staff schools. Given that the alternatively certified teachers indicated higher levels of work-related concerns, it was recommended that continuous support be provided to these teachers throughout their first year of teaching. These concerns, which appear more specific to the pedagogy and instructional preparation, are similar to what Darling-Hammond addressed in her research stating that it is important to place teachers, regardless of their training path, in schools where they have an opportunity to practice with strong teachers. ACP teacher candidates are often placed for classroom field experiences in schools that have shortcomings, and serve low-income and/or minority students (Darling-Hammond, 2010).

A review of the literature identified many studies that compared traditional teacher training programs with ACPs (Robertson & Singleton, 2010; Tournaki et al., 2009; Viadero, 2010). Qu and Becker (2003) studied the question of whether teachers that have not earned traditional teaching certificates perform as well as non-traditionally certified teachers. Their research review of the literature determined that not all research results support traditionally trained teachers being superior to alternatively certified teachers. However, their research did demonstrate that traditional teacher certificates require the greatest requirements for teachers.

Alternative certification courses cover content differently than those taken by traditionally certified teachers. Participants in ACPs typically complete coursework during their internship and ACPs are typically shorter than those of traditional education programs.

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[3]An exception is Teach For America (TFA), which recruits recent college graduates.
[4]For purposes of this study, campus administrators refer to campus principals and assistant principals.

Findings concluded that alternative teacher training could be as effective as traditional teacher training; however, differences within ACPs can impact specific program effectiveness. Consistent with this conclusion, Goe and Stickler (2008) reported, "there is too little recent research on alternative preparation programs to generalize findings about the quality of the teachers they produce" (p. 5). The most common concerns expressed about graduates of an ACP were the lack of pedagogy and the minimum amount of training completed in a classroom (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2006; Darling-Hammond et al., 2002; Nagy & Wang, 2007). Darling-Hammond (2010) acknowledged that there is a need for quality ACPs since university programs may not necessarily be able to meet the demand for new teachers; especially in hard-to-staff schools.

Good et al. (2006) examined whether the type of training program made a difference for first year teachers. This study determined that, in general, beginning teachers from both types of preparation programs met the standards defined by the participating school districts. However, elementary teachers from the traditional program scored higher in classroom management measures. Robertson and Singleton (2010) found no evidence that teachers from the traditional program had an increased ability to handle the stress of teaching compared to the alternatively prepared teachers.

Teacher Self–Efficacy

According to Bandura (1994), a person's belief in his or her own abilities provides situations with more successful outcomes. "The stronger the perceived self-efficacy, the higher the goal challenges people set for themselves and the firmer the commitment to them" (Bandura, 1994, p. 3). Having a strong sense of efficacy increases the confidence level to make decisions and approach challenges. Teacher self-efficacy is a teacher's perception of their ability to be effective in a classroom. It is the belief that student learning can be obtained, even with difficult and unmotivated students (Tschannen-Moran & Woolfolk Hoy, 2001). Teacher efficacy has been associated with significant teacher characteristics such as student motivation, classroom management strategies, and innovative teaching (Hoy, 2000; Redmon, 2007) and directly linked to teacher performance (Flores et al., 2004; Ludlow, 2010; Tschannen-Moran & Woolfolk Hoy, 2001).

Several studies have sought to determine if there is a difference in self-efficacy of teachers who graduated from different types of teacher training programs (Flores et al., 2004; Ludlow, 2010; Murshidi, Konting, Elias, & Fooi, 2006; Tournaki et al., 2009). Murshidi et al. (2006) examined the level of teacher's sense of efficacy among 328 beginning teachers in Sarawak, Malaysia. Findings concluded that beginning teachers, who graduated from universities, perceived themselves as having a higher sense of self-efficacy compared to beginning teachers who graduated from alternative programs, which were termed teacher education colleges.

