AN EXAMINATION OF PROSPECTIVE TEACHER QUALITIES RELATED

TO TEACHER EFFICACY AND TEACHER COMMITMENT

by

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For my supportive husband, Mark Martin, and my amazing parents,

Steve and Beverly Nollner, my first teachers.

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ABSTRACT

This study examined teacher efficacy and teacher commitment in recent graduates of a preservice teacher education program. Specifically, an exploratory analysis on the qualities of these graduates that were related to teacher efficacy and teacher commitment after completion of the preservice teacher education program was conducted.

Participants included 58 recent graduates of an on-campus and online preservice teacher education program at a leading research university. Multiple and linear regression analyses were conducted to identify factors that were related to teacher efficacy and the desire to serve and commit to the teaching profession after completion of the program. Also, a series of paired t tests was conducted to compare teacher efficacy and teacher commitment scores for participants who assumed employment in high-need schools and those who did not. And one-way analysis of variance (ANOVA) was performed to identify differences between the online and on-campus graduates.

Results of the regression analyses indicated that age was a significant predictor of general teacher efficacy, and content grade point average was a significant predictor of teacher commitment. Additionally, t tests revealed no significant differences in mean scores for teacher efficacy and teacher commitment between teachers in high-need schools and those in traditional settings. One-way ANOVA results indicated no significant differences between the online and on-campus groups in terms of the identified variables.

CHAPTER 1

THE PROBLEM AND ITS UNDERLYING FRAMEWORK

At the end of the 2003-2004 school year, 17% of the elementary and secondary teacher workforce (621,000 teachers) left the public and private schools where they had been teaching. Nearly half of this teacher turnover was due to transfers to other schools, while the remainder was due to teachers leaving the profession altogether (Planty et al., 2008). Both components are particularly high among teachers in their first few years of service, with nearly half of all beginning teachers leaving the field altogether after just 5 years (Ingersoll & Smith, 2003).

The movement of teachers to better schools and the departure of teachers from the profession are costly trends, as states, districts, and schools experience widespread effects, including financial losses, school staffing problems, and lowered student achievement (Ingersoll, 2001). The nation's neediest schools, which are usually located in urban, rural, or poor school districts, suffer from these effects the most (National Commission on Teaching and America's Future [NCTAF], 2003). Teachers in high-poverty schools are as much as 50% more likely to transfer or leave than those in low-poverty schools (Barnes, Crowe, & Schaefer, 2007). To make matters worse, the best and brightest are often the first to leave (Henke, Chen, Geis, & Knepper, 2000).

Efforts to expand the workforce have been implemented, including new pre-service teacher education programs, but these expansion efforts alone cannot diminish teacher turnover. Research has noted that the inability to prevent turnover is not driven by too few teachers entering the profession but by too many leaving (NCTAF, 2003). Therefore, efforts must be concentrated on identifying teacher qualities that are related to

teacher commitment, particularly in high-poverty schools. Research on teacher commitment has drawn attention to the influential nature of teachers' beliefs in their ability to accomplish teaching tasks, known as *teacher efficacy* (Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). Studies suggest that teachers who exhibit higher teacher efficacy are more likely to report commitment to the profession (Coladarci, 1992; Ware & Kitsantas, 2007). However, much remains unknown about the relationships between prospective teachers' qualities and (a) the development of teacher efficacy and (b) their intention to remain in the teaching profession, particularly in high-need schools. Therefore, it is valuable to focus attention on teacher candidates before they are granted acceptance into preservice teacher education programs and ultimately the classroom to identify whether certain qualities are significantly related to teacher efficacy and teacher commitment, in an effort to reduce teacher turnover.

Background of the Problem

Effects of Teacher Turnover

High rates of teacher turnover cause problems that ultimately hinder the national goal of providing an equitable education to all students (Guarino, Santibanez, & Daley, 2006). When teachers transfer to more desirable schools or leave the profession, the schools that the teachers left schools experience financial loss, institutional instability, staffing problems, and lowered student performance (Ingersoll, 2001). These damaging effects directly impact student outcomes and school accountability (NCTAF, 2003).

Schools and districts are forced to devote financial resources to recruit and train teachers to replace those who quit or transfer schools. A conservative national estimate of the cost of replacing public school teachers who have left the profession is $2.17 billion a

year. If the cost of replacing public school teachers who transfer is added, the total reaches $4.9 billion every year. For individual states, cost estimates range from $8.5 million in North Dakota to a staggering half a billion dollars for larger states such as Texas (Alliance for Excellent Education, 2005). These costs put a significant drain on already scarce financial resources in public schools.

Teacher turnover also affects the institutional stability of the school and qualifications of the teacher workforce (Ingersoll & Smith, 2003). Elementary and secondary schools are learning environments that depend on teacher interaction, cohesion, and commitment to flourish (Frankenberg, Taylor, & Merseth, 2009); teacher turnover negatively impacts this necessary atmosphere, creating an unstable work environment (Ingersoll & Smith, 2003). School districts with high turnover are often forced to fill vacancies with underqualified teachers or a string of short- and long-term substitute teachers (Murnane & Steele, 2007). These replacements may occur on short notice, inhibiting the ability to provide teachers with adequate orientation and induction. This method of staffing, with frequent changes and insufficient preparation, often leads to low-quality instruction, affecting student achievement. A major objective of No Child Left Behind (NCLB) is to ensure that all students have the best teachers possible: those who are highly qualified in the subjects that they teach (U.S. Department of Education, Office of the Deputy Secretary [USDOE], 2004). However, teacher turnover makes this task extremely challenging.

Insufficient preparation and environmental instability can also affect student achievement and cause psychological effects on students that are detrimental to their learning (Rice, 2003). Research has shown that classroom effectiveness increases with

teaching experience, particularly within the first several years (Béteille & Loeb, 2009). A sense of relatedness to students, as defined by self-determination theory (Ryan & Deci, 2000), can be difficult for new teachers to establish. Close relationships between teachers and students have been shown to have a significant impact on students' academic motivation and performance (Martin & Dowson, 2009). Legault, Green-Demers, and Pelletier (2006) found that student relatedness deficiencies in teachers predicted students devaluing school, which led to maladaptive behaviors such as poor study habits, skipping class, and tardiness. Furrer and Skinner (2003) supported these findings through students' reports of closeness with their teachers, which were positively related to academic engagement and performance. High turnover rates inhibit the development of these beneficial relationships and potential increases in teachers' classroom effectiveness (Béteille & Loeb, 2009; Martin & Dowson, 2009). Schools across the nation experience these unfortunate consequences, but none more severely than those serving disadvantaged students (Voke, 2002).

School districts with a majority of minority and low-income students are most likely to be affected by a chronic rotation of relatively inexperienced beginning teachers and difficulties in filling vacant positions (Allensworth, Ponisciak, & Mazzeo, 2009). The poor working conditions in many high-need schools negatively affect new teachers. Insufficient curricular guidance, lack of mentoring, poor leadership, and lack of disciplinary structures can drive new teachers out of their schools or out of the profession entirely (Frankenberg et al., 2009). Unable to match the salaries and resources of more affluent schools, poor school districts consequently have large numbers of underqualified teachers. Voke (2002) noted that there are simply not enough teachers who are both

qualified and willing to teach in underprivileged schools. Thus, disadvantaged students are not granted equal access to qualified teachers, leading to poor educational, and ultimately, occupational outcomes (Wilson, 1996). The sheer absence of committed and qualified teachers in these schools has been tied to a host of other future problems as well, including inner-city unemployment (Wilson, 1996). These educational inequities create major social problems that must be addressed.

The high rates of turnover in beginning teachers are costly occurrences that directly impact teacher quality, student achievement, and accountability. Therefore, it is crucial to concentrate efforts on retaining qualified teachers in the profession, particularly in high-need schools. The NCTAF (2003) highlighted retention of teachers as a necessary component in providing an equitable education for all students and improving their chances of success.

Factors Related to Teachers Leaving and Staying

Research suggests that teachers leave for a variety of reasons. Data from the Schools and Staffing Survey (SASS) and its supplement, the Teacher Follow-Up Survey (TFS), conducted by the National Center for Education Statistics (NCES), provide notable findings from a national sample of U.S. teachers who left the profession in their first year (NCES, 1997). Self-reports indicate that personal reasons (e.g., pregnancy, family move) and school staffing actions (e.g., layoff) were cited as reasons for many teachers' departures. However, nearly two thirds of beginning teachers reported that pursuit of another job or dissatisfaction with teaching in general played a central role in their decision to leave the profession. Major identified sources of dissatisfaction included student discipline problems, lack of support, and poor student motivation.

Other studies have highlighted teachers' frustration with student performance, as well as lack of adequate preparation for teaching (Hanushek, Kain, & Rivkin, 2004; Johnson & Birkeland, 2003). Teachers with low-achieving students or those who feel that they cannot affect student achievement are more likely to leave (Boyd, Lankford, Loeb, & Wyckoff, 2005; Falch & Ronning, 2007). Those who report feeling unprepared are at risk of leaving early (Darling-Hammond, 2000). Research demonstrates that new teachers often report feeling overwhelmed by the demands of teaching (Ruby, 2002). Preparation may be a significant problem in urban schools where resources are typically scarce and increased teaching skills are necessary (Shen, Wegenke, & Cooley, 2003). All of these factors have implications for first-year teachers, who are typically placed in "difficult" classrooms more frequently than experienced teachers (Johnson & Birkeland, 2003).

Factors related to teachers staying in the field relate to their perceived ability to handle some of these challenges of teaching (Caprara, Barbaranelli, Steca, & Malone, 2006). Research has shown that many teachers who remain in the profession possess a strong belief in their ability to influence student learning (Ingersoll, 2003), affect student achievement (Fresko, Kfir, & Nassr, 1997), and improve student motivation (Caprara et al., 2006). This sheds light on the aforementioned reasons for teachers leaving: lack of adequate preparation, poor student achievement, and motivation. Teachers' beliefs in their capabilities serve as influential factors in their decisions to remain in the field (Fresko et al., 1997).

Research has identified the significance of teachers' self-efficacy beliefs, also known as *teacher efficacy*, to their commitment to teaching as well as to job satisfaction (Caprara, Barbaranelli, Borgogni, & Steca, 2003; Chan, Lau, Nie, Lim, & Hogan, 2008;

Coladarci, 1992; Ware & Kitsantas, 2007). Teacher efficacy is defined as "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran et al., 1998, p. 233). Research has shown that high teacher efficacy is related to a range of positive variables, including greater enthusiasm for teaching (Allinder, 1994), more willingness to cope with student behavioral problems (Poulou & Norwich, 2002), lower levels of reported stress (Smylie, 1988), greater job satisfaction (Caprara et al., 2003), and most important, stronger commitment to the profession (Coladarci, 1992; Ware & Kitsantas, 2007) as expressed by greater optimism about remaining in the profession or more reluctance to leave. Teacher efficacy has even been found to predict teachers' decisions to remain in the field despite negative school-context variables (Chan et al., 2008), highlighting the importance of teacher efficacy for teachers in high-need schools.

The impact of teacher efficacy on teacher commitment has been clearly documented (Chan et al., 2008; Coladarci, 1992; Ware & Kitsantas, 2007). Given that teacher efficacy is an outgrowth of self-efficacy, this paper draws on a set of theories on self-efficacy produced by Bandura (1977, 1997) and applies them to teacher efficacy, where applicable. With respect to self-efficacy, Bandura (1997) postulated, "Unless people believe that they can produce desired effects by their actions, they have little incentive to act" (p. 87). Applied to teacher efficacy and taken a step further, teachers who believe in themselves and their students perceive difficulties as challenges and make the best use of their capabilities and available resources (Caprara et al., 2006). As a result, they are more

likely to experience satisfaction with their job and the desire to continue (Caprara et al., 2003).

In light of the relationship between teacher efficacy and teacher commitment, studies have examined the construct of teacher efficacy to learn how it is developed and sustained. Sources of efficacy (Bandura, 1977, 1997), changes in teacher efficacy (Hoy, W. K., & Woolfolk, 1990; Knoblauch & Woolfolk Hoy, 2008; Lin & Gorrel, 2001; Romi & Daniel, 1999; Woolfolk-Hoy, 2000), and teacher qualities that are related to high teacher efficacy (Fives & Buehl, 2010; Wolters & Daugherty, 2007) have been investigated. However, very few studies have examined the qualities of applicants to preservice teacher education programs as they relate to teacher efficacy after their training. Given that efficacy is most malleable early in learning (Bandura, 1997), experiences during preservice teacher education programs are critical to the long-term development of teacher efficacy (Hoy, A. W., & Spero, 2005). Therefore, it is valuable to examine prospective teachers' qualities that may influence the development of their perceived capability to handle the demands of teaching (Poulou, 2007).

Teacher efficacy is certainly not the only factor related to teachers' decisions to remain in the profession. Much remains unknown about prospective teachers' qualities as they relate to teacher commitment, particularly in high-need schools.

Teacher Commitment in High-Need Schools

High-need schools have unique challenges that affect their ability to attract and retain teachers (Johnson & Birkeland, 2003). Studies of teacher employment and mobility suggest that teachers generally opt for schools with relatively low enrollments of poor, minority, or low-achieving students (Bacolod, 2007). As a result, students in underserved

schools are not given access to the same educational opportunities as their counterparts in more desirable schools (Boyd et al., 2005). Although research has shown that teacher efficacy is positively related to teacher commitment (Chan et al., 2008; Coladarci, 1992; Ware & Kitsantas, 2007), these studies often do not distinguish the school settings in which teachers are reporting their professional commitment. Therefore, little is known about the qualities of teachers who seek and maintain employment in high-need schools.

Many prospective teachers have generally had little exposure to diversity in their professional preparation and may have never been inside urban, racially diverse, or linguistically diverse classrooms (Terrill & Mark, 2000). In order for them to be successful teachers of culturally diverse students, they must possess the necessary skills to promote culturally relevant pedagogy and practices (Villegas, 2007). Preservice preparation programs attempt to build these skills (Hollins & Guzman, 2005), but some preservice teachers still report feeling unprepared to serve culturally diverse students (Sleeter, 2001), which may influence their decision to seek employment in urban schools (Darling-Hammond, Chung, & Frelow, 2002). This is not to suggest that all prospective teachers of color or those who have been exposed to diverse environments are more prepared and committed to high-need schools. Even though most preservice teachers of color are more willing to work in urban schools (Su, 1997), research has shown that the majority of teachers, regardless of ethnicity, prefer to work in predominantly White schools (Gomez, 1993). Therefore, commitment to high-need schools is a relevant problem for all teachers, regardless of background.

To meet the pressing need for teachers who are committed to high-need schools, many preservice teacher education programs have focused attention on preparing

candidates for these settings. While some studies have found that teachers who complete

these programs choose to teach in high-need schools and stay in teaching longer than

usual in these settings (Olsen & Anderson, 2007; Quartz, 2003), other studies have

concluded that these programs did not affect teachers' professional commitment (Foote &

Cook-Cottone, 2004). Researchers suggest that some prospective teachers simply do not

possess the skills to serve high-need schools, which results in their departure (Foote,

2005; Frankenberg et al., 2009). Given these mixed findings, as well as gaps in the

literature, much remains to be learned about the relationship between prospective

teachers' qualities and subsequent commitment to teach and remain in high-need schools.

Online Preservice Teacher Education Programs

In addition to the presence of high-need- and urban-focused teacher education

programs, the mode of instruction in which these programs are offered has changed

recently. Policy makers have recognized the need to provide prospective teachers with

more opportunities to enter the field in order to attract more candidates and produce more

teachers (Feistritzer, 2009). While the means by which individuals can enter the teaching

profession have grown exponentially in the past two decades, including accelerated

programs (Feistritzer, 2009) and alternative routes (Baines, 2006), one of the most

prolific current trends is the increasing number of *online* preservice teacher education

programs (Lee, 2009). With the growth of distance education and the demand for this

mode of instruction, it is fitting for educational institutions to provide this alternative

(Levine, 2006).

In fall 2007, over 30% of higher education institutions were offering fully online

programs in education, and over three million college students took at least one online

class (Allen & Seaman, 2008). Students value the convenience and flexibility offered by the "anytime, anywhere" accessibility of distance learning, which allows them to over-come geographic issues, manage scheduling conflicts, and/or prevent changes in lifestyle or culture required in attending a traditional brick-and-mortar school (Cook, 2007). Adult learners, in particular, are drawn to this mode of instruction, as they can arrange their learning around their everyday lives without being constrained by time and place. This appeal to adult learners provides credentialing opportunities to a wider audience (Huang, 2002). Levine (2006) argued that "too often teacher education programs cling to out-dated, historically flawed vision of teacher education that is at odds with a society remade by economic, demographic, technological, and global change" (p. 1). Educational institu-tions have recognized this transformation by providing new alternatives for prospective teachers.

However, online learning may impose additional cognitive and social demands on students (Lai & Pratt, 2004) that could hinder their ability to achieve expected and necessary growth to become efficacious and committed teachers. Aside from the acquisi-tion of technical skills required to navigate an online classroom, students are required to become more autonomous learners in these isolated environments (Jung, 2001; Kearsley, 2000). Those who choose to pursue an online degree may possess unique characteristics that differ from those who would prefer an on-campus program (Kearsley, 2000), so it is important to take these factors into consideration.

While these new urban-focused and online programs are constructive, their purpose is to increase the pool of qualified teachers. However, more teachers entering the profession is not the problem (NCTAF, 2003), as it does not necessarily reduce teacher

turnover. Therefore, it is important to take action before teachers enter the field. A careful examination of candidates who enter these urban-focused and/or online programs could identify factors related to teacher efficacy and teacher commitment.

Statement of the Problem

Teacher commitment is necessary for schools to build a culture that supports student achievement (Frankenberg et al., 2009), but beginning teachers are leaving their schools and the profession every year, particularly in low-income, low-achieving schools, affecting the ability of those schools to provide an equitable education for all students. While a variety of reasons can be attributed to these early departures, research has high-lighted the role of teacher efficacy as an influential factor in teachers' decisions to remain in the profession (Caprara et al., 2003; Chan et al., 2008; Coladarci, 1992; Ware & Kitsantas, 2007).

Highly efficacious teachers are more likely to meet the demands of teaching and to persist in the face of obstacles. Although research on the characteristics of novice and experienced teachers that are related to teacher efficacy and commitment has been reported, very few studies have examined the characteristics of prospective teachers before they begin their teacher education program (Knoblauch & Woolfolk Hoy, 2008). Research has shown that efficacy is most malleable early in learning, making preservice teacher preparation critical to the long-term development of teacher efficacy. Different experiences and backgrounds shape the ways in which individuals analyze information from which beliefs about efficacy are derived during these programs (Tschannen-Moran et al., 1998). Therefore, it is valuable to explore early influential factors that may be related to teacher candidates' development of efficacy.

This is not to suggest that all highly efficacious teachers remain in the field or, inversely, that teachers who leave the profession are not highly efficacious. Much remains unknown about the relationship between prospective teachers' characteristics and their subsequent intention to begin and remain in the teaching profession, particularly in high-need schools. Therefore, it is valuable to assess characteristics that could be related to teacher commitment to the profession in high-need schools.

New preservice teacher education programs are emerging in an effort to increase the applicant pool, including ones that are urban focused and/or entirely online, but admission into these programs must be selective, and research on teacher qualities that are related to teacher turnover, such as teacher efficacy and teacher commitment, must be examined and considered. Programs must enable teacher candidates to achieve a high sense of teacher efficacy and commitment to the profession, particularly in high-need schools (Olsen & Anderson, 2007; Woolfolk-Hoy & Spero, 2005). Preservice teacher education programs should carefully select applicants who have the potential for teacher efficacy, regarding the admissions process as entrance into professional practice. However, limited research has focused on the influence of prospective teachers' qualities as they relate to teacher efficacy and commitment to high-need schools after completing these types of programs, highlighting the necessity for this examination.

Purpose of the Study

Given the detrimental effects of teacher turnover, particularly in high-need schools, it is critical that efforts be concentrated on teacher candidates before their entrance into teacher education programs (Guarino et al., 2006). In an effort to identify factors that are related to high levels of teacher efficacy and the desire to serve and

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commit to high-need schools as a result of participation in a preservice teacher education program, the current study was an exploratory analysis of the qualities of applicants to a master's degree program in teaching that were related most to these outcomes.

Research Questions

1. Among applicants to a preservice teacher education program, what qualities are related to teacher efficacy upon completion of the program?

2. Among applicants to a preservice teacher education program, what qualities are related to teacher commitment upon completion of the program?

3. Among applicants to a preservice teacher education program, what qualities do graduates who assume employment in a high-need school possess?

4. Do any differences exist between the on-campus and online preservice teacher education program candidates?

Significance of the Problem

An exploratory analysis of qualities that are related to the development of both teacher efficacy and teacher commitment could yield valuable information for preservice teacher education programs, as well as PK-12 schools. By identifying whether teacher qualifications serve as building blocks for high teacher efficacy and commitment to high-need schools, preservice teacher education programs can either tailor their programs to build on the identified foundations or establish a baseline of expectations for their candidates. Schools can benefit from this information as they seek to employ highly efficacious and committed teachers; certain qualifications may reveal a greater likelihood for the presence of these desired outcomes.

Assumptions

Two assumptions were made in this study. First, it was assumed that participants would respond honestly to the study survey that assessed their teacher efficacy and teacher commitment. Second, assumptions were made about the effectiveness of the examined preservice teacher education program. The present study did not evaluate any organizational and/or pedagogical variables that may have impacted the effectiveness of the identified program. It was assumed that the program was effective in developing teacher efficacy and commitment, given that candidates possessed adequate preparation. However, aspects of the program may have existed that negatively or positively affected participants' ability to achieve the desired outcomes, regardless of background.

Limitations

The present study has several limitations. First, the study was limited to participants who voluntarily agreed to participate. Second, the study was limited by the number of participants surveyed and the amount of time available to conduct the study. Third, the validity of the study was limited to the reliability of the instruments used. Fourth, the school setting in which teacher candidates completed their student teaching likely affected participants' reported teacher efficacy and teacher commitment. While efforts were made to place candidates in similar schools, differences inevitably existed. Some schools may have placed greater demands on student teachers, provided inadequate support and resources, or had significant student discipline problems, all of which could have affected candidates' analysis of the teaching task and subsequent efficacy beliefs (Hanushek et al., 2004; Knoblauch & Woolfolk Hoy, 2008). These factors may also have affected candidates' reported commitment.

Delimitations

This study was confined to surveying a small sample of teachers who had completed a master's degree program in teaching at an identified educational institution. Only those who completed the program in summer 2010 were included in the study. A limited number of qualities were examined as they related to teacher efficacy and teacher commitment.

Definition of Terms

Much of the literature fails to distinguish between urban and high-need schools. The term *urban* has come to serve as a euphemism for racial and socioeconomic diversity, having implications beyond the mere geographical location of a school (Weiner, 2000). Terms such as *diverse, poor*, or *underserved* are often used to characterize students who attend these schools.

High-need schools are schools that typically exhibit certain characteristics based on school performance and student demographic characteristics. School performance variables may include inability to meet Adequate Yearly Progress (AYP), identification as a Program Improvement (PI) school, inability to meet Annual Measurable Objectives (AMO) for subgroups, state-wide ranking of 4 or below, or receipt of Title I funds. Student demographic variables in high-need schools include dropout rates above the county and state average, an English language learners (ELL) student population of 15% or more, 35% or more of students qualifying for free or reduced-price lunch (FRPL), and rates of truancy, suspensions, and/or expulsions above county and state averages (Ralston, Newman, Clauson, Guthrie, & Buzby, 2008).

Studies often refer to schools by their poverty and socioeconomic status as well, referring to them as having *low-poverty/high socioeconomic status* or *high-poverty/low*

socioeconomic status. These classifications are based on the percentage of a school's

enrollment that is eligible for FRPL through the National School Lunch Program (NSLP).

Each year, the United States Department of Agriculture (USDA) publishes income

guidelines for program eligibility that factor household income and size in relation to

federal poverty. Students from families with incomes at or below 130% of the federal

poverty guidelines are eligible for free meals, while students from families with incomes

that are above 130% and up to 185% of the poverty level are eligible for reduced-price

meals (Ralston et al., 2008). High-poverty schools are typically those in which 76% to

100% of students are eligible for FRPL, and low-poverty schools are those in which 0%

to 25% of the students are eligible (Aud et al., 2010). The literature uses these terms

interchangeably to describe high-need and urban schools, given their prevalent use and

lack of distinction. Given the recognition that all of the presented terms are certainly

distinct from one another, efforts were made in this study to distinguish the proper

classification, when possible.

Several definitions of teachers are presented. *Prospective teachers* are persons

who are not enrolled in preservice teacher education programs but have demonstrated an

interest in entering the field by presenting an application of candidacy to these programs.

Teacher candidates are persons who are enrolled in preservice teacher education pro-

grams. The term *teachers* includes elementary and secondary teachers who are employed

by a school system.

Organization of the Dissertation

Chapter 1 presents the introduction, background of the problem, statement of the

problem, purpose of the study, research questions, significance of the study, assumptions,

limitations, delimitations, and definitions of terms. Chapter 2 is a review of relevant

literature on the following topics: (a) teacher commitment; (b) teacher efficacy, including

sources of and changes in teacher efficacy; (c) applicant qualities related to teacher com-

mitment and teacher efficacy, focusing on admission criteria; and (d) contextual factors

that influence teacher commitment and teacher efficacy. Prior to the examination of these

topics, a conceptual framework is presented to shape the literature review. Chapter 3

describes the methodology used in the study, including the research design; population

and sampling procedure; and the instruments and their selection or development, together

with information on validity and reliability. Each of these sections concludes with a

rationale, including strengths and limitations of the design elements. The chapter con-

cludes with a report of the procedures used for data collection and data analysis. Chapter

4 presents the results of the study. Chapter 5 presents discussion and analysis of the

results, culminating in conclusions and recommendations.

CHAPTER 2

REVIEW OF THE LITERATURE

Committed and efficacious teachers are more likely to remain in the profession

and to perform at higher levels in the classroom (Tsui & Cheng, 1999; Elliot &

Crosswell, 2001). However, factors related to teacher commitment and teacher efficacy

are not typically measured in applicants to preservice teacher education programs

(Denner, Salzman, & Newsome, 2001). Given the influence of commitment and efficacy

on teacher retention, it is valuable to explore whether measureable qualifications of

prospective teachers are related to these constructs.

The conceptual framework for the literature review and the study is presented

first. The literature review presents an overview of teacher commitment and teacher

efficacy, followed by an examination of prospective teacher qualifications that are related

to each of these constructs.

Conceptual Framework

For the purposes of this study, three theories were used to frame the literature

review and research questions: (a) economic labor market theory of supply and demand

to examine teacher commitment, (b) social cognitive theory to explore teacher efficacy,

and (c) sociocultural theory to support the exploration of prospective teachers' qualities

during the admissions process.

Economic Labor Market Theory and Teacher Commitment

The economic labor market theory of supply and demand (Ehrenberg & Smith,

1997) serves as the principle that initially motivates prospective teachers to enter the field

of teaching, as well as to stay committed to the profession in the long term. When applied

to the teacher labor market, *demand* is defined as the number of teaching positions offered at a given level of compensation and *supply* is defined as the number of qualified teachers who are willing to teach at a given level of compensation (Haggstrom, Darling-Hammond, & Grissmer, 1988). Compensation includes a combination of salary and other types of rewards (e.g., personal satisfaction) derived from teaching. Based on the economic labor market theory (Ehrenberg & Smith, 1997), teachers remain committed to the profession because they hold the perception that teaching remains the most attractive occupation in terms of compensation, working conditions, and intrinsic rewards, compared to alternative activities (Guarino et al., 2006).

Teachers who choose to remain in the profession lose the opportunity to experience the potential rewards of other occupations. These lost rewards are considered "opportunity costs" of teaching (Guarino et al., 2006). Depending on teachers' qualifications, experiences, and perceived rewards associated with both teaching and other occupations, opportunity costs vary. Teachers whose opportunity costs outweigh rewards gained from teaching are less likely to remain in the profession (Guarino et al., 2006). School-level characteristics can also affect these interpretations made by teachers.

The elements of overall attractiveness that teachers consider to establish their opportunity costs and rewards of teaching can vary based on the school setting where they teach. High-need schools present added challenges that can increase opportunity costs and reduce personal rewards for some teachers (Johnson & Birkeland, 2003), leading to school-specific attrition and a higher demand than supply of qualified teachers. Given the consequences associated with this imbalance in high-need schools, as well as the effects of teacher attrition in the profession overall, it is important to examine factors

related to teachers' decisions to remain committed to the field, utilizing the economic labor market theory of supply and demand.

Social Cognitive Theory and Teacher Efficacy

The conceptualization of teacher efficacy is grounded in the theoretical framework of Bandura's social cognitive theory (1977) and the construct of self-efficacy (Tschannen-Moran et al., 1998). Bandura (1997) defined *self-efficacy* as "beliefs in one's capacity to organize and execute the courses of action required to produce given attainments" (p. 3). It is a future-oriented judgment about one's perception of competence rather than a judgment about actual competence (Hoy, A. W., & Spero, 2005). These beliefs influence thought patterns and emotions that subsequently affect how much effort the teacher exerts in the pursuit of objectives and the level of persistence in the face of adversity (Bandura, 1997; Milner, 2002; Tschannen-Moran & Woolfolk-Hoy, 2001). In other words, the degree of a teacher's conviction in his/her level of effectiveness will affect how much effort he/she expends and how long he/she will persist (Bandura, 1997).

Social cognitive theory proposes an additional belief that differs from perceived self-efficacy: *outcome expectancy*. Whereas efficacy expectation is the conviction that one can execute the necessary actions to perform a given task, outcome expectancy is the estimation that a given behavior will lead to certain outcomes (Bandura, 1986). People can infer that given courses of action will lead to certain outcomes but, if they do not have sufficient conviction of their ability, it is likely that they will not employ those behaviors (Tschannen-Moran & Woolfolk-Hoy, 2001). Bandura (1997) suggested that "the self-assurance with which people approach and manage difficult tasks determines whether they make good or poor use of their capabilities" (p. 35).

Drawing on these theories of self-efficacy, researchers have extended these two types of expectations to teachers, creating two separate factors of teacher efficacy: *personal teaching efficacy* and *general teaching efficacy.* Personal teaching efficacy reflects teachers' evaluations of their abilities to bring about positive student change, paralleling Bandura's (1997) efficacy expectation. General teaching efficacy refers to the extent to which teachers believe that students can be taught, given environmental factors, paralleling Bandura's outcome expectancy (Ashton, 1985; Gibson & Dembo, 1984). Given that these constructs, collectively known as *teacher efficacy*, play such an important role in teachers' actions, it is valuable to examine factors related to them in the literature review.

Sociocultural Theory and Prospective Teachers' Qualities

Preservice teacher education programs strive to arm candidates with tools to assume employment as highly efficacious and committed teachers. However, individual differences exist in the ability to meet this goal. In other words, the extent to which a program can equip teachers with the necessary tools is impacted by each candidate's state of readiness upon entry into the program, highlighting the notion of the zone of proximal development (ZPD) and sociocultural theory.

The *ZPD* is defined as the distance between an individual's actual level of development, as determined by independent problem solving, and the potential level of development, as determined through problem solving under the influence or guidance of a more capable individual (Vygotsky, 1978). With respect to preservice teacher education programs, learning is grounded in social interactions and nurtured through the membership in the learning community (Flores, Hernandez, Garcia, & Claeys, 2011).

Teacher candidates engage with theories and pedagogical approaches through classroom instruction, readings, discussions, field experiences, and interactions with colleagues, resulting in the development of higher-order functions and preparation for service. However, in order for this development to occur, teachers must mediate instruction within candidates' ZPD (Flores et al., 2011; Vygotsky, 1986). According to Vygotsky (1978), instruction should awaken functions that are in the process of maturing. Therefore, a foundation of prior knowledge that allows learners to understand new concepts and internalize new information must exist (Olson & Platt, 2000). With respect to the current study, this suggests that candidates who are accepted into preservice teacher education programs should possess certain fundamental knowledge so they can advance their learning via the provided instruction. With this foundation in place, instruction can be scaffolded to support development of complex skills and knowledge necessary for future teachers (Tharp & Gallimore, 1989).

Programs such as preservice teacher education programs aim to provide students with the necessary pedagogical knowledge, skills, and dispositions to enter the teaching profession (Darling-Hammond et al., 2002). However, students who do not enter with the necessary foundation may leave unprepared as a result of their inability to benefit fully from instruction, curriculum and field experiences. While teachers in these preparation programs can make adjustments to accommodate varying levels, it is critical that candidates' ZPD reflects the ability to take advantage of the collaboration, instruction, and social interactions, particularly in urban-focused teacher preparation programs or those that are delivered online, which may present additional demands (Lai & Pratt, 2004). This capability may increase candidates' likelihood of graduating from programs

with high teacher efficacy and greater commitment to high-need schools, highlighting the value of exploration of these factors.