Darling-Hammond et al. (2002) examined data from a 1998 survey of nearly 3,000 beginning teachers in New York City regarding their views of their preparation for teaching, beliefs and practice, and plans to remain in teaching. Findings demonstrated that teachers prepared in traditional teacher education programs felt significantly more prepared than those who obtained their teaching certification through alternative programs. Flores et al. (2004) also examined the self-efficacy of 162 teachers in the public schools that worked with low socio-economic and minority students from traditional and ACPs and their perceptions about their training programs. Results showed that "compared to the alternative certification teachers, traditional route teachers report having greater confidence in their teaching ability to make a difference" (Flores et al., 2004, p. 44). The argument is that the teacher's confidence is more than likely due to the pedagogical training of traditionally certified teachers.

Ludlow (2010) investigated whether self-efficacy levels differed based on professional development experiences, attendance in an intensive preparation program prior to teaching, participation in district sponsored induction, or assignment of a mentor. Collecting data from 164 interns in Arizona Ludlow concluded that new teacher efficacy was not tied to a specific certification pathway, but rather to individual background experiences. In addition, she determined that professional development was important for ACP teachers because of their lack of pedagogical preparation.

There appears to be a limited time to affect a teacher's sense of efficacy (Hoy, 2000; Ludlow, 2010). Research suggests the importance of offering suggestions for improvement shortly after students graduate and that within the first years of teaching the self-efficacy of teachers' be measured (Bandura, 1994). Darling-Hammond et al. (2002) stated, "since teachers' practice and views are affected by other professional development the longer they are in the profession, we felt that analyses of program effects would be best examined within 3 years of entry" (p. 289).

Hoy (2000) studied self-efficacy with 53 prospective teachers. The students completed questionnaires during three phases: before they completed their coursework, after student teaching, and at the end of their first year of actual teaching. The researchers conducted correlations of changes in scores with the participants rating of their success compared to the first year teachers, their perception of the difficulty of the assignment, the available support, and the poverty level of their classroom. Hoy (2000) determined that as perceptions of support increased, so did the self-efficacy of the teachers.

Table 1
Grade Level Taught, TAKS Subject Taught, and Certification Program

	Frequency (*n*)	Percentage (%)
Grade Level Taught		
Elementary (K-5)	127	44.1
Secondary (6-12)	161	55.9
Taught a TAKS (High-Stakes) Subject		
Yes	171	59.4
No	117	40.6
Certification Training Program		
Traditional: College/4 year University	129	44.8
Alternative Certification Program	159	55.2
Education Service Center Sponsored (HCDE/Region 4)	45	15.6
School District Sponsored	11	3.8
University Sponsored	18	6.3
Privately Sponsored (iTeach Texas/Teach-Now)	85	29.5

Method

Participants

A purposeful sample[5] of 288 new teachers employed across 20 K-12 public school districts comprised from the Gulf Coast Association of School Personnel Administrators (GCASPA) participated in this study. The GCASPA is an organization comprised of approximately 50 school districts and educational groups in the greater Houston, Texas area. The school districts range in student enrollment from approximately 2,000 students to more than 200,000 students (GCASPA, 2012). New teachers were identified as all those who were newly employed with the district and did not have any teaching experience. Thirty-three of the school districts provided a contact list of their new teachers. Table 1 displays the participant demographics regarding grade level taught, TAKS[6] subject taught, and teacher certification program.

Male participants comprised 17.4% (n = 50) of the sample, while females were in the majority with 82.6% (n = 238). Seventy-one percent (n = 205) of the participants reported to be Caucasian or White followed by Hispanic/Latino (15.3%, n = 44) and African-American (6.9%, n = 20). Elementary teachers comprised 44.1% (n = 127) of the survey participants, while 55.9% (n = 161) reported teaching secondary students. In addition, 59.4% (n = 171) reported teaching a TAKS subject, whereas 40.6% (n = 117) reported that they did not teach a TAKS subject. Sixty-two percent of participants (n = 106) assigned to teach a TAKS subject claim to be teaching at the secondary level. Of those teachers teaching a TAKS subject, 42.1% (n = 72) graduated from a traditional certification program and 31.6% (n = 54) from a private ACP. Approximately 61.0% (n = 78) of the participants teaching at the elementary level and 31.7% (n = 51) teaching at the secondary level graduated from a traditional certification program.