Overview of the Literature Review

The literature review is grounded in the aforementioned theories of economic labor market theory (Ehrenberg & Smith, 1997), social cognitive theory (Bandura, 1977) and sociocultural theory (Vygotsky, 1986). Three main topics are treated in this literature review: (a) teacher commitment, (b) teacher efficacy, and (c) applicant qualities related to teacher commitment and teacher efficacy. Research on teacher commitment is reviewed, drawing on elements of the economic labor market theory to explain where teachers choose to teach and stay and why they make these choices. Research on teacher efficacy is examined, focusing on the sources of and changes in the development of this construct, as identified by Bandura (1977, 1997). Applicant qualities related to teacher commitment and teacher efficacy are discussed by utilizing sociocultural theory and ZPD, as well as economic labor market theory, to explain the nature of these relationships.

Teacher Commitment

Teacher commitment was defined by Coladarci (1992) as the "degree of psychological attachment to the teaching profession" (p. 326). Specifically, Firestone and Pennel (1993) defined a *committed teacher* as one who "believes in the values and goals of his or her work, actively wants to be affiliated with his or her work, and will work beyond the minimal expectations required of the job description" (p. 491).

Studies have identified multiple dimensions of teacher commitment, including commitment to one's students, to one's individual school, and to the teaching profession (Frankenberg et al., 2009). While these elements are related, research has shown that they

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may also operate independently of one another (Park, 2005). Teachers may feel committed to their students, for example, but not to their school. Most research aligns teacher commitment with a particular type of professional commitment (Frankenberg et al., 2009), while some research focuses on teachers' commitment to specific settings, including urban schools. Frankenberg et al. (2009) coined the term *urban commitment*, which they defined as "teachers' active choices to pursue opportunities to work in inner-city schools, and especially those with high percentages of low-income students and students of color" (p. 313). Along these lines, teacher commitment consists not only of sustained dedication to the field but also of initial career decisions, so it is important to examine research that identifies where teachers choose to teach.

Research on teacher employment suggests that most teachers do not enter the field to teach students in high-need schools (Frankenberg et al., 2009; Gay, 2003). This is reflected in the data that show that the majority of teachers seek employment in schools with relatively low enrollments of poor, minority, or low-achieving students (Bacolod, 2007; Frankenberg et al., 2009). Bacolod (2007) examined the key determinants of entry into the profession across school type, using data from the NCES Baccalaureate and Beyond Longitudinal Study that supported that working conditions play an important role in where prospective teachers choose to teach. Schools with a majority of minority students, low-socioeconomic status students, or low academic performances attract significantly fewer teachers (Bacolod, 2007).

Teachers prefer to teach students who are like themselves and in communities similar to their own (Gay, 2003). As most teachers entering the field are White middle-class women (NCES, 2005), they are not inclined toward schools serving non-White

students and/or toward high-need schools (Allensworth et al., 2009). As the demographics of America's schools change, with increasingly high concentrations of poor students and students of color (Frankenberg, Lee, & Orfield, 2003), it is not surprising that school staffing difficulties remain concentrated in urban and poor communities (Frankenberg et al., 2009). For many teachers, these environments are not the most attractive in terms of overall compensation (i.e., salary, benefits, and working conditions) relative to alternative opportunities (Guarino et al., 2006).

In a review of research on multicultural education, Ladson-Billings (1999) asserted that "teacher education programs are filled with prospective candidates who have no desire to teach in schools where students are from racial, ethnic, or linguistic backgrounds different from their own" (p. 224). While this assertion is generally accepted (Barraza & Hunter-Quartz, 2005), one study presented a school that was intentionally attempting to challenge this pattern. Olsen and Anderson (2007) interviewed beginning teachers who had recently completed a master's-level urban teacher preparation program at the University of California, Los Angeles, in an effort to examine their career plans. While all 15 participants assumed employment in urban or high-need schools, only 3 reported an unequivocal intent to stay in teaching as long as they were able. There were various reasons for the 12 participants who were uncertain, but a few patterns emerged. In particular, many of the teachers wondered whether their reasons for entry (e.g., social justice) could be better met in other realms of education. Many felt that changing roles would enable them to make greater changes. Therefore, they did not intend to leave the profession but did not plan to stay in the role of classroom teacher in an urban school. While it is positive that these teachers intended to remain in the field of education, the

outcome for schools was still unfavorable, given the resulting decrease in staff and the need to replacement them (Ingersoll, 2001). Therefore, although the study suggested that completion of a preservice teacher education program that emphasizes urban education may influence teachers' subsequent decision to work in urban schools, it did not suggest that they are likely to commit to these schools.

In addition to examining where beginning teachers seek employment, studies on teacher commitment have assessed their commitment to the profession. This investigation is typically done through two means: (a) reviewing attrition rates and potential reasons for attrition, or (b) self-reports by teachers. Surveys typically ask teachers whether they would choose teaching as a career again. Research has shown that various teacher qualities are related to various aspects of teacher commitment (reviewed in a later section along with the teacher qualities related to teacher efficacy). However, before these relationships can be explored, teacher efficacy must be examined, given its relationship to teacher commitment and the focus of this study.

Teacher Efficacy

A growing body of research suggests that teacher commitment is related to the ability to influence student learning (Fresko et al., 1997; Ingersoll, 2003), which has drawn attention to the construct of teacher efficacy: "a teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran et al., 1998, p. 233). Research has identified several sources of teacher efficacy that are important to examine for understanding the development this construct (Bandura, 1977, 1997).

Sources of Efficacy

Bandura (1977, 1997) postulated four sources of self-efficacy information: mastery experiences, physiological and emotional states, vicarious experience, and verbal persuasion. These four sources contribute to the analysis of the teaching task and teachers' perception of their competence.

Mastery experiences are the most powerful source of efficacy information (Bandura, 1997). Student teaching provides many teacher candidates with some of their first mastery experiences, influencing the development of teacher efficacy beliefs (Mulholland & Wallace, 2001). The perception that performances on teaching tasks are successful enhances efficacy beliefs, as well as expectations that future performances will be proficient. If success is achieved on difficult tasks with little assistance or early in learning with minor setbacks, efficacy beliefs are strengthened considerably (Tschannen-Moran et al., 1998).

In line with this theory, Knoblauch and Woolfolk Hoy (2008) found that beginning teachers who completed their student teaching in urban schools, known to present challenges, demonstrated increased teaching efficacy, when compared to their efficacy beliefs prior to their teaching assignment. The authors hypothesized that the constraints and lack of resources in urban schools would cause student teachers' efficacy beliefs to decline, which was not the case. Mastery of a challenging situation (i.e., teaching at an urban school) could serve as a possible reason for this outcome. However, this alone does not enhance efficacy beliefs (Bandura, 1997).

Several factors can lead to unchanged or reduced efficacy beliefs. For example, if success is achieved with extensive assistance or on an easy task, then efficacy may not be strengthened (Pintrich & Schunk, 2001). If success requires a level of work that the

individual feels unable to sustain, efficacy may remain unchanged (Hoy, A. W., & Spero, 2005). Not surprisingly, the perception that performances are not successful lowers efficacy beliefs and leads to the expectation that future performances will also be ineffective. However, these "failures" may provide clues about more potentially success-ful strategies, so they are not always detrimental (Mulholland & Wallace, 2001).

Attributions also play a role. Efficacy is enhanced most when success is attributed to internal causes, such as ability or effort. When achievements are attributed to external causes, efficacy beliefs are likely to remain unchanged. Internal attributions may have contributed to the urban student teachers' enhanced efficacy beliefs in the study by Knoblauch and Woolfolk Hoy (2008). Student teachers may have attributed their success to internal factors, thereby enhancing their teaching efficacy. According to Knoblauch and Woolfolk Hoy (2008), teachers who attribute lack of success to external causes can be problematic, as their "level of effort and persistence may subsequently decline due to perceived external constraints" (p. 174). Research has also shown that teachers who leave the profession often cite external causes (e.g., inadequate support and resources, student discipline problems, poor student motivation) for their departure (Haberman & Richards, 1990; Ingersoll, 2003), highlighting the significance of attributions.

The level of physiological and emotional arousal that a person experiences while engaging in a task also adds to the perception of competence. Feelings of relaxation during a teaching task, for example, may suggest confidence and self-assurance, while feelings of stress or anxiety may be viewed negatively and skew the anticipation of future success, depending on the circumstances. According to Bandura (1997), moderate levels of arousal may be beneficial by encouraging focus and attention on the task, but high

levels of arousal may be interfere with one's capabilities. The interpretation of these states can influence judgments about one's capabilities (Poulou, 2007).

Vicarious experiences also play a valuable role in the development of teachers' efficacy beliefs. Watching others teach provides prospective teachers with impressions about the nature of the teaching task (Hoy, A. W., & Spero, 2005). In addition to the experiences garnered from professors in preservice teacher education programs, student teaching provides influential vicarious experiences from which prospective teachers can learn. Student teachers are traditionally matched with cooperating teachers/mentor teachers who serve as models to them, providing an opportunity to enhance the students' efficacy through observational learning (Knoblauch & Woolfolk Hoy, 2008). Student teachers can gain valuable information from these cooperating teachers, but the development of efficacy beliefs through vicarious information requires more than mere exposure to these models. According to Bandura (1997), the observer considers the value of the modeled events, as well as the competence of the model. Some cooperating teachers may exert greater instructional influence than others (Bandura, 1997). Accordingly, research has shown that student teachers who viewed their cooperating teachers as efficacious were more efficacious themselves after completing their teaching assignment (Knobluach & Woolfolk Hoy, 2008), which is consistent with earlier research by Li and Zhang (2000). Therefore, interpretations of task value and perceptions of efficacy can be as significant as reality.

Verbal persuasion from professors and cooperating teachers can serve as another essential source of efficacy information for beginning teachers. Encouragement, support, and feedback can instill confidence in student teachers as they encounter the challenges

of teaching and experience the inevitable disillusionment and doubt about their capabilities (Hawkey, 1997). However, similar to vicarious experiences, the impact of verbal persuasion is contingent on who provides it. Credibility, proficiency, and trustworthiness may all be taken into consideration (Bandura, 1997). Teacher candidates who perceive their mentors and professors to be efficacious, for example, may give more credence to their verbal persuasion.

These four sources of information play important roles in the development of efficacy beliefs. However, it is the interpretation of this information by the candidate that is the most critical. Tschannen-Moran et al. (1998) suggested that "cognitive processing determines how the sources of information will be weighed and how they will influence the analysis of the teaching task and personal competence" (p. 230). This information then shapes teacher efficacy. Individual differences affect what people attend to, what they consider important or credible, and what they remember (Poulou, 2007). People generally develop biases based on preexisting beliefs, experiences, the kinds of attributions that they typically construct, and the sources of information that they consider important (Bandura, 1997). Some prospective teachers may possess optimistic expectations, while others generally exhibit more pessimistic expectations. Some may have a tendency to blame external factors for their mistakes, while others assume personal responsibility for failures. These differences affect the development of efficacy beliefs, which, in turn, can affect success as a teacher, as well as commitment to the profession.

Changes in Efficacy

The development of teacher efficacy in prospective teachers has become a key area of interest for many researchers, given that once efficacy beliefs are established, they

appear to be somewhat resistant to change (Bandura, 1997). A fairly consistent finding is that teachers' reported sense of efficacy for teaching increases during preservice teacher education programs and student teaching (Hoy, W. K., & Woolfolk, 1990; Knoblauch & Woolfolk Hoy, 2008). However, other studies have found no changes (Lin & Gorrell, 2001; Romi & Daniel, 1999), which could be due to differences in the way teacher efficacy was measured (Tschannen-Moran & Woolfolk-Hoy, 2001).

Using a sample of 102 student teachers, Knoblauch and Woolfolk Hoy (2008) investigated the teacher efficacy beliefs of candidates enrolled in a preservice teacher education program. Data about teacher efficacy beliefs were gathered before and after candidates completed their student teaching. Results revealed that all participants exhibited significant increases in teacher efficacy following student teaching, regardless of the school setting (i.e., rural, suburban, or urban). An earlier study by Woolfolk-Hoy and Spero (2005) found similar results among 53 prospective teachers in a Master of Education initial teaching certification program. Teacher efficacy was measured through three phases of data collection: (a) during the first quarter of teacher preparation, (b) at the end of the preparation program after student teaching, and (c) at the end of the first year of teaching. Participants reported significant increases in teacher efficacy after student teaching but significant declines during the first year of teaching, which is consistent with other studies (Woolfolk-Hoy & Spero, 2005).

Research suggests that high levels of teacher efficacy are not always sustained during the first year of teaching. A longitudinal study by Woolfolk-Hoy (2000) evaluated the changes in efficacy beliefs in 339 prospective teachers during their preservice teacher education program and after their first year of teaching. Results indicated a significant

increase in teaching efficacy from the start of the program to the end, as expected; however, participants' teaching efficacy decreased between the start and end of the first year of teaching. Woolfolk-Hoy (2000) attributed the initial increase to the support given during training; when the support diminished, the expectancies of efficacy decreased. Novice teachers may also underestimate the complexity of teaching and experience a "reality shock" (Veenman, 1984) that subsequently affects their efficacy beliefs.

Efficacy beliefs are expected to change during the first year of teaching and beyond. However, research has shown that preservice teacher education programs build a strong foundation for teacher efficacy that substantially influences its later development and maintenance (Darling-Hammond et al., 2002). Therefore, it is valuable to examine the qualifications with which candidates enter preservice teacher education programs in an effort to identify factors that may influence this development.

Applicant Qualities Related to Teacher Efficacy and Teacher Commitment

A range of admission variables has been established in an attempt to select teacher candidates who will go on to excel in the dynamic environment of education as committed and efficacious teachers (Caskey, Peterson, & Temple, 2001). Most current programs rely heavily on quantitative criteria, such as undergraduate grade point average (GPA; Haberman & Post, 1998), as well as subjective criteria such as relevant work experience. However, some teacher education programs consider additional factors, such as coursework and undergraduate institution, given the unique requirements to succeed as a teacher in today's educational environment. This section reviews these factors to examine their relationship to teacher efficacy and teacher commitment.

It is important to note that there is only limited research on the relationship between many preservice teacher education admission variables and teacher efficacy. In an effort to present data on the influence of such variables, research on teacher effectiveness is presented, where applicable. Teacher effectiveness is typically measured by student outcomes or supervisor ratings, not by teachers' perception of their effectiveness. Therefore, these comparisons should be interpreted with caution. However, it is relevant to discuss these findings, given the influence of teacher effectiveness on efficacy beliefs (Tschannen-Moran et al., 1998). Research is also limited on the relationship between prospective teachers' qualifications and teacher commitment. Studies often fail to identify the type of schools where teachers work when they report their commitment. Therefore, research reviewed in this section focuses primarily on teacher commitment to the profession and high-need schools, when possible. This study will contribute to the existing body of research, addressing this gap in the literature.

Demographic variables, as well as admission variables used in the selection of teacher candidates, are reviewed in this section. The demographic variables of age, ethnicity, and gender have identified relationships with teacher commitment. In recognition of the student population that teachers are likely to serve, the diversity of the applicant pool is important for preservice teacher education programs to consider (Branch, 2001). Examined admission variables include undergraduate content GPA, work experience, coursework, and institution selectivity.

Demographic Variables

Research has shown that demographic characteristics have an important impact on teacher commitment. Older, more experienced teachers are more likely to remain in the

profession, minority teachers tend to have lower attrition rates than Caucasian teachers, and male teachers are less likely to leave the profession than women (Guarino et al., 2006; NCES, 1997). No identified studies have examined demographic characteristics and teacher efficacy.

Age. Research consistently demonstrates higher attrition rates for young beginning teachers than for older beginning teachers (Guarino et al., 2006). Hanushek et al. (2004) analyzed public data on 300,000 Texas public school teachers and found that those who left Texas public schools were generally relatively young. The data did not indicate whether they remained in the profession; only departure from their schools was documented. Using data on more than 6,000 teachers in the SASS, Ingersoll (2001) found similar results, with higher attrition rates for younger teachers. Individuals who are new to the labor market are still exploring their options and may not be as willing to accept the extant working conditions as readily as more experienced professionals (Guarino et al., 2006).

Ethnicity. Research demonstrates that minority teachers tend to have lower attrition rates than Caucasian teachers (Ingersoll, 2001). Using the SASS and Teacher Follow-Up Survey to investigate factors related to attrition, Ingersoll (2001) found that White teachers were more likely than minority teachers to quit. S. Kirby, Berends, and Naftel (1999) found that Hispanic teachers demonstrated the lowest early attrition rates. Among Texas public school teachers, the average teaching tenure for Hispanic males and females was 10 years, compared to 6 and 9 years for Black males and females, respectively, and 7 and 6 years for Caucasian males and females, respectively.