Instrumentation

This study employed a 24-item instrument, the *Teachers' Sense of Efficacy Scale* (TSES), to measure a teacher's perception of his or her ability to be effective in a classroom (see Appendix). The TSES was developed in 2001 by Megan Tschannen-Moran of the College of William and Mary and Anita Woolfolk Hoy of Ohio State University and is sometimes referred to as the *Ohio State Teacher Efficacy Scale* (Tschannen-Moran & Woolfolk

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[5]A purposeful sample is a nonrandom sampling technique in which the researcher solicits participants from a population of people possessing specific criteria or characteristics (Johnson & Christensen, 2010).
[6]The Texas Test of Assessment of Knowledge and Skills (TAKS) is considered a high-stakes test as the results are used to determine district and campus ratings for federal, as well as state, accountability. Mathematics, reading, writing, science, and social studies content are assessed by TAKS and are known as high-stakes subjects (Texas Education Agency, 2012).

Table 2
Teacher Certification Program

Certification Type	N	M	SD	t	df	*p*-value	*d*
Traditional	129	173.6	21.60	1.662	286	.098	.20
ACP	159	169.1	24.09				

Hoy, 2001). The TSES has been used in recent studies to determine teacher self-efficacy (Ludlow, 2010; Murshidi et al., 2006). Teachers were asked to rate themselves on a 9-point Likert scale (1 = Nothing, 3 = Very Little, 5 = Some Influence, 7 = Quite A Bit, 9 = A Great Deal). Composite scores can range from 24 to 216; the larger the composite score the higher the teacher self-efficacy. The Cronbach's alpha reliability coefficients for this study were 0.95 for the entire instrument, 0.91 for classroom management, 0.88 for instruction strategies, and 0.89 for student engagement.

Data Collection Procedures

Directors of Human Resources in the GCASPA were sent an e-mail soliciting their help in accessing their new teachers' names and e-mails. The new teachers from the 33 participating school districts were sent an email stating the purpose of the study, that participation was completely voluntary, and an assurance that identities would remain confidential. Administration of the survey was conducted using SurveyMonkey. A question prior to responding to the survey determined if the corresponding school year was the respondent's first year ever teaching. If the answer was "Yes," then the respondent was prompted to continue with the survey. If the answer was "No," then the respondent was directed to exit the survey. Results of the survey were downloaded into an Excel spreadsheet and imported into SPSS for further analysis.

Data Analysis

Quantitative. This study consisted of two categorical independent variables, teacher certification training program and subject matter assigned to teach, and one continuous outcome variable, teacher self-efficacy. Teacher certification training program, was originally divided into five categorical groups: (a) traditional college/4-year university program, (b) university sponsored ACP, (c) school district sponsored ACP, (d) educational service center sponsored ACP, and (e) privately sponsored ACPs. Given the issue of small sample sizes obtained for some of the ACPs, all four ACP groups were collapsed into one group. Subject matter assigned to teach was also divided into categorical groups: (a) high-stakes and (b) non high-stakes. A two-tailed independent t-test was conducted to determine if

there was a statistically significant mean difference in self-efficacy between the ACP and traditionally certified group and if there was a statistically significant mean difference in self-efficacy between the teachers who were assigned to teach a non-stakes subject and a high stakes subject. Cohen's d was used to assess effect size (Cohen, 1988).