In line with the conceptual framework of sociocultural theory and ZPD, researchers have suggested that minority teachers are better suited to work in high-need schools because they possess a greater understanding of the cultural tools that these students bring to the classroom (Villegas, 2007). Minority teachers have presumably endured similar challenges as minority students and tend to have empathy for the life conditions with which these students are confronted daily (McKinney, Berry, Dickerson, & Campbell-Whately, 2007). This understanding allows minority teachers to enter the classroom with a different, and arguably more beneficial, set of tools to handle the demands of teaching in a high-need school, compared to Caucasian teachers, who have not had as much exposure to diverse students (Branch, 2001). As a result, minority teachers feel more comfortable in these environments and possess greater "staying power" (Haberman, 1996, p. 751).

Labor market perceptions also influence minority teachers' decisions to remain in the field. Based on a sample of recent university graduates, Ng and Sears (2010) found that ethnic minorities expressed lower confidence in their labor market prospects than Whites. Therefore, they might be more inclined to remain in the teaching profession if they do not believe that they possess many other options.

Gender. Several studies have found that women tend to display higher attrition rates than men, controlling for race (Ingersoll, 2001; Kirby, S., et al., 1999). Using longitudinal data on public school teachers in Texas, Kirby et al. reported that females had a 5% higher rate of attrition than males. Ingersoll (2001) also found that men were less likely to leave the profession than women, through an analysis of the SASS. Despite these higher attrition rates, women tended to report higher commitment than men.

Ingersoll and Alsalam (1997) analyzed data on 53,000 teachers that revealed higher self-reported commitment to the teaching profession among women. Data show that personal reasons such as pregnancy and child-rearing are frequently cited as reasons for their departure (Guarino et al., 2006), so women could feel a greater sense of commitment but not necessarily remain in the profession as long due to the aforementioned reasons. This finding highlights the limitation of using attrition rates as a measure of teacher commitment. According to the economic labor market theory, these women could also perceive the opportunity costs of remaining in teaching as greater than the rewards gained from staying home for child-rearing purposes, resulting in their departure (Ehrenberg & Smith, 1997).

Teacher Education Program Admission Variables

Undergraduate GPA. GPA is the most widely used criterion for admission into teacher education programs (Mikotovics & Crehan, 2002). Given that GPA is generally believed to measure academic ability, graduate programs utilize this variable as an indicator of students' future success. The prevalence of this measure can also be traced to its capacity to screen large numbers of applicants due to its objective nature (Haberman, 1993). The majority of preservice teacher education programs require a minimum GPA of 3.0 on a 4.0 scale. However, exceptions are made on a case-by-case basis, and there are some programs with a lower minimum GPA (e.g., 2.75) or no GPA requirement at all.

Despite its widespread use, research suggests that GPA is not a significant predictor of teacher efficacy (Chester & Beaudin, 1996). Using a sample of 173 novice teachers in urban schools, Chester and Beaudin (1996) found that undergraduate GPA was not related to teachers' reported perceptions about their capabilities as a teacher.

However, Bacolod (2007) found that GPA was related to teacher commitment. Data from the NCES Baccalaureate and Beyond Longitudinal Study showed that prospective teachers with higher undergraduate GPA were significantly less likely to report teacher commitment to urban schools than prospective teachers with lower undergraduate GPA (Bacolod, 2007). These findings are consistent with the conceptual framework of labor market theory, as higher-ability individuals, as assessed by undergraduate GPA, are presumed to have more options available to them, which could entice them to explore other options.

These findings connect to minority teachers as well, who reportedly express greater teacher commitment than Caucasian teachers. Evidence has shown that Black and Hispanic students average lower GPAs than their White and Asian counterparts (Massey, 2006). These differences have been traced to family socioeconomic status, inequalities in educational opportunities, and a multitude of other factors that are beyond the scope of this paper (Alon & Tienda, 2007). Nevertheless, these disparities in college success might influence minority teachers' decisions to remain in the field if they do not feel well positioned to enter other professions.

Undergraduate institution selectivity. Consideration of the institution where candidates earn their Bachelor's degree is also important. While research does not exist on the influence of institution selectivity on teacher efficacy, there are studies on the influence of institution selectivity on teacher commitment. A longitudinal study by Podgursky, Monroe, and Watson (2004), which tracked public school teachers, showed that teachers who earned their undergraduate degree from highly selective institutions were more likely to leave teaching than teachers who attended less selective institutions.

Lankford, Loeb, and Wyckoff (2002) reported similar results with regard to both attrition and migration. Teachers who left the profession were 60% more likely to have earned a bachelor's degree from a highly selective institution; teachers who transferred schools were 35% more likely to have received a bachelor's degree from a highly selective institution.

Therefore, research suggests that teachers with presumed higher ability, as assessed by undergraduate GPA and the selectivity of their undergraduate institution, have a higher probability of leaving the profession. In line with labor market theory, these teachers could presumably have more occupational options available to them, which could lead to their departure.

Coursework. Applicants must possess adequate knowledge of the subject area(s) in which they intend to teach. Those who apply for elementary school credentials are assumed to possess the required subject matter knowledge if they have earned a Bachelor's degree. However, secondary teachers must demonstrate sufficient knowledge through relevant coursework. Marks (1990) suggested that applicants who intend to teach high school should have a minimum of six semester courses in their major teaching area; the content of these courses should also be considered (Stotsky, 2006).

Research has examined the relationship between degree types and levels of teacher effectiveness, as assessed by student achievement. No identified studies have examined these academic qualifications in connection with teacher efficacy. Using data from National Education Longitudinal Study (NELS), Goldhaber and Brewer (2000) found that degree level was not related to high school student achievement in mathematics, science, English, or history; however, subject-specific degrees exerted an

influence on achievement. Degrees in mathematics and science (both bachelor's and master's), in particular, had a positive effect on student test scores in those subjects. Teachers who held both a bachelor's degree and a master's degree in the subject area taught were the most effective. Rowan, Chiang, and Miller's (1997) study of 10th-grade student achievement in mathematics supported these finding, as a degree in mathematics in undergraduate and/or graduate school was a positive predictor of student achievement.

Sociocultural theory and ZPD support these findings, suggesting that candidates who enter preservice teacher education programs with greater pedagogical knowledge are more likely to possess high teacher effectiveness. However, researchers express caution regarding the assumption that in-depth knowledge of subject matter content contributes to a teacher's effectiveness, given that the transfer of that knowledge to teaching practice is not inevitable (Zumwalt & Craig, 2005).

While research on coursework in subject-specific degrees has not been conducted in connection with teacher commitment, studies have shown that teachers with advanced degrees in the subject in which they teach are less likely to remain in the profession (Borman & Dowling, 2008). In line with the economic labor market theory, these teachers with advanced degrees are presumed to have more occupational opportunities with potentially higher compensation in terms of salary, thereby increasing their opportunity costs of staying in the profession and reducing their likelihood of staying (Ehrenberg & Smith, 1997).

Work experience. The record of work experience can provide information on candidates' suitability and aptitude for preservice teacher education programs and their subsequent entry into the profession. Teaching experience is not required for admission

into preservice teacher education programs, but relevant experiences that will translate to the demands for teaching are certainly favorable. Research has highlighted the relationship between teaching experience and positive outcomes, including higher student achievement (Rice, 2003), higher teacher efficacy (Fives & Buehl, 2010), and greater teacher commitment (Chan et al., 2008). Based on these findings, candidates with teaching experience are presumed to be more favorable candidates. Experience outside of education has also been deemed beneficial by some researchers (Haberman, 1990; Stoddart & Floden, 1995; USDOE, 2004), despite limited support.

Recent studies have highlighted the positive relationship between teaching experience and efficacy beliefs (Fives & Buehl, 2010; Wolters & Daugherty, 2007). Fives and Buehl (2010) examined differences in efficacy beliefs between practicing ($n =102$) and preservice teachers ($n = 270$) with respect to experience. Five groups of teachers were formed based on the number of years that they had taught (i.e., preservice, 1-2 years, 3-5 years, 6-10 years, 10+ years). Results indicated that teachers with 10 or more years of teaching experience were significantly more efficacious than preservice teachers, while no other significant differences were found among the other groups. An earlier study by Wolters and Daugherty (2007) was in line with these findings, as it found that teachers with more experience reported significantly higher efficacy than beginning teachers for various teaching tasks, such as instructional practices and classroom management. However, these results should be interpreted with caution because other studies have found that experienced teachers tended to be less effective, as measured by student achievement (Harris & Sass, 2007). Therefore, although experienced teachers might be reportedly more efficacious, they are not necessarily more effective.

Research suggests that experienced teachers are more likely to exhibit greater commitment. In a sample of 3,715 teachers, Chan et al. (2008) found a significant relationship between the number of years spent in teaching and teacher commitment, as assessed by self-reported reluctance to leave the profession. Conversely, Hanushek et al. (2004) found that those who displayed low levels of commitment, as defined by their departure from the profession, had very little experience. Similar to young teachers, those with little experience may still be exploring their options in the labor market, while experienced teachers may find it more difficult to move easily to another profession, thus enhancing their "commitment" to the field.

Some research has highlighted the benefit of other professional experience, reasoning that such experience would lead to advanced knowledge through on-the-job experience (Stoddart & Floden, 1995). Haberman (1990) stated that "teacher candidates with greater levels of experience outside of education would be more mature and committed and thus better equipped to deal with the demands of teaching than their younger, traditionally prepared counterparts" (p. 280). Haberman (1990) argued that older, more mature teachers with broader experiences would express stronger commitment to organizational goals (as opposed to egocentric goals), which would lead to more effective teaching. However, a recent study challenged these assumptions. Scribner and Akiba (2010) examined the relationship between the nature and characteristics of teachers' prior experiences and instructional quality, as assessed by their practice of standards-based instruction. Results indicated that career length, number of prior careers, and career relevance to subject area were not related to instructional quality. However, teachers with education-related experience practiced standards-based instruction to a greater degree

than those with no education-related experience. This is not to suggest that experiences outside of education are not beneficial, but assumptions about their value have not been supported by empirical research. No studies have examined the relationship between experiences outside of education and teacher efficacy or commitment.

Effects of School Setting on Teacher Efficacy and Teacher Commitment

Social cognitive theory (Bandura, 1986, 1997) proposes that personal factors (e.g., cognitive skills and attitudes), behavior, and the social environment interact to influence each other through the process of reciprocal determinism. Therefore, it is important to examine the relationships among teacher efficacy beliefs (i.e., personal factors), teacher commitment (i.e., behavior), and school context (i.e., social environment).

In making judgments about efficacy, teachers assess what will be required of them for a given teaching task (Tschannen-Moran et al., 1998). Considerations such as the school setting and subject taught are likely to affect inferences about the difficulty of the task and what it will take to be successful in that context. These perceptions are likely to affect job satisfaction and subsequent desire to continue teaching (Coladarci, 1992; Tschannen-Moran et al., 1998).

Efficacy judgments are based, in part, on teachers' analysis of the teaching tasks to be performed, as well as on their perceived personal capabilities to perform those tasks (Tschannen-Moran & Woolfolk-Hoy, 2001). The context of these teaching tasks greatly influences this analysis and is therefore critical in the development of efficacy beliefs. Teachers may consider elements such as student achievement and motivation, availability of resources, school climate and support. High-need schools are often beset with

challenges such as low academic achievement, discipline problems, limited resources, and a poor sense of community. In a sample of 240 student teachers, Knoblauch and Woolfolk Hoy (2008) found that prospective teachers who completed their training at urban schools reported significantly lower teacher efficacy, compared to those who taught in suburban or rural settings.

The school setting also significantly influences teacher commitment. Research has found that the socioeconomic status of the community in which the school is located, the racial composition of the students and faculty, and student achievement are all predictors of teacher commitment (Park, 2005). Elementary and secondary teachers who work in urban schools are less likely to be committed to their schools than are teachers who work with wealthier students (Park, 2005). Using data from the 1990-2000 SASS and its Teacher Follow-Up Survey, Smith and Ingersoll (2004) found that public school teachers in high-poverty schools were more likely than teachers in medium-poverty schools to leave (16% versus 9%). Weiss (1999) found similar results using a nationally representative sample of first-year teachers from the SASS. New teachers whose students experience economic hardships are less likely to indicate that they would choose teaching as a career again.

The racial composition of the school affects teacher commitment, particularly among Caucasian teachers. Lankford et al. (2002) found that teachers generally left schools where the proportion of non-Caucasian and low-income students was approximately 75% to 100% greater than the schools to which they transferred. Using a sample of 838 teachers in an urban school district, Mueller, Finley, Iverson, and Price (1999) examined the relationship between racial composition (students and faculty) and

teachers' commitment to their schools and to the profession. Results indicated that Caucasian teachers were less likely to report commitment to their schools if they worked in schools where Caucasian teachers and/or Caucasian students were the minority. On the other hand, African American teachers' commitment to their school was not affected by the racial composition of the school. These results were not found with regard to professional commitment, as a weak relationship was found between racial composition and professional commitment. Nonetheless, the findings draw attention to teachers' lack of commitment to urban schools.

Similar to teacher efficacy, research has shown that students' levels of academic achievement affect teacher commitment (Danetta, 2002; Falch & Ronning, 2007). In an analysis of public data on every teacher employed in a New York State public school at any time from 1995-1996 through 2003-2004, Boyd et al. (2005) found that teachers in schools where achievement was low were more likely to transfer or to leave the profession. Hanushek et al. (2004) found clear differences in school transition rates related to student achievement. Almost 20% of teachers in the bottom quartile of school achievement (as assessed by students' test scores) left each year, compared to 15% of teachers in top quartile schools. Johnson and Birkeland (2003) identified student achievement levels as a reason for leaving. This longitudinal interview study of 50 new teachers found that teachers attributed their decisions to move to new schools or out of the profession to their perception that they were not "successful" with their students with regard to achievement.

While these studies certainly underscore the impact of student achievement on teacher commitment and retention, it is important to consider that some negative school-level and student variables are often related to poor student achievement (e.g., lower

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levels of instructional support and student discipline problems; Allensworth et al., 2009).

Therefore, these findings cannot isolate student achievement as the reason for teachers'

departure, but they can highlight it as a related variable.

Chapter Summary

Research on teacher commitment suggests that older, minority, and male teachers

are more slikely to remain in the profession than younger, Caucasian, and female

teachers, respectively (Guarino et al., 2006; NCES, 1997). No identified studies have

examined these demographic characteristics as they might be related to teacher efficacy.

Among the teacher education program admission variables, only work experience has

been significantly related to teacher efficacy. Individuals with more teaching experience

have been significantly more efficacious than preservice teachers (Fives & Buehl, 2010;

Wolters & Daugherty, 2007). GPA has not been reported to be a significant predictor of

teacher efficacy (Chester & Beaudin, 1996), and no identified studies exist on teacher

efficacy as it relates to institution selectivity and coursework. With respect to teacher

commitment, persons with higher undergraduate GPA, degrees from highly selective

undergraduate institutions, and little work experience are less likely to report

commitment to the teaching profession (Bacolod, 2007; Chan et al., 2008; Lankford, et

al., 2002; Podgursky et al., 2004). No identified studies exist on the relationship between

undergraduate coursework and teacher commitment.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter describes the methodology and research design of the study, which examined the qualities of applicants to a preservice teacher education program as they relate to teacher efficacy and teacher commitment. Research questions to guide the exploration are presented. The description of research methodology addresses the sampling procedure and population, instrumentation, and procedures for data collection and analysis.

Research Questions

1. Among applicants to a preservice teacher education program, what qualities are related to teacher efficacy upon completion of the program?

2. Among applicants to a preservice teacher education program, what qualities are related to teacher commitment upon completion of the program?

3. Among applicants to a preservice teacher education program, what qualities do graduates who assume employment in a high-need school possess?

4. Do any differences exist between the on-campus and online preservice teacher education program candidates?

Population and Sample

Graduates from a Master of Arts in Teaching program at a large research university were purposely selected as the units of study, based on criterion-based sampling. The chosen program provides two unique areas of focus to enhance the results of this study. First, the program centers on work with diverse students in urban schools, which is currently a ubiquitous focus in educational institutions and research, given

increasingly diverse student populations. Therefore, it is valuable to assess candidates'
perceptions of their abilities to serve students who have been identified in the literature as
underserved. Second, the program offers both an on-campus and an online program
(nearly identical, aside from the vehicle used to deliver instruction and access teachers).
Given the strong growth and popularity of distance education, this study provides a
unique opportunity to examine candidates who complete the program through this
medium.

Selection criteria of recruited participants were based on completion time of the
program. Twenty-four candidates began the program in April 2009 and 130 began in June
2009; all candidates who stayed on track graduated in June 2010. All of these graduates
were recruited for the study in fall 2010. Participants were recruited from both the on-
campus program and the online program, combining the groups to generate a larger
sample size and to provide the opportunity to examine differences between on-campus
and online graduates.

Students apply to the master's program using the same application for online and
on-campus programs and must meet the same standards to be accepted. Once admitted,
identical courses are required for degree completion and are taught by the same uni-
versity faculty members. Candidates in both programs earn a master's degree in teaching,
and they may elect to earn a teaching credential. Candidates who enroll in the credential
track must pursue one type of credential: Multiple Subjects, Single Subject English,
Single Subject Math, Single Subject Music, Single Subject Science, or Single Subject
Social Science. Regardless of the track or type of credential, all students in the programs
were recruited for participation, as they completed the program together in June.

The program is specifically designed to prepare teachers for diverse students in urban schools, providing candidates with theoretical foundations and teaching strategies for successful entry into the profession. Courses are divided into four broad categories: (a) foundation courses, (b) teaching methods, (c) language and literacy, and (d) supervised field experience. Foundation courses introduce knowledge in sociological and psychological theories and their application in the classroom. Teaching methods courses provide strategies for teaching linguistically and ethnically diverse students in urban schools, focusing on the implementation and assessment of instruction across all content areas. Language and literacy courses highlight current theories for all learners and the application of these concepts in the classroom. Supervised field experiences serve as an essential aspect of the program; candidates are paired with schools close to their residence to learn practical applications of theories and instructional methods from experienced teachers and to complete their student teaching.

Study Variables

The literature lacks studies on the relationships between teacher candidate qualities and teacher efficacy and teacher commitment, despite the recognized importance of these two constructs. Therefore, the researcher chose study variables that could shed light on these relationships, specifically, teacher candidate qualities that could be extracted from program applications.

With respect to the study variables that have been previously examined with teacher efficacy and teacher commitment, such as work experience, those were chosen in an effort to add to the existing literature. Other variables, such as undergraduate major,

that have not have been examined as they relate to teacher efficacy and teacher commitment, were chosen in an effort to address the gap in the literature.

Candidates' applications provided demographic data, including age, gender, and ethnicity, as well as information on candidates' qualifications, which included content GPA, work experience, major, and institution selectivity. These variables served as the independent variables, as discussed below.

Content GPA

Content undergraduate GPA was calculated on a 4.0 scale and utilized as a ratio scale for analysis. All coursework in the subject(s) of each participant's credential was calculated to form a cumulative content GPA. For example, if a participant earned a Single Subject Mathematics credential, all mathematics courses were identified from the participant's transcripts and the total number of grade points was divided by the number of units in those courses. Grade points were calculated by multiplying the value of each grade by the number of units in that course. Grade values were calculated using the following scale: A = 4, A- = 3.7, B+ = 3.3, B = 3, B- = 2.7, C+ = 2.3, C = 2, C- = 1.7, D+ = 1.3, D = 1, D- = 0.7, F = 0. For participants who earned a Multiple Subjects credential, the same procedure was implemented but included the following courses: English, mathematics, social science, science, and fine arts.

Work Experience

This variable was identified through candidates' resumes, which were required as part of the application to the program. The researcher assessed candidates' work experiences in terms of relevance to teaching, such as work in education-related fields, work with children, or other experiences that are presumed to demonstrate capabilities of

succeeding in the field (e.g., service work). Relevance was deemed by the researcher and quantified based on length of time for which candidates held these positions. For example, candidates with 2 years of relevant work experience were scored 2 on this variable.

Major

This variable was based on the subject in which participants had earned an undergraduate degree. If participants had majored in the subject in which they earned their credential, they were scored 2 for this variable; if not, they were scored 1. For example, a participant who had earned a bachelor's degree in English Literature and earned a Single Subject English Credential was scored 2 on this variable. Participants who earned Multiple Subjects Credentials and majored in English, mathematics, science, or social science were scored 2 on this variable.

Institution Selectivity

This variable was based on the acceptance rate of the institution where participants had earned an undergraduate degree. Published by *U.S. News and World Report* (2010), this number indicates the percentage of applicants who are offered admission to the institution.

Teacher Efficacy

This variable was measured via the 22-item version of Gibson and Dembo's (1984) Teacher Efficacy Scale (TES). The TES was the first major attempt to measure teacher efficacy and has remained the standard instrument in the field (Ross, 1994), as well as the most reliable measure of teacher efficacy (Guskey & Passaro, 1994; Tschannen-Moran et al., 1998). Gibson and Dembo (1984) performed a multitrait-

multimethod analysis that supported both convergent and discriminant validity of the scale (see also Woolfolk & Hoy, 1990).

Factor analysis of the instrument yielded two independent dimensions of teacher efficacy: General Teacher Efficacy and Personal Teacher Efficacy (Gibson & Dembo, 1984; Woolfolk & Hoy, 1990), both of which were assessed. The instrument required participants to indicate the degree to which they agreed with various statements. Examples of items for General Teacher Efficacy included "The amount a student can learn is primarily related to family background" and "A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement." Examples of items for Personal Teaching Efficacy included "When a student gets a better grade than he/she usually gets, it is usually because I found better ways of teaching that student" and "When I really try, I can get through to the most difficult students." Participants responded to each item using a 6-point Likert-type scale ranging from *Strongly Disagree* to *Strongly Agree*. High scores for both dimensions reflected high teacher efficacy. Given that general teacher efficacy and personal teacher efficacy represent independent factors, these scores were examined separately. Alpha coefficients of reliability were .80 for Personal Teacher Efficacy and .72 for General Teacher Efficacy.

Teacher Commitment

This dependent variable was measured based on responses to three items: (a) "I am generally satisfied with being a teacher at my current school," (b) Suppose you could start all over, would you become a teacher again?" and (c) "How long do you plan to

remain in teaching?" Each of these questions was used in the SASS 2007-2008 conducted by the NCES. High scores on items reflected greater commitment to teaching.

In addition to these questions, employment status and commitment to high-need schools were examined. Employment status measured whether candidates had sought and attained a PK-12 teaching position after graduation. Participants who had sought employment as a PK-12 teacher were scored 2 on the Sought Employment variable, while those who had not sought employment were scored 1. Participants who had obtained employment as a PK-12 teacher were scored 2 on the Employed variable, while those who had not obtained employment were scored 1. Participants who did not seek or attain employment had an opportunity to provide a free response indicating why such actions or outcomes had not occurred in order for preservice teacher education programs to learn from these experiences.

Commitment to high-need schools was assessed in participants who indicated that they were currently employed as PK-12 teachers at schools that they perceived to be high-need. These participants were prompted to report their degree of commitment to high-need schools via the following question: "How long do you plan to continue teaching in a high-need school?" Higher scores on this item reflected greater commitment to high-need schools.

Data Collection

Two instruments were utilized to address the research questions for this study: (a) candidates' applications for admission to the master's program, and (b) a survey that identified candidates' teacher commitment and their perceived level of teacher efficacy (Appendix A).

The measures of the variables Content GPA, Work Experience, Major, and Institution Selectivity were extracted from candidates' applications. The dependent variables Teacher Efficacy and Teacher Commitment were assessed based on responses to the survey. The Qualtrics Web tool (www.qualtrics.com) was used to distribute the survey and receive and organize data from the survey.

University email addresses of recent graduates from the program were requested from the registrar's office; all candidates who had completed the program in June 2010 were contacted via email in November 2010 and asked to participate. Potential respondents were advised that their participation was voluntary and that their responses would be kept completely confidential. As an incentive to complete the survey, respondents had the option of entering their names for a random drawing for an iPod touch, a $100 Amazon.com gift certificate, or a $50 Amazon.com gift certificate. Participants accessed the survey though a link in the email solicitation (Appendix B). Once participants were identified through completion of the survey, applications for those participants were requested from the program's admissions committee. Surveys were matched with corresponding applications and given identifiers so that no student names were used. After analysis, all documents that matched students to their identifiers were destroyed.

The validity and reliability of this research study were supported in two ways. First, several education professors reviewed the survey instrument in an effort to reduce researcher bias in the wording of the questions. Second, the survey was standardized, with all respondents receiving the same survey with the same questions.

Data Analysis

Percentages and frequencies were calculated for all demographic information and participant qualities, including program type, major, and employment information. Descriptive statistics were computed for the remaining independent variables, including Content GPA, Work Experience, and Institution Selectivity. Mean scores and standard deviations for Teacher Efficacy and the Teacher Commitment variables were calculated.

To address research questions 1 and 2 (*What qualities are related to teacher efficacy and teacher commitment upon completion of the program?*), a linear regression analysis was conducted between each of the measures (Content GPA, Work Experience, Major, and Institution Selectivity) and the outcome variables (Teacher Efficacy and Teacher Commitment) to assess the extent to which each accounted for the variability in participants' efficacy scores and teacher commitment. A multiple regression analysis was run with each of the demographic variables to identify any additional relationships.

Given that research has shown that school settings have an impact on teachers' efficacy beliefs and commitment, *t* tests were conducted between participants who assumed employment in an identified high-need school and those who did not. Efficacy and commitment scores were compared to identify significant differences.

One-way analysis of variance (ANOVA) was performed to address research question 3 ("Do any differences exist between the on-campus and online preservice teacher education program candidates?").

Limitations of the Study

This study has several limitations. First, the response rate for this quantitative survey was too low to make generalizations about the relationship between applicant qualities and teacher efficacy and teacher commitment. Second, the study focused on a

limited number of applicant qualifications, leaving a wide range of unidentified data that could have a large influence on participants' level of teacher efficacy and teacher commitment. Third, research has shown that the teacher efficacy beliefs of beginning teachers typically decline over the course of the first year (Woolfolk-Hoy, 2000). Participants' reported level of teacher efficacy might be inflated when data were collected, as they had not been exposed to all challenges of teaching. Fourth, the study was designed to examine whether candidates sought employment in high-need schools upon completion of the program, but two problems arose with this measurement: (a) Due to budget cuts, available teaching positions in PK-12 settings were relatively scarce at the time of survey distribution; and (b) beginning teachers are often placed in high-need schools. Therefore, candidates' reported employment status might not be reflective of actual intention or desire to assume employment in a high-need school. In response to these impediments, the researcher sought to examine teachers' general commitment to the profession in an effort to obtain an accurate perception of their teacher commitment. Fifth, school settings can have a strong impact on efficacy beliefs and teacher commitment. Teachers who assumed employment in high-need schools or completed teacher training in a high-need school, for example, may have reported lower efficacy than teachers in low-poverty schools. The study took these factors into consideration with regard to the design of the study and in presenting the findings and implications.

Ethical Considerations

Ethical considerations in any study are paramount, and the researcher sought to ensure that a thorough and honest approach was taken. Participants were assured that their identities would be confidential and that the information that they provided would

not be associated with them or their place of employment. The researcher complied with the rules and regulations of the university's Institutional Review Board to ensure that ethical standards were upheld throughout the study. The researcher also took personal experiences and perceptions into consideration to minimize bias.

Chapter Summary

The research design and methodology of this project support exploration of prospective teachers' qualities as they relate to teacher efficacy and teacher commitment. The instruments included participants' admissions applications to a master's-level teaching program and a quantitative survey to measure teacher efficacy and teacher commitment after completion of the program.

CHAPTER 4

RESULTS

This chapter presents the quantitative results to address the research questions:

1. Among applicants to a preservice teacher education program, what qualities are related to teacher efficacy upon completion of the program?

2. Among applicants to a preservice teacher education program, what qualities are related to teacher commitment upon completion of the program?

3. Among applicants to a preservice teacher education program, what qualities do graduates who assume employment in a high-need school possess?

4. Do any differences exist between the on-campus and online preservice teacher education program candidates?

Preliminary Analysis

This section presents the results of descriptive analyses: (a) percentages and frequencies for demographic information and participant qualities (i.e., program type, major, and employment information), (b) descriptive statistics for the remaining independent variables (i.e., Content GPA, Work Experience, and Institution Selectivity), and (c) mean scores and standard deviations for the variables Teacher Efficacy and Teacher Commitment.

The population of this study was preservice teachers who attended the identified on-campus or online preservice teacher education program. There were 58 participants (79.3% male, 20.7% female), for a 38% response rate. Although the ages of participants were widely distributed from early 20s through 50s, the distribution was skewed to students in their early and mid-20s. The majority (62.0%) were Caucasian; other races

included Asian (12.1%), Hispanic (12.1%), and African American (1.7%). These results are presented in Table 1.

Approximately two thirds (65.5%) of the participants were enrolled in the online program and 31% in the on-campus program. Distribution by credential type was as follows: Multiple Subjects Credential 37.9%, Single Social Science Credential 24.1%, Single English Credential 10.3%, Single Science Credential 12.1%, Single Music Credential 3.5%, Single Mathematics Credential 1.7%, and no credential 3.5%. Nearly half of the participants (46.5%) majored in the subject in which they earned their credential, while almost one quarter (22.4%) did not do so. The majority of the participants (82.8%) sought employment after graduating from the preservice teacher education program, and over half (58.6%) became teachers. Among these teachers, 32.8% became teachers in high-need schools. These results are presented in Table 2.

Participants who had not sought employment were prompted to respond to the following item: "Please explain why you did not seek employment as a PK-12 teacher after completion of the program." Content analysis of the responses resulted in two categories: Two had accepted another job opportunity—inspirational speaker and educational researcher—and four had experienced a life event that had affected their ability to seek employment (i.e., had a baby, "other things came up," went back to school, moved to another state).

Of the 48 participants who had sought employment, 13 had not obtained employment. They were asked to response to the following item: "Please explain why you believe that you did not attain employment as a PK-12 teacher." Content analysis of the responses showed that the majority of these participants ($n = 10$) attributed their

Table 1

Demographic Variables for All Participants

Variable	n	%
Gender		
Female	46	79.3
Male	12	20.7
Age (years)		
20	1	1.7
21	3	5.2
22	11	19.0
23	7	12.1
24	11	19.0
25	5	8.6
26	4	6.9
27	1	1.7
28	1	1.7
29	1	1.7
30	1	1.7
31	2	3.5
32	2	3.5
35	1	1.7
37	1	1.7
39	2	3.5
42	1	1.7
55	1	1.7
57	1	1.7
Missing	1	1.7
Ethnicity		
African American	1	1.7
Asian	7	12.1
Hispanic	7	12.1
Caucasian	36	62.0
Unknown	7	12.1

Table 2

Percentages and Frequencies for Program Type, Major, Employment, and Type of Teacher for All Participants

Variable	*n*	%
Mode of instruction		
On campus	18	31.0
Online	38	65.5
Missing	2	3.5
Credential type		
Multiple Subjects	22	37.9
Single English	6	10.3
Single Mathematics	1	1.7
Single Music	2	3.5
Single Science	7	12.1
Single Social Science	14	24.1
No credential	2	3.5
Major in credential		
Yes	27	46.5
No	13	22.4
Not applicable	16	27.6
Missing	2	3.5
Sought employment		
Yes	48	82.8
No	6	10.3
Missing	4	6.9
Employed as a teacher		
Yes	34	58.6
No	13	22.4
Missing	11	19.0
Type of teacher		
High-need	19	32.8
Not high-need	15	25.9
Missing	24	41.3

inability to obtain employment to a lack of open positions due to budget constraints. Two indicated that they did not obtain employment for internal reasons: "interview skills need improving" and failure to gain certification in time to apply for positions. One participant reported being laid off shortly after being hired "without any explanation."

Descriptive statistics, including means, standard deviations, and minimums and maximums for the other independent variables are summarized in Table 3. Content GPA was 3.26, which is a B+ average; Work Experience illustrated that the average number of years of related experience was 2.54; and Institution Selectivity revealed that the average acceptance rate among participants' undergraduate institutions was 54.06%.

Table 3

Descriptive Statistics of Independent Variables for All Participants

Candidate qualities	N	M	SD	Minimum	Maximum
Content grade point average (GPA)	44	3.26	0.47	1.96	4.00
Work experience	44	2.54	4.72	0.00	34.00
Institution selectivity	44	54.06	20.66	21.50	88.70

Descriptive statistics, including means, standard deviations, and minimums and maximums, for Teacher Efficacy are summarized in Table 4. Only participants who indicated that they were currently employed as teachers were allowed to answer the Teacher Efficacy items, resulting in a lower sample size.

Table 4

Descriptive Statistics of Teacher Efficacy for All Teachers

Teacher efficacy	*N*	*M*	*SD*	Minimum	Maximum
General teacher efficacy	34	2.70	0.69	1.40	4.40
Personal teacher efficacy	33	2.37	0.59	1.23	3.69

Frequencies and percentages for items in the Teacher Commitment variable are summarized in Table 5. The Teacher Commitment items were (a) I am generally satisfied with being a teacher at my current school, (b) Suppose you could start all over, would you become a teacher again? and (c) How long do you plan to remain in teaching? As with Teacher Efficacy, only participants who indicated that they were currently employed as teachers were allowed to answer the Teacher Commitment items, resulting in a lower sample size. Among these teachers, the majority *strongly agreed* that they were satisfied with being a teacher (58.8%); expressed certainty that they would become a teacher again (73.5%); and indicated that they would remain in teaching for as long as they were able (70.6%).