Qualitative. The qualitative analysis followed standard qualitative research procedures (Creswell, 2007) drawing broadly on the constant comparative method. Data were organized in Excel, which allowed researchers to proceed with an emergent coding process (Charmaz, 2006; Coffey & Atkinson, 1996; Corbin & Strauss, 1998). Identification of key themes and patterns was used to organize and manage responses into meaningful pieces of information. As repeated themes surfaced, they were organized into categories and a narrative description of the findings was presented in a detailed discussion of the participants' perceptions. This information was used in conjunction with the findings from the quantitative data to provide a more in-depth understanding of the self-efficacy of first year teachers as influenced by assigned subject matter and teacher certification training. Extensive peer-review coding was done to validate the findings; first by the researchers and then by inputting the data into InVivo by a qualitative researcher.

Results

Teacher Certification Program

To assess the influence of teacher certification training program on the self-efficacy of first year teachers a two-tailed independent t-test was conducted. Table 2 provides descriptive information regarding the certification programs and the influence on self-efficacy. Findings indicated that there were no statistically significant mean differences in reported self-efficacy between first year teachers graduating from a traditional certification program as compared to those certified through an ACP, $t(286) = 1.662$, $p = .098$, $d = .20$. Although the mean self-efficacy of the traditional certification group (M = 173.6) was greater than the mean self-efficacy of the ACP group (M = 169.1), there was insufficient evidence to conclude that the type of teacher certification program had an influence on these first year

Table 3
Subject Matter Assigned to Teach

Certification Type	N	M	SD	t	df	*p*-value	*d*
High-Stakes	129	169.8	23.12	-1.208	286	.228	.14
Non High-Stakes	159	173.1	22.98				

Table 4
High-Stakes vs. Non High-Stakes

	N	M	SD	t	df	*p*-value	*d*
High-Stakes							
Traditional	72	171.2	21.58	.677	169	.499	.11
ACP	99	168.7	24.24				
Non High-Stakes							
Traditional	57	176.7	21.42	1.672	115	.097	.31
ACP	60	169.7	24.05				

teachers' self-efficacy.

Subject Matter Assigned

A two-tailed independent t-test was used to determine if there was a statistically significant mean difference between the two subject matter assigned groups (high-stakes; non high-stakes). Results suggested that the subject matter assigned to teach did not influence the self-efficacy of the first year teachers, t(286) = -1.208, p = .228, d = .14. First year teachers assigned to teach a high-stakes (TAKS) subject reported a lower relative overall mean self-efficacy (M = 169.8) than first year teachers assigned to teach a non high-stakes (non-TAKS) subject (M = 173.1). The statistical analysis demonstrated that there was insufficient evidence to support a significant mean difference in reported self-efficacy between first year teachers assigned to teach a high-stakes (TAKS) subject compared to those assigned a non high-stakes (non-TAKS) subject. These results are displayed in Table 3.

High-Stakes vs. Non High-Stakes

Teachers assigned to teach a high-stakes subject were separated out from teachers assigned to teach a non high-stakes subject. A two-tailed independent t-test was used to determine if there was a statistically significant mean difference between teacher training programs for (a) high-stakes teachers and (b) non high-stakes teachers. Table 4 provides descriptive information regarding the certification programs and their influence on self-efficacy with teachers assigned to teach high-stakes or non high-stakes subjects.

For part (a), findings suggest that the type of certification training program does not influence the self-efficacy of first year teachers assigned to teach a TAKS subject, $t(169) = .677$, $p = .499$, $d = .11$. The statistical analysis demonstrated that there were no significant differences in reported self-efficacy between first year teachers assigned to teach a TAKS subject graduating from a traditional certification program as compared to those certified through an ACP. For part (b), findings suggest that the type of certification training program does not influence the self-efficacy of first year teachers assigned to teach a non TAKS subject, $t(115) = 1.672$, $p = .097$, $d = .31$. The statistical analysis demonstrated that there were no significant differences in reported self-efficacy between first year teachers assigned to teach a non-TAKS subject graduating from a traditional certification program as compared to those certified through an ACP.