Research Question 1

Research question 1 asked, *Among applicants to a preservice teacher education program, what qualities are related to teacher efficacy upon completion of the program?* A multiple regression analysis was conducted on the demographic variables to examine how the observed dependent variable (i.e., Teacher Efficacy) changed when any

Table 5

Teacher Commitment Items for All Teachers

Question	Response	f	%
Satisfaction with being a teacher	Strongly agree	20	58.8
	Somewhat agree	10	29.4
	Somewhat disagree	4	11.8
	Strongly disagree	0	0.0
Becoming a teacher again	Certainly	25	73.5
	Probably	7	20.6
	Even for and against	1	2.9
	Probably not	1	2.9
	Certainly not	0	0.0
Remaining in teaching	As long as I am able	24	70.6
	Until an event occurs	5	14.7
	Until a job opportunity comes	1	2.9
	Definitely plan to leave	0	0.0
	Undecided at this time	4	11.8

independent variable changed and other independent variables were held fixed. The independent variables in the multiple regression analysis were Age, Gender, and Ethnicity. Their relationships to General Teacher Efficacy and Personal Teacher Efficacy were examined. A linear regression analysis was conducted for the other independent variables—Content GPA, Work Experience, Major, and Institution Selectivity—focusing on each independent variable's relationship to the observed dependent variables General Teacher Efficacy and Personal Teacher Efficacy.

Table 6 summarizes the results of the multiple regression analysis on the relationship between Personal Teacher Efficacy and the demographic variables. Results

Table 6

Multiple Regression Results Predicting Personal Teacher Efficacy

Measure	β	Beta	*t*	*p*
Constant	3.145		6.477	.000
Age	-0.020	-0.307	-1.539	.137
Gender	0.281	0.218	1.080	.291
Ethnicity	-0.229	0.142	-1.614	.120
R^2	0.200			

Note. Dependent variable = Personal Teacher Efficacy.

indicated that Age (β = -0.020, *p* = .137), Gender (β = 0.281, *p* = .291), and Ethnicity (β = -0.229, *p* = .120) were not significant predictors of Personal Teacher Efficacy. This indicated that none of these variables influenced participants' level of Personal Teacher Efficacy upon completion of the program. The R^2 model indicated that the demographic variables predicted 20% of Personal Teacher Efficacy among the preservice teachers.

Table 7 summarizes the results of the linear regression analysis on the relationships between Personal Teacher Efficacy and Content GPA, Work Experience, Major, and Institution Selectivity. Results indicated that Content GPA (β = -0.096, *p* = .722), Work Experience (β = -0.018, *p* = .298), Major (β = -0.217, *p* = .424), and Institution Selectivity (β = -0.005, *p* = .373) were not significant predictors of Personal Teacher Efficacy. This indicated that none of these variables was related to participants'

Table 7

Linear Regression Results Predicting Personal Teacher Efficacy

Measure	β	Beta	*t*	*p*
Constant	2.769		3.124	.004
Content GPA	-0.096	-0.072	-0.360	.772
Adjusted R^2	.005			
Constant	2.385		20.321	.000
Work Experience	-0.018	-0.193	-1.061	.298
Adjusted R^2	.370			
Constant	2.832		6.571	.000
Major	-0.217	-0.198	0.819	.424
Adjusted R^2	.036			
Constant	2.666		8.131	.000
Institution Selectivity	-0.005	-0.166	-0.905	.373
Adjusted R^2	.027			

Note. Independent variables = Content Grade Point Average (GPA), Work Experience, Major, and Institution Selectivity; dependent variable = Personal Teacher Efficacy.

level of Personal Teacher Efficacy upon completion of the preservice teacher education program.

General Teacher Efficacy was examined with the same demographic variables and independent variables. Table 8 summarizes the results of a multiple regression analysis on the relationship between General Teacher Efficacy and the demographic variables. Age (β = -0.036, *p* = .020) significantly predicted General Teacher Efficacy at the significance level of .05: Younger preservice teachers presented higher General Teacher Efficacy than their older counterparts (*r* = .371, *p* < .05). Sociocultural theory might suggest that this difference is due to life experiences. The majority of participants

Table 8

Multiple Regression Results Predicting General Teacher Efficacy

Measure	β	Beta	t	p
Constant	4.134		7.594	.000**
Age	-0.036	-0.475	-2.482	.020
Gender	0.135	0.090	0.465	.646
Ethnicity	-0.255	0.297	-1.602	.122
R^2	.265			

Note. Independent variables = Content Grade Point Average (GPA), Work Experience, Major, and Institution Selectivity; dependent variable = Personal Teacher Efficacy.

*p < .05. **p < .01.

had been out of college for less than 2 years. Therefore, the functions required of a student were relatively familiar to them. This foundation may have allowed these younger students to advance their learning via the provided instruction more fully. Older adults, who may have been out of school for a number of years, may have found it more challenging to internalize new information and support development of complex skills and knowledge necessary for teaching. Younger adults are generally more computer knowledgeable than older adults, which may have affected the learning outcomes of the online participants.

Gender (β = 0.135, *p* = .646) and Ethnicity (β = -0.255, *p* = -1.602) were not significant predictors of General Teacher Efficacy of preservice teachers. The R^2 model

indicated that the demographic variables predicted 26.5% of General Teacher Efficacy among the preservice teachers.

Table 9 summarizes results of the linear regression analysis on the relationships between General Teacher Efficacy and Content GPA, Work Experience, Major, and Institution Selectivity. Results indicated that Content GPA (β = 0.104, p = .751), Work Experience (β = -0.022, p = .260), Major (β = 0.165, p = .577), and Institution Selectivity (β = -0.006, p = .387) were not significant predictors of General Teacher Efficacy in preservice teachers. This indicated that none of these variables influenced participants' General Teacher Efficacy upon completion of the program.

Research Question 2

Research question 2 asked, *Among applicants to a preservice teacher education program, what qualities are related to Teacher Commitment upon completion of the program?* A multiple regression analysis was conducted to investigate the relationship between demographic variables—Age, Gender, and Ethnicity—and the Teacher Commitment outcome variables. A linear regression analysis was conducted between each of the independent variables—Content GPA, Work Experience, Major, and Institution Selectivity—and the Teacher Commitment outcome variables. The outcome variables items were (a) I am generally satisfied with being a teacher at my current school, (b) Suppose you could start all over, would you become a teacher again? and (c) How long do you plan to remain in teaching?

Table 9

Linear Regression Results Predicting General Teacher Efficacy

Measure	β	Beta	t	p
Constant	2.395		2.216	.036
Content GPA	0.104	0.063	0.321	.751
Adjusted R^2	.004			
Constant	2.738		21.195	.000
Work Experience	-0.022	-0.205	-1.147	.260
Adjusted R^2	.042			
Constant	2.480		5.254	.000
Major	0.165	0.133	0.568	.577
Adjusted R^2	.018			
Constant	3.053		8.107	.000
Institution Selectivity	-0.006	0.006	-0.878	.387
Adjusted R^2	.025			

Note. Independent variables = Content Grade Point Average (GPA), Work Experience, Major, and Institution Selectivity; dependent variable = Personal Teacher Efficacy.

Table 10 summarizes the results of the multiple regression analysis on the relationships between Item 1 and the demographic variables. According to the results of the multiple regression analysis, Age (β = -0.024, *p* = .104), Gender (β = -0.144, *p* = .605), and Ethnicity (β = -0.066, *p* = .653) did not significantly predict general satisfaction with being a teacher among participants. This suggests that none of these demographic variables influenced preservice teachers' subsequent satisfaction level with employment as a teacher. The R^2 model indicated that the demographic variables predicted 10.2% of teacher satisfaction among the participants.

Table 10

Multiple Regression Results Predicting Question 1

Measure	β	Beta	*t*	*p*
Constant	1.650		1.442	.163
Age	-0.024	-0.350	-1.686	.104
Gender	-0.144	-0.107	-0.524	.605
Ethnicity	-0.066	-0.091	-0.456	.653
R^2	.102			

Note. Dependent variable = Question 1: "I am generally satisfied with being a teacher at my current school."

Table 11 summarizes the results of the linear regression analyses on the relationships between Item 1 (i.e., I am generally satisfied with being a teacher at my current school) and Content GPA, Work Experience, Major, and Institution Selectivity. Results of the linear regression analysis indicated that Content GPA (β = 0.147, p = .587), Work Experience (β = -0.007, p = .732), Major (β = -0.045, p = .883), and Institution Selectivity (β = -0.007, p = .264) did not predict preservice teachers' level of satisfaction with being a teacher. This indicated that none of these independent variables influenced participants' fulfillment of their role as a teacher.

Table 12 summarizes the results of the multiple regression analysis on the relationship between the Item 2 (i.e., Suppose you could start all over, would you become a teacher again?) and the demographic variables. Results indicated that Age (β = -0.008,

Table 11

Linear Regression Results Predicting Question 1

Measure	β	Beta	*t*	*p*
Constant	0.941		1.051	.303
Content GPA	0.147	0.107	0.550	.587
Adjusted R^2	.011			
Constant	1.492		10.823	.000
Work Experience	-0.007	-0.063	-0.345	.732
Adjusted R^2	.004			
Constant	1.545		3.164	.005
Major	-0.045	-0.034	-0.149	.883
Adjusted R^2	.041			
Constant	1.881		5.304	.000
Institution Selectivity	-0.007	-0.204	-1.139	.264
Adjusted R^2	.041			

Note. Independent variables = Content Grade Point Average (GPA), Work Experience, Major, and Institution Selectivity; dependent variable = Question 1: "I am generally satisfied with being a teacher at my current school."

$p = .627$), Gender (β = 0.210, $p = .484$), and Ethnicity (β = 0.101, $p = .523$) were not significant predictors of preservice teachers' assumption of becoming a teacher again. This indicates that none of these demographic variables influenced whether participants would choose to become a teacher again if they could start all over. The R^2 model indicated that the demographic variables predicted 7.7% of participants' decisions to become teachers again.

Table 13 summarizes the results of the linear regression analysis on the relationships between Item 2 (i.e., Suppose you could start all over, would you become a teacher

Table 12

Multiple Regression Results Predicting Question 2

Measure	β	Beta	*t*	*p*
Constant	1.322		2.360	.026*
Age	-0.008	-0.104	-0.493	.627
Gender	0.210	0.148	0.711	.484
Ethnicity	0.101	0.131	0.648	.523
R^2	.077			

Note. Dependent variable = Question 2: "Suppose you could start all over; would you become a teach again?"

p < .05.

again?) and Content GPA, Work Experience, Major, and Institution Selectivity. Results indicated that Content GPA (β = 0.657, *p* = .026) was a significant predictor of preservice teachers' assumptions on becoming teachers again. As preservice teachers had higher Content GPA, they held stronger assumptions on this item.

The conceptual framework of labor market theory would suggest that teachers with higher content GPA would actually be less likely to report this possibility (Ehrenberg & Smith, 1997). Based on the assumption that these teachers possess higher abilities, their opportunity costs are, therefore, higher. Teachers whose opportunity costs outweigh rewards gained from teaching are less likely to remain in the profession (Guarino et al., 2006).

Table 13

Linear Regression Results Predicting Question 2

Measure	β	Beta	*t*	*p*
Constant	-0.862		-0.926	.363
Content GPA	0.657	0.421	2.368	.026*
Adjusted R^2	.177			
Constant	1.405		9.684	.000
Work Experience	-0.009	-0.977	-0.423	.675
Adjusted R^2	.006			
Constant	1.436		2.484	.023
Major	-0.036	-0.023	-0.101	.921
Adjusted R^2	.001			
Constant	1.474		3.873	.001
Institution Selectivity	-0.002	-0.050	-0.277	.784
Adjusted R^2	.003			

Note. Independent variables = Content Grade Point Average (GPA), Work Experience, Major, and Institution Selectivity; dependent variable = Question 2: "Suppose you could start all over; would you become a teach again?"

*p < .05.

Results of the linear regression analysis indicated that Work Experience (β = -0.009, *p* = .675), Major (β = -0.036, *p* = .921), and Institution Selectivity (β = -0.002, *p* = .784) were not significant predictors of preservice teachers' assumptions on becoming teachers again. This indicated that none of these independent variables was related to participants' decisions to choose teaching as their profession again.

Table 14 summarizes the results of a multiple regression analysis of the relationship between Item 3 (i.e., How long do you plan to remain in teaching?) and the

Table 14

Multiple Regression Results Predicting Question 3

Measure	β	Beta	*t*	*p*
Constant	2.162		1.991	.058
Age	-0.015	-0.109	-0.509	.615
Gender	0.464	0.173	0.822	.419
Ethnicity	-0.157	-0.109	-0.529	.601
R^2	.052			

Note. Dependent variable = Question 3: "How long do you plan to remain in teaching?"

demographic variables. Results of the multiple regression analysis indicated that Age

($\beta = -0.015$, $p = .615$), Gender ($\beta = 0.464$, $p = .419$), and Ethnicity ($\beta = -0.157$, $p = .601$)

were not significant predictors of how long preservice teachers planned to remain in

teaching. This indicated that none of these demographic variables influenced participants'

hypothetical decisions to remain in the profession.

Table 15 summarizes the results of a linear regression analysis on the relation-

ships between Item 3 (i.e., How long do you plan to remain in teaching?) and Content

GPA, Work Experience, Major, and Institution Selectivity. Results indicated that Content

GPA ($\beta = 0.646$, $p = .224$), Work Experience ($\beta = -0.017$, $p = .680$), Major ($\beta = 0.409$,

$p = .522$), and Institution Selectivity ($\beta = -0.007$, $p = .582$) were not significant predictors

of participants' intentions to remain in teaching. This indicated that none of the independ-

ent variables influenced preservice teachers' intentions to continue to teach.

Table 15

Linear Regression Results Predicting Question 3

Measure	β	Beta	*t*	*p*
Constant	-0.611		-0.351	.728
Content GPA	0.646	0.237	1.245	.224
Adjusted R^2	.056			
Constant	1.775		6.409	.000
Work Experience	-0.017	-0.076	-0.416	.680
Adjusted R^2	.006			
Constant	1.091		1.081	.293
Degree	0.409	0.148	0.650	.522
Adjusted R^2	.022			
Constant	2.099		2.900	.007
Institution Selectivity	-0.007	-0.101	-0.557	.582
Adjusted R^2	.010			

Note. Independent variables = Content Grade Point Average (GPA), Work Experience, Major, and Institution Selectivity; dependent variable = Question 3: "How long do you plan to remain in teaching?"

Research Question 3

Research question 3 asked, *Among applicants to a preservice teacher education program, what qualities do graduates who assume employment in high-need schools possess?* Descriptive analyses were conducted in order to answer this question, including: (a) percentages and frequencies for demographic information and independent variables (i.e., Age, Gender, Ethnicity, Mode of Instruction, Credential Type, Major, Content GPA, Work Experience, and Institution Selectivity) and (b) mean scores and standard deviations for the variables Teacher Efficacy and Teacher Commitment.

Nearly one third (32.8%) of the participants who sought employment became high-need teachers. Among these high-need teachers, the majority were female (63.2%) and in their 20s (78.9%). Nearly half of the high-need teachers were Caucasian (47.3%), followed by Hispanic (15.8%), Asian (10.5%), and African American (5.3%). Almost two thirds of these participants (57.9%) had been enrolled in the online program and 42.1% in the on-campus program. Over half of the high-need teachers had earned a Multiple Subjects Credential (52.6%), followed by Social Science Credential (21.0%) and Single English Credential or a Single Mathematics Credential (5.3% each). An equal proportion of the participants (42.1%) had earned an undergraduate degree in a major that corresponded to the credential they had earned in the preservice teacher education program. These results are presented in Table 16.

A profile of high-need teachers indicated that they were relatively similar to the full sample with respect to demographic variables, Program Type, and Major. The majority of high-need teachers were Caucasian females in their early or mid-20s who had completed the online teacher education program and had earned a Multiple Subjects Credential. However, a few noteworthy patterns emerged between the two groups.