Experience and Mentoring

A qualitative coding analysis was used to analyze the open-ended responses collected from asking the following question, *How do you perceive the teacher certification training you received as influencing your self-efficacy and therefore your confidence in supporting*

your students to pass TAKS? In reflecting on what increases teacher self-efficacy to support their students to pass the TAKS test, teachers from across both the traditional and alternative certification programs echoed that their teacher training program was not a factor, but experience and mentoring was critical to their self-efficacy in the classroom.

Many of the participants felt that regardless of the training program, they did not feel prepared to administer the TAKS test. A common sentiment expressed by participants assigned a TAKS subject was expressed in statements such as; "I don't think any program could fully prepare a first year teacher for the challenges of TAKS." and "Nothing truly can prepare you for being in the classroom with a room full of students that need your help to pass TAKS until you jump in the deep end and go for it!"

Having the opportunity to have experience working with students in the classroom was reported by the participants as the most important criteria to support a positive self-efficacy.

> I don't feel as though a college can truly "teach" you how to have the confidence to support your students to pass the TAKS test. That confidence and self-efficacy can only be developed once you are in the classroom and begin having "true" teaching experiences.

Opportunities for experience were gained from working as an intern, a substitute teacher, or through a student teaching requirement as part of their training program. These experiences supported feelings of preparedness for working with all types of students. One participant stated, "The certification training played a very minute role, in comparison to my experience over the years as a substitute and youth mentor…" Another teacher expressed, "Interning was great. The classroom experience and hands on classroom management training helped me a great deal." While another one commented, "I believe my student teaching had … [the] biggest impact on my self-efficacy." Additional examples of teacher responses emphasizing the importance of classroom experience are provided below.

> The classes were beneficial, but the most influencing factor of my training was student teaching. Getting to experience teaching a TAKS grade level day to day with an experienced teacher helped build self-efficacy and confidence.

> I think the program I was involved in did a lot to prepare us for the classroom but, in reality, the actual classroom experience is the only thing that is going to give someone confidence and self-efficacy.

> I have subbed for the last five years, sometimes as a permanent sub prior to TAKS testing. These experiences were much more beneficial in preparing me for the TAKS challenges than anything my TCP offered.

> As part of my certification, I had to student-teach for an entire year. I truly believe that this gave me an advantage over teachers going through the ACP programs. Technically I am considered a first year teacher, but I felt coming in that I already had a year of experience.

> I feel that my college education has helped me to some extent. The one thing that has made the biggest difference in my confidence and readiness is the actual experience of having my own classroom.

The other common theme expressed by the participants was the positive support received from being mentored. The different types of mentoring the participants discussed below include support from supervising teachers during student teaching, assigned mentors as first year probationary teachers, and fellow co-workers.

> The mentoring I received from a university-accredited program has been invaluable. My mentors definitely made me a better teacher.

> My mentor in specific was amazing. She kept in touch with me personally and made sure to know what was going on in my personal life as well as in the classroom. I also had a district mentor, a school mentor, and I had regular meetings and lesson planning/co-teach experiences with a curriculum instruction administrator. I feel that between such a wonderful alternative certification program, a wonderful district, and a wonderful campus I was already set up to succeed.

> I think that I did receive some great information from [alternative certification program], but this first year would have been so difficult if I had not had the support from fellow teachers. My mentor teachers made it possible for me to succeed this year. I don't know what I would have done without them.

> Region 4 prepared me very well for being in the classroom as far as rules/expectations/classroom procedures

were concerned. Much of the training was related to lesson planning and differentiation of instruction, but I don't feel like that prepared me or made me feel confident in supporting my students to pass TAKS. That particular confidence came from my co-workers. They walked me through what needed to be done to adequately prepare my students for TAKS.

Several of the first year teachers contributed their success to a combination of experience and mentoring. One participated stated, "I credit my confidence to the experience I gained student teaching and substitute teaching and to an extremely supportive mentor, 5th grade teaching team, and campus administration." Others echoed similar sentiments below.

I feel that my self-efficacy and confidence in my students' preparedness to take the TAKS test comes from attending content team meetings where we addressed the TAKS objectives and lesson planned together. I feel that most of my training and skills comes from "on the job" training and the mentor program we have at my school.

Being in a classroom with a mentor teacher for a year I believed made all the difference in the world in how I conduct myself and my classroom...having those first hand experiences in a controlled setting was very helpful. When I started this year it was nice have already had essentially a first year under my belt because I taught a semester under a mentor teacher. My experience to me was very valuable because I had already spent a semester preparing students for a TAKS test for the subject I now teach. I don't know that I would have faired as well in lesson planning, discipline, differentiation, or daily student interaction if I had not had the first year with a mentor.

Discussion

The purpose of this study was to examine the influence of the type of teacher certification training program (traditional vs. ACP) and subject matter assigned to teach (high-stakes vs. non high-stakes) on the self-efficacy of first year teachers. Results from the current study indicated that there was not a statistically significant mean difference between the type of certification program and its influence on a first year teacher's self-efficacy. These results were in agreement with Ludlow (2010), Good et al. (2006), and Tournaki et al. (2009) who concluded that new teacher efficacy was not tied to a specific certification pathway. However, these results contrast with Murshidi et al. (2006) who found that

beginning teachers who graduated from traditional certification programs perceived themselves as having a higher sense of self-efficacy compared to beginning teachers who graduated from alternative programs.

Regarding whether the subject matter assigned to teach influenced the self-efficacy of a first year teacher, findings demonstrated that there was not a statistically significant difference between the reported self-efficacy of first year teachers assigned to teach a TAKS subject compared to those assigned to teach a non-TAKS subject. Research addressing teachers assigned to teach a high-stakes grade level demonstrated that teachers managed the added pressure by focusing instruction on test preparation (Abrams et al., 2003). However, many of the teachers they surveyed that taught in grades with high-stakes testing wanted to transfer to grades that did not require that testing. Abrams (2003) raised concerns with teacher morale being impacted due to testing policies that support accountability sanctions. Results of this study determined that first year teacher self-efficacy was not significantly influenced by having to teach a high-stakes subject. As evidenced by the findings of this study, confident teachers will rise to challenges regardless of the teaching assignment.

Findings also demonstrated that there was not a significant mean difference reported in self-efficacy between first year teachers assigned to teach a high-stakes subject graduating from a traditional certification program as compared to those certified through an ACP. New teacher self-efficacy did not appear to be tied to a specific training program. Teacher training programs are not preparing teacher candidates to understand high-stakes testing; however, they are also not impacting their self-efficacy in having to teach a high-stakes subject (Mulvenon, Stegman, & Ritter, 2005). Teachers may not want to be held accountable for their students passing, but it is not directly impacting their students' performance. In Costigan's (2002) study, the participants related that that they were very concerned about the potentially harmful effects of high-stakes testing on their students. The teachers indicated that their teacher-training program had not prepared them for this type of testing culture.

Participants were asked how their teacher certification training influenced their self-efficacy and therefore, their confidence in supporting their students to pass the TAKS test. Qualitative analysis illustrated the importance of experience and mentoring as necessary to support teacher self-efficacy. In addition, many participants from all five types of certification training expressed that they did not feel that their teacher-training program prepared them to support their students to pass a TAKS (high-stakes) test. Responses supported the quantitative analysis demonstrating that the type of certification and subject matter assigned did not significantly influence a teacher's self-efficacy. As a result, teacher preparation programs may need to focus

more on helping teacher candidates acquire the tools needed for high-stakes testing so they are better prepared to support their students.