Comparison of the two groups in terms of percentage difference in gender showed less difference among high-need teachers (36.8% male; 63.2% female) than among all participants (20.7% and 79.3%, respectively). The percentage of males who became high-need teachers was much higher than the corresponding percentage for the females in the total sample (58.3% and 26.1%, respectively). In other words, more male participants than female participants became high-need teachers. This finding is surprising,

Table 16

Percentages and Frequencies for Demographic Variables, Program Type, and Major for High-Need Teachers Only

Variable	*n*	%
Gender		
Female	12	63.2
Male	7	36.8
Age (years)		
21	1	5.3
22	5	26.2
23	3	15.8
24	2	10.5
25	2	10.5
26	1	5.3
28	1	5.3
31	2	10.5
39	1	5.3
Missing	1	5.3
Ethnicity		
African American	1	5.3
Asian	2	10.5
Hispanic	3	15.8
Caucasian	9	47.3
Missing	4	21.1
Mode of instruction		
On campus	8	42.1
Online	11	57.9
Credential type		
Multiple Subjects	10	52.6
Single English	1	5.3
Single Mathematics	1	5.3
Single Social Science	4	21.0
No credential	3	15.8
Major in credential		
Yes	8	42.1
No	8	42.1
Missing	3	15.8

considering that there are 3 times as many female teachers than male teachers in high-need schools (75.8% and 25.1%, respectively), which is approximately the same proportion in the overall teacher population (75.2% female, 24.8% male; NCES, 2006). Among the numerous challenges to high-need schools, crime and violence are two notable ones that could deter many prospective teachers. Sociocultural theory might suggest that men are less fearful of these challenges than women, which may have contributed to their willingness to assume employment in these environments.

A similar pattern was seen regarding ethnicity. The majority of high-need teachers were Caucasian, followed by Hispanic, Asian, and African American (the same order as the full sample). However, the percentage of participants who became high-need teachers among graduates of color was notable. While 25% of Caucasian participants became high-need teachers, 42.9% of Hispanic participants, 100% of African American participants ($n = 1$), and 28.6% of Asian participants became high-need teachers.

In line with sociocultural theory as well, researchers have suggested that minority teachers are better suited to work in high-need schools because they possess a greater understanding of the life conditions with which these students are confronted daily (McKinney et al.; Villegas, 2007). Some of the minority teachers may have endured similar challenges to those faced by the students in these schools and may possess a desire to serve them. Additionally, minority teachers are more comfortable in these environments than Caucasian teachers, who have likely not had as much exposure to diverse students (Haberman, 1996). This familiarity and understanding may have led

more minority teachers to assume employment in high-need schools than Caucasian teachers.

Third, although the majority (57.9%) of high-need teachers had been enrolled in the online program, the percentage of all online graduates who became high-need teachers is much lower (28.9%), when compared to the percentage of all on-campus graduates who became high-need teachers (44.4%). The higher number of online participants (*n*=38 online; *n*=18 on-campus) may have influenced the higher number of high-need teachers who completed the online program, but it is important to note this difference, as it dilutes the presumption that more online graduates became high-need teachers. When in fact, a greater percentage of on-campus graduates became high-need teachers, as mentioned, which has implications that will be discussed in Chapter 5.

Descriptive statistics, including means, standard deviations, and minimums and maximums for the other independent variables are summarized in Table 17. The average Content GPA was 3.31, which is nearly the same as the full sample (3.26); The average number of years of related work experience was 2.22 years, which was slightly lower then the full sample (2.54); and the average acceptance rate among participants' undergraduate institutions was 49.41, which is slightly lower than the full sample (54.06).

Descriptive statistics, including means, standard deviations, and minimums and maximums, for Teacher Efficacy are summarized in Table 18.

A series of paired *t* tests was conducted to compare Teacher Efficacy scores for participants who had assumed employment in an identified high-need school and those who had not. No significant differences in mean scores for Personal Teacher Efficacy and

General Teacher Efficacy were: Personal Teacher Efficacy, $t(31) = 0.521$, $p = .476$;

General Teacher Efficacy, $t(31) = 0.199$, $p = .726$.

Table 17

Descriptive Statistics of Independent Variables for High-Need Teachers Only

Candidate qualities	*N*	*M*	*SD*	Minimum	Maximum
Content grade point average (GPA)	16	3.31	0.50	1.o6	4.00
Work experience	18	2.22	1.77	0.00	6.00
Institution selectivity	17	49.41	20.84	21.50	80.90

Table 18

Descriptive Statistics of Teacher Efficacy for High-Need Teachers Only

Teacher efficacy	*N*	*M*	*SD*	Minimum	Maximum
General teacher efficacy	19	2.67	0.62	1.40	3.70
Personal teacher efficacy	19	2.41	0.64	1.23	3.69

Frequencies and percentages for items in the Teacher Commitment variable are summarized in Table 19. The Teacher Commitment items were (a) I am generally satisfied with being a teacher at my current school, (b) Suppose you could start all over, would you become a teacher again? and (c) How long do you plan to remain in teaching? Among these teachers, the majority *strongly agreed* that they were satisfied with being a

teacher (57.9%); expressed certainty that they would become a teacher again (78.9%);

and indicated that they would remain in teaching for as long as they were able (73.7%).

Table 19

Teacher Commitment Items for High-Need Teachers Only

Question	Response	f	%
Satisfaction with being a teacher	Strongly agree	11	57.9
	Somewhat agree	5	26.3
	Somewhat disagree	3	15.8
	Strong disagree	0	0.0
Becoming a teacher again	Certainly	15	78.9
	Probably	3	15.8
	Even for and against	0	0.0
	Probably not	1	5.3
	Certainly not	0	0.0
Remaining in teaching	As long as I am able	14	73.7
	Until an event occurs	2	10.5
	Until a job opportunity comes	0	0.0
	Definitely plan to leave	0	0.0
	Undecided at this time	3	15.8

A series of paired *t* tests was conducted to measure differences in Teacher

Commitment scores between participants who had assumed employment in an identified

high-need school and those who had not. Scores on items 10 through 12 were compared.

Results showed no significant differences between groups in mean scores for these items:

Item 10, $t(32) = 1.046$, $p = .341$; Item 11, $t(32) = 0.048$, $p = .828$; Item 12, $t(32) = 0.867$,

$p = .359$.

Participants who indicated that they were high-need teachers were asked to answer an additional question: "How long do you plan to continue teaching in a high-need school?" Of these 19 participants, the majority (47.4%) indicated that they planned to continue teaching in a high-need school for only 0-2 years; more than one quarter (26.3%) indicated that they planned to continue to teach in a high-need school until retirement. The rest of participants indicated that they intended to continue working as a high-need teacher for 5-10 years (21%) or 2-5 years (5.3%). These results are presented in Table 20. Although nearly three-quarters indicated that they would remain in teaching for as long as they were able, nearly half indicated that they would remain at their current school for 0-2 years.

Table 20

Teacher Commitment to High-Need Schools

Question	Response	f	%
How long do you plan to remain at your current school?	0-2 years	9	47.4
	2-5 years	1	5.3
	5-10 years	4	21.0
	10+ years	0	0.0
	Until retirement	5	26.3

Research Question 4

Research question 4 asked, *Do any differences exist between the on-campus and online preservice teacher education program candidates?* ANOVA was conducted to

measure differences between candidates who had completed an on-campus program and candidates who had completed an online program on the following variables: Content GPA, Work Experience, Major, Institution Selectivity, Personal Teacher Efficacy, General Teacher Efficacy, and Teacher Commitment (Items 10 through 12). No significant differences were found between groups: Content GPA $F(1,41) = 0.832$, $p > .05$, Work Experience $F(1,49) = 0.904$, Major $F(1,33) = 0.013$, Institution Selectivity $F(1,48) = 0.582$, Personal Teacher Efficacy $F(1,32) = 1.216$, General Teacher Efficacy $F(1,33) = 0.367$, Item 10 $F(1,32) = 0.039$, Item 11 $F(1,32) = 1.287$, and Item 12 $F(1,32) = .631$; all probabilities were $> .05$.

Chapter Summary

Results of the regression analyses indicated that age was a significant predictor of General Teacher Efficacy and that Content GPA was a significant predictor of teacher commitment. Specifically, younger preservice teachers presented higher General Teacher Efficacy than their older counterparts. Preservice teachers who had higher Content GPA held stronger assumptions that they would become a teacher again if they could start all over. One-way ANOVA results indicated no significant differences between the online and on-campus groups in terms of the identified variables.

Previous research on teacher efficacy and teacher commitment was not supported by the present study. Research has shown that teaching experience is positively related to teacher efficacy (Fives & Buehl, 2010; Wolters & Daugherty, 2007); however, the present study did not find any relationship between Work Experience and Teacher Efficacy. No other studies have examined the relationship between Teacher Efficacy and the identified variables.

With respect to teacher commitment, research has found that persons with higher GPAs are less likely to report commitment to the teaching profession; however, the aforementioned finding that participants with higher content GPA reported higher teacher commitment contradicts this assumption. Research has also found that older, minority, and male teachers are more likely to remain in the profession than younger, Caucasian, and female teachers, respectively (Guarino et al., 2006; NCES, 1997). Persons with degrees from highly selective undergraduate institutions and with little work experience are less likely to report commitment to the teaching profession (Bacolod, 2007). However, this study cannot support any of these findings, as no relationships were found between any of these variables and teacher commitment. No identified studies have examined the relationship between coursework and teacher commitment.

CHAPTER 5

FINDINGS, CONCLUSIONS, AND IMPLICATIONS

This study examined qualities of applicants to a preservice teacher education program that were related to teacher efficacy and teacher commitment upon completion of the program. This chapter provides an overview of the study, a review of the findings, conclusions based on the findings, implications regarding the issues raised in the research, and suggestions for future research.

Summary of the Study

There is a critical shortage of qualified teachers in high-need schools (Barnes et al., 2007). Many teachers either elect to work in more desirable areas or leave the profession in the first few years of service (Ingersoll, 2003). The effects of this turnover is to inhibit the ability of schools to provide an equitable education for all students (NCTAF, 2003).

While teachers' lack of commitment to the profession can be attributed to several factors, research has highlighted the role of *teacher efficacy* as an influential factor in teachers' decision to remain in the field (Ware & Kitsantas, 2007). Highly efficacious teachers are more likely to persist in the face of obstacles (Poulou & Norwich, 2002), exhibit greater job satisfaction, and ultimately remain in the profession (Caprara et al., 2003). While extensive research has focused on the characteristics of novice and experienced teachers related to teacher efficacy, very few studies have examined characteristics and qualifications of prospective teachers before they begin a teacher education program, highlighting the importance for this exploration.

These efforts are constructive, given the relationship between teacher efficacy and teacher commitment, but much remains unknown about the relationship between prospective teachers' qualities and subsequent intention to begin and remain in the teaching profession, particularly in high-need schools. The majority of studies that highlight the relationship between teacher efficacy and teacher commitment do not distinguish the school settings in which teachers are reporting their professional commitment. Therefore, less is known about the qualifications of teachers who seek and maintain employment in high-need schools. Also, little is known about factors related to these constructs when teacher candidates complete online preservice teacher education programs, which are becoming increasingly popular.

In an effort to identify applicant qualities that are related to teacher efficacy and based on the desire to serve and commit to high-need schools as a result of participation in an on-campus or online preservice teacher education program, the present study was an attempt to identify qualities that were most related to these outcomes. Applicant qualities such as academic background and professional experience were extrapolated from applicants' applications, and a survey administered after graduation was used to establish applicants' levels of teacher efficacy and teacher commitment. Regression analyses were conducted between each of the applicant qualities and teacher efficacy and teacher commitment in order to identify relationships.

Findings

Results of the regression analyses demonstrated that Gender, Ethnicity, Content GPA, Work Experience, Major, and Institution Selectivity were not significant predictors of Personal Teacher Efficacy or General Teacher Efficacy. While Age also did not

predict Personal Teacher Efficacy, it significantly predicted General Teacher Efficacy: Younger preservice teachers reported higher General Teacher Efficacy than did their counterparts.

Regarding Teacher Commitment, results of the regression analyses demonstrated that Age, Gender, Ethnicity, Content GPA, Work Experience, Major, and Institution Selectivity did not significantly predict general satisfaction with being a teacher (Item 1). Regression analyses results indicated that Age, Gender, Ethnicity, Work Experience, Major, and Institution Selectivity—were not significant predictors of preservice teachers' assumptions about becoming teachers again (Item 2); however, Content GPA was a significant predictor of this assumption: Preservice teachers who had higher content GPA reported stronger beliefs that they would become teachers again.

Results of the regression analyses on how long preservice teachers planned to remain in teaching (Item 3) indicated that Age, Gender, Ethnicity, Content GPA, Work Experience, Major, and Institution Selectivity were not significant predictors of this outcome.

Additionally, t tests indicated no significant mean differences in Personal Teacher Efficacy, General Teacher Efficacy, and Teacher Commitment between teachers who were employed at high-need schools and those who were not employed in these schools.

Finally, ANOVA results indicated no significant differences between online and on-campus groups in terms of the identified variables. Participants in both groups entered the preservice teacher education program with similar qualifications and reported similar outcomes upon graduation with respect to teacher efficacy and teacher commitment.

Conclusions

This exploratory study found that Age was a significant predictor of General Teacher Efficacy and Content GPA was a significant predictor of Teacher Commitment. No significant mean differences were found between teachers who were employed at high-need schools and those who were employed at traditional schools. And no differences were found between online and on-campus students with respect to these outcomes.

As discussed in Chapter 2, *general teacher efficacy* refers to the extent to which teachers believe that students can be taught, given environmental factors (Gibson & Dembo, 1984). Considering the presumably limited experience that younger participants possessed, it is surprising that these preservice teachers reported higher general teacher efficacy than older participants. Studies have shown that teachers with less teaching experience report lower teacher efficacy than those with more experience (Fives & Buehl, 2010; Wolters & Daugherty, 2007). However, this finding provides only a loose comparison, given that age does not necessarily correlate with experience. No identified studies have examined the relationship between age and teacher efficacy. Therefore, such assumptions should be considered with caution.

One such assumption is related to life experience and sociocultural theory. Younger participants are presumably more familiar with being students and understanding the responsibilities and functions that are required to learn effectively in formal educational settings. This familiarity may have allowed these younger participants to benefit more fully from the mediated instruction in the program, resulting in development of higher-order functions, preparation for service, and subsequently, higher general teacher efficacy. While the majority of participants were in their 20s, almost one-

third were between the ages of 30 and 57. It is likely that these individuals were in the midst of career changes, which may have been influenced by the poor economy and high number of layoffs at the time. The work experiences of these older individuals could have differed drastically from teaching and therefore influenced their beliefs in their abilities to effectively teach students.

The life experiences that participants brought to the learning context may have affected their teacher efficacy as well. Older adults are presumed to have richer, more extensive life experiences that lead to greater awareness of the world around them and its inherent challenges. Given the nature of general teacher efficacy, this awareness may include recognition of the difficulty of teaching students while overcoming obstacles of environmental factors. Older participants might, therefore, initially report teaching as more challenging, as they have had more exposure to the power of these obstacles. Younger participants might be naïve and not have strong conceptions regarding the difficulty of this feat, and therefore report higher efficacy.

Changes in efficacy are also important to note. Teachers' reported sense of efficacy for teaching increases during preservice teacher education programs and student teaching (Hoy & Woolfolk, 1990; Knoblauch & Woolfolk Hoy, 2008) but declines significantly during the first year of teaching (Woolfolk-Hoy, 2000; Woolfolk-Hoy & Spero, 2005). Therefore, teachers' sense of efficacy is typically inflated when they first enter the profession, as they have not been exposed to all of the challenges of teaching. Woolfolk-Hoy (2000) attributed the initial increase in self-reported efficacy to the support given during training; when support is diminished, expectancies of efficacy decrease.

Content GPA was the only variable to predict significantly any of the teacher commitment variables. Specifically, Content GPA predicted teachers' beliefs in the likelihood that they would become teachers again. This finding is not in line with previous research, which suggests that teachers with higher undergraduate GPA are significantly less likely to report teacher commitment, particularly to urban schools, compared to prospective teachers with lower undergraduate GPA (Bacolod, 2007). The conceptual framework of labor market theory would suggest that higher-ability teachers, as assessed by their content GPA, would have more employment options available to them, which would lead them to explore other options (Ehrenberg & Smith, 1997). Given the scope of the present study, reasons for this commitment are merely speculative.

One such reason could be the timing of the study. Participants had just committed a challenging year of their lives to the preservice teacher education program and were likely eager to enter the field. The majority of them were first-time teachers and had therefore been employed in the profession for only approximately 2 months when the survey was administered. At that point they were probably still excited about their new occupations, which they had thoughtfully considered and worked hard to attain. Also, they likely possessed relatively limited awareness of the complexities of the job at that point. These factors might have influenced their self-reported beliefs that they would choose to become teachers again if they had the opportunity.