One critical function of any school district's human resources department is to recruit quality teachers who can make a direct impact on student success. According to Darling-Hammond et al. (2002), campus principals perceive that traditionally prepared teachers are viewed as better prepared for classroom management. Results from this study support current research demonstrating that alternative certification training programs do not significantly impact first year teacher's self-efficacy and thus, do not compromise effectiveness in the classroom. In addition, being assigned a high-stakes subject to teach does not necessarily impact a first year teacher's self-efficacy and ultimately compromise effectiveness in the classroom.

Despite the limitations of this study, the findings have important implications and can inform hiring practices for school districts nationally, as well as in Texas. First year teachers have a strong self-efficacy regardless of their certified training program. The amount of prior experience as an aide, substitute or student teacher appears to level the "playing field." Student teaching has long been recognized as an integral part of traditional training programs. In a study by Caprano, Caprano, and Helfeldt (2010), they determined that aligning coursework with field experience through a partnership between school districts and universities produced the highest ratings in perceived levels of competence from teacher candidates. Hiring authorities should look at prior field experience such as student teaching, substituting, or working as a paraprofessional as opposed to type of training programs to inform hiring recommendations.

Additionally, without alternative teacher training programs, school districts would likely not meet state and federal mandates for highly qualified staffing requirements. For example, Texas recruits approximately one third of its new hires from ACPs (National Center for Alternative Certification, 2010). Alternative certification programs that do not have many opportunities for a student teaching experience should increase opportunities for time in the classroom. Unfortunately, many ACPs provide the pedagogy during a summer session culminating in a test and then place these first year teachers in a classroom, without the benefit of a "student teaching" opportunity. School districts and especially campus administrators become overwhelmed with the mentoring responsibilities (Steadman & Simmons, 2007). In Texas, many districts offer summer school to improve student achievement. This would be an opportunity for teacher candidates to gain some experience with a strong mentor teacher.

Time spent on fieldwork activities offers teacher candidates opportunities to build feelings of teacher self-efficacy (Redmon, 2007). Since many teacher candidates obtain their training from ACPs, ensuring that these ACPs provide the necessary training practice would support the development of quality teachers. For example, in Texas, with the introduction of the State of Texas Assessments of Academic Readiness (STAAR), which appears to be a more rigorous state assessment, and increasing state assessment standards, it is imperative that effective teachers are in all classrooms. In a state that requires assessments for students to be promoted, teacher-training programs should also consider adding to their course requirements one on preparing teachers for high stakes assessments. First year teachers that have an understanding of the accountability system as well as specific assessment requirements will feel better prepared to support their students.

Recommendations for Future Research

Several recommendations are suggested for future research. This study should be repeated with data collected during new teacher induction and then compared with data from the same teachers at the end of the year. Survey results may look different prior to having a year of teaching experience and TAKS testing experience. Since research has demonstrated that a strong efficacy is highly correlated with a teacher's effectiveness, after surveys are completed at the beginning of the year, results could be compared with the student achievement from that teacher's class to determine if there is a difference as compared with other teachers' impact at the same school and at the same level. If findings indicate a significant relationship between high self-efficacy scores and student achievement as measured by state assessment results, then future use of this survey should be considered for teacher placement decisions in high-stakes versus non high-stakes assignments.

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Appendix

Teachers' Sense of Efficacy Scale[1] (long form)

Teacher Beliefs	How much can you do?								
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing		Very Little		Some Influence		Quite A Bit		A Great Deal
1. How much can you do to get through to the most difficult students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. How much can you do to help your students think critically?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. To what extent can you make your expectations clear about student behavior?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. How well can you respond to difficult questions from your students ?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. How well can you establish routines to keep activities running smoothly?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. How much can you gauge student comprehension of what you have taught?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12. How much can you do to foster student creativity?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
13. How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14. How much can you do to improve the understanding of a student who is failing?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15. How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
16. How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
17. How much can you do to adjust your lessons to the proper level for individual students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
18. How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
19. How well can you keep a few problem students form ruining an entire lesson?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
20. To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
21. How well can you respond to defiant students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
22. How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
23. How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
24. How well can you provide appropriate challenges for very capable students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

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