Differences between participants who assumed employment in high-need schools and those who were employed at traditional schools were limited. As mentioned, no significant mean differences in Personal Teacher Efficacy, General Teacher Efficacy and Teacher Commitment existed. This finding is inconsistent with previous research that

suggests that teachers who work in high-need schools typically report significantly lower

teacher efficacy and teacher commitment than teachers who work in suburban or rural

settings (Park, 2005; Tschannen-Moran et al., 1998; Woolfolk-Hoy, 2000). High-need

schools face a plethora of challenging factors–low academic achievement, discipline

problems, and limited resources–that negatively influence teachers' efficacy judgments

and their willingness to remain in the field. This contradiction is likely due to the fact that

some of the participants had been officially employed as teachers for less than one

semester. Their perceptions regarding their capabilities as teachers, as well as their desire

to continue in the profession, were still likely being formed at the time of data collection

and will likely change. Therefore, it is difficult to obtain an accurate assessment of their

teacher efficacy and teacher commitment from the present study. However, a few

noteworthy differences emerged when percentages among various participant groups

(e.g., males vs. females) were examined.

First, between the male and female samples who sought employment, a higher

percentage of males attained employment in high-need schools. In line with this finding,

a higher percentage of minority participants became high-need teachers among their

respective groups. In other words, only one-quarter of Caucasian participants became

high-need teachers, while almost half of Hispanic participants and all African American

participants ($n = 1$) became high-need teachers. Finally, a greater percentage of on-

campus graduates became high-need teachers, when compared to the percentage of online

graduates who became high-need teachers. Sociocultural theory might suggest that each

of these groups is better suited to work in high-need schools. Males could be less fearful

of the dangers present in some high-need schools; minority teachers could feel a greater

desire to serve these schools, given that they may have endured similar challenges to the students who attend them; and on-campus graduates might have felt more prepared than online graduates to assume employment in high-need schools as a result of their participation in their respective program.

In addition to examining teacher efficacy and teacher commitment, the present study touched on the prolific trend of online learning. Online candidates were recruited as a way to whether there were differences between online and on-campus participants in terms of the identified variables. No such differences were found. This finding could be attributed to the similarity of the two programs. Applicants apply to the programs using the same application and must meet the same standards for acceptance. Once admitted, identical courses are required for degree completion and the courses are taught by the same university faculty members. The only difference between the courses is the medium through which instruction and student collaboration are achieved. Given the impressive growth of online learning, it is informative to see that the online participants had outcomes similar to those of students who completed the on-campus program, despite the additional cognitive and social demands of online learning (Lai & Pratt, 2004).

Implications

Several implications arise from this study. First, the age of a future teacher tends to predict the extent to which he/she believes that students can be taught related to given environmental factors. Younger teachers possess stronger beliefs in this capability. This finding is relevant to admission committees and schools, who may regard older candidates as more equipped because of richer life experiences that they can bring to the classroom. However, this study suggests that this conclusion might not be accurate, as

older candidates in this study reported weaker efficacy beliefs after completion of a preservice teacher education program. Therefore, assumptions made on the basis of candidates' ages should be avoided.

The teacher efficacy results in this study highlight the importance of support in the growth and protection of efficacy beliefs in beginning teachers. The finding that older candidates entered the profession with lower general teacher efficacy suggests that action should be taken to enhance their efficacy beliefs to ensure their success in the field and subsequent commitment. This support could be in the form of mentoring by experienced teachers at their school. However, it is apparent that some schools are unable to provide ample or even sufficient support to new teachers due to lack of resources. Therefore, teachers must be prepared to meet these challenges on their own. Preservice teacher education programs should teach candidates how to locate a support system or utilize resources that do not emerge naturally from the school.

The second implication of this study is that teacher candidates with higher content GPA tend to report higher levels of teacher commitment. While GPA has always been emphasized in the admissions process, this study highlights the value of assessing content GPA as well. Given the nature of the profession of teaching, an examination of candidates' academic background in the subject area in which they intend to teach is pertinent. In addition to the academic performance of coursework, the quantity and relevance of courses as they translate to elementary and secondary education should also be evaluated.

Third, the finding that only two of the independent variables were related to teacher efficacy and teacher commitment has several implications for the purpose of this study. It does not suggest that the other variables lack value, given the inherent

limitations of the present study; however, it does suggest that the relationships between these variables might not be assessable at such an early stage in teachers' careers. Each of the other variables – work experience, undergraduate institution selectivity, and major – is extremely valuable to consider in the admissions process, as they allow preservice teacher education programs to discern whether or not applicants possess the fundamental building blocks to support the development of complex skills and knowledge necessary for teaching. While these variables might not be able to predict whether or not these applicants will possess high teacher efficacy and teacher commitment when they first assume employment as teachers, they do provide valuable insight into applicants in a relatively quick, quantifiable manner. However, this raises another consideration: qualitative measures.

Although quantitative measures such as GPA and the number of years of related work experience are valuable, they do not necessarily tap into the personality traits and beliefs of candidates, which are important considerations, as they relate to teacher efficacy and teacher commitment. Two areas in which applicants have an opportunity to reveal this side of their personalities are through essays and letters of recommendation. While letters of recommendation are constructive, letter inflation is prevalent, so information must be interpreted with caution. Essays are fraught with a similar dilemma, but they can still be used to gain a deeper insight into the dispositions of candidates, if the questions are carefully constructed in a manner that does not allow generic answers to be provided. Therefore, another implication of these limited findings is that perhaps other independent variables that are more qualitative in nature

should be considered as they relate to teacher efficacy and teacher commitment. This exploration is discussed in more detail in Future Research.

Fourth, with respect to the given program, teacher candidates can complete the online preservice teacher education program and have the same outcomes in terms of teacher efficacy and teacher commitment as candidates who complete the program in the traditional on-campus setting. In light of the growth of distance education, this implication is extremely valuable for potential candidates and for schools. Potential candidates can feel confident that they will receive the same preparation in the online program as their counterparts in the on-campus program. Schools that might be reluctant to hire teachers who have completed the online program can recognize the comparable quality of education in this nontraditional environment. The identified online program is unique in that it is not predominantly asynchronous, and it is comparable to the on-campus program. Therefore, this implication cannot be generalized to all online preservice teacher education programs. However, programs that share these characteristics may experience similar outcomes.

Fifth, there are implications about the limited number of graduates who became high-need teachers. Only one third of the participants who sought employment became teachers in disadvantaged schools, and the majority of these teachers indicated that they planned to leave their respective schools in the next few years. The given preservice teacher education program is designed to prepare teachers for work with diverse students in urban schools, yet the majority of graduates did not pursue this path, despite what their applications might have suggested.

These findings suggest that candidates might have simply wanted to attend the given university due to its reputation with no intention of serving high-need schools. These participants might have ignored the overt emphasis of the program on meeting the needs of disadvantaged students in order to benefit from the opportunity to earn their teaching credential from a well-respected school. Or perhaps candidates changed their minds during the program once they gained a deeper understanding of the challenges faced by high-need teachers. Regardless of the reason, it highlights the necessity for a deeper investigation during the admissions process into evidence that supports applicants' desire to serve disadvantaged students.

Differences between on-campus and online graduates are also important to note. A higher percentage of on-campus students attained employment in high-need schools when compared to online students, which has implications for the program. Although online graduates reported similar teacher efficacy and teacher commitment, as discussed, their desire to become high-need teachers, however, might not have been as strong as on-campus graduates. There are several possible reasons for this finding.

First, similar to the full sample, online graduates might have simply wanted to attend the given university without any intention of serving high-need students. Some of these graduates might have lived in areas that did not have reputable teacher education programs near them, so they decided to pursue an online program so that they would not have to relocate. Given the limited number of online teacher education programs, they might have, therefore, chosen to attend the given program even though they had no intention of becoming high-need teachers.

Second, the online graduates could have had fewer urban, low-income, and/or high-minority schools near their residences, given that they were spread out across the country. Graduates who attended the on-campus program had a plethora of high-need schools in the city where the program was located, which might have led to the higher percentage of on-campus graduates who became high-need teachers.

Third, it is possible that the online program either did not prepare students as adequately for high-need schools, thereby hindering their desire to seek empoyment in them, or it did not reinforce and inspire the pressing need for teachers in these settings as effectively as the on-campus program. Sociocultural theory would suggest that this hypothetical lack of preparation as well as inspiration could have been due to the nature of online learning and the additional demands that it requires. As discussed in Chapter 2, learning is grounded in social interactions and nurtured through membership in the learning community in preservice teacher education programs. Teacher candidates engage with theories and pedagogical approaches through classroom instruction, discussions, and interactions with colleagues, resulting in preparation for service. Online students might not have been able to fully benefit from these experiences and therefore felt less inclined to serve the notoriously challenging high-need schools.

Future Research

The present study provided a starting point in the study of topics that have had only limited research. Several areas were not addressed, and several topics could be addressed in response to the findings.

First, the comparison between the online and on-campus candidates was loosely examined, as the focus of the study was teacher efficacy and teacher commitment. Several confounding variables were not considered, such as previous experience with online learning, perceived effectiveness of instruction, and ease of program functionality. Future research could address these factors as they relate to teacher efficacy and teacher commitment.

Second, data on the schools where candidates completed their student teaching were not collected. The identified preservice teacher education program made an effort to place all candidates in high-need schools, but in some instances this was not feasible. Some participants may have assumed employment in a school that differed drastically from where they obtained their training. Additionally, the mentor teachers assigned to participants during their student teaching could have had an immense impact on graduates' teacher efficacy and commitment. The characteristics of mentor teachers, such as teaching experience, demonstrated ability to improve student learning, and demonstrated skill at mentoring adults were not collected. Given all of the influences that a school setting can have on the development of a beginning teacher's efficacy and commitment during student teaching, these distinctions should be made in future studies.

Third, a deeper exploration of candidates who sought and obtained employment in high-needs schools would expand this significant body of research. Although results of *t* tests demonstrated no significant differences between candidates who worked in high-need schools and those who did not, other areas were not explored. In the regression analyses, participants were not separated by where they taught. Future research could examine whether findings held true in the presence of this distinction.

Fourth, several candidate qualities related to teacher efficacy and teacher commitment were not addressed and could be considered for future research. Specifically, school subject, degree level, school level, and dispositions could be examined.

Research has reported differences in teacher efficacy and teacher commitment among teachers who teach different subjects. Numerous studies over the past couple of decades have shown that science and mathematics teachers have the lowest retention rate (Ingersoll, 2001; Kirby, E., 1999; McGinnis, Parker, & Graeber, 2004; Murnan et al., 1988; Rinke, 2009). Ingersoll (2001) found that mathematics and science teachers were more likely to leave than were teachers in other subjects, and E. Kirby (1999) found similar results, with science teachers demonstrating the highest attrition rates among Texas public school teachers.

School subject is apparently also related to teacher efficacy (Wolters & Pintrich, 1998). The majority of the research does not compare efficacy beliefs according to subject taught. However, one study (Wolters & Pintrich, 1998) revealed that teacher efficacy was higher for English teachers than for mathematics and social studies teachers. Research has also shown that teachers in a sample of middle and elementary school teachers tended to have relatively low efficacy for teaching science (Alshalaan, 2006). Bandura (1986) described teachers' sense of efficacy as context specific, which could contribute to differing levels of efficacy for various subjects. Data were collected on the type of credential that candidates earned, which could be used for this variable, but there were not enough candidates in each category to generate comparisons.

Research on the relationship between degree level and teacher commitment suggests that teachers with postgraduate degrees are less likely to remain in the

profession (Borman & Dowling, 2008; Ingersoll & Alsalam, 1997). These individuals typically report lower commitment to the field than those with only a bachelor's degree. No studies have examined the relationship between teacher efficacy and degree level. This variable was not included in the present study due a small sample of participants with advanced degrees.

Several studies have compared school level with efficacy beliefs and teacher commitment. Research suggests that preservice and practicing elementary teachers report significantly higher efficacy beliefs than secondary teachers (Wolters & Daugherty, 2007). In addition to higher efficacy, one study (Ingersoll & Alsalam, 1997) found that elementary school teachers were less likely to leave the profession. Data on teaching level were not gathered in the survey used for this study, so these relationships could not be examined. Future research should consider inclusion of these relationships.

The personal qualities or characteristics of candidates, including attitudes, beliefs, and values, are also an important consideration for admission into preservice teacher education programs and should be examined as they relate to teacher efficacy and teacher commitment. These attributes influence individuals' dispositions, also known as "tendencies to act in a particular manner under particular circumstances, based on their beliefs" (Villegas, 2007, p. 373). Renewed attention has been given to teacher dispositions with the revision of National Council for the Accreditation of Teacher Educators (NCATE) in 2000, which called for teacher education programs to attend to the moral and ethical development of teachers, in addition to the traditional development of knowledge and skills (Wise, 2006).

The literature on teacher dispositions highlights specific beliefs and perceptions that are associated with effective teaching, but no studies have examined their relationship to teacher efficacy and teacher commitment. While there is no consensus about which specific dispositions are necessary or how they should be assessed, given that they are difficult to quantify and measure, researchers agree that teachers play a salient role in shaping the moral development of students while providing them with opportunities to learn, so the teachers' dispositions cannot be ignored (Osguthorpe, 2008; Villegas, 2007). Two specific dispositions that NCATE expects all institutions to assess are fairness and the belief that all students can learn (Hallam, 2009). Correspondingly, Villegas (2007) argued that programs should assess teacher candidates' dispositions related to social justice to ensure that they are capable of teaching students equitably. Given the increasing racial/ethnic diversity of the K-12 population, the necessity of this task is brought into sharp focus. Teachers must be responsive to the needs of students who have been historically left behind and recognize the significant role that those needs play in shaping students' lives (Villegas, 2007).

Finally, additional research related to the findings of this study would be valuable. Specifically, an examination of candidates' teacher efficacy and teacher commitment after a full year of teaching could shed light on the reliability of the results of this study. Teachers' sense of efficacy is typically inflated when they first enter the profession, so it would be interesting to see whether general teacher efficacy was still related to age after participants had been exposed to the challenges of teaching for a full school year. Similarly, it would be informative to assess whether candidates' assumptions that they

would choose teaching again would still be related to content GPA after the first year of teaching, to test whether this finding could have been due to the timing of the survey.

Summary

In an effort to identify qualities that are related to teacher efficacy and teacher commitment as a result of participation in an online or on-campus preservice teacher education program, this study conducted an exploratory analysis of the qualities of applicants to a teaching program leading to a master's degree that were related to these outcomes. Results indicated that Age was a significant predictor of General Teacher Efficacy and Content GPA was a significant predictor of Teacher Commitment. Specifically, Age predicted teachers' beliefs in their capabilities of teaching students given environmental factors and Content GPA predicted teachers' self-reported beliefs that they would become a teacher again if the opportunity to start again were presented. No significant mean differences in General Teacher Efficacy, Personal Teacher Efficacy, and Teacher Commitment were found between graduates who became high-need teachers and those who became teachers in traditional settings. Additionally, no significant differences were found between candidates who completed the online program and those who completed the on-campus program were found.

This study contributes to an existing body of research and generates ideas for new research on teacher efficacy and teacher commitment. Highly efficacious teachers are more likely to persist in the face of obstacles, and teacher commitment is paramount for schools to build a culture that supports student achievement. Therefore, identifying factors that are related to these outcomes contributes to a picture of what it takes to enter

the dynamic field of teaching, leading to the national goal of reducing teacher turnover so that all students are provided with an equitable education.

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APPENDIX A

QUALTRICS SURVEY

Please check the appropriate box.

1. Did you graduate from the [name of program and school]? ("No" responses will end the survey)

   ☐ Yes ☐ No

2. Did you attend the on-campus or online [name of program and school]?

   ☐ On-campus ☐ Online

3. Did you complete the credential or non-credential program? ("Non-credential" responses will be directed to Question 5)

   ☐ Credential ☐ Non-credential

4. What type of credential did you earn in the [name of program and school]?

   ☐ Multiple Subjects Credential

   ☐ Single English Credential

   ☐ Single Math Credential

   ☐ Single Music Credential

   ☐ Single Science Credential

   ☐ Single Social Science Credential

5. Did you seek (or retain) employment as a Pk-12 teacher after completion of the [name of program and school]? ("Yes" responses will be directed to Question 7).

   ☐ Yes ☐ No

6. Please explain why you did not seek employment as a Pk-12 teacher after completion of the [name of program and school]?

   _____

7. Are you currently employed as a Pk-12 teacher? ("Yes" responses will be directed to Question 9).

   ☐ Yes ☐ No

8. Please explain why you believe that you did not attain employment as a Pk-12 teacher? (Survey will end for participants who answer this question).

   _____

9. What is the name and location (city and state) of the school where you are currently teaching?

_____

10. Do you consider the school in which you teach to be a "high-need" school? ("No" responses will be directed to Question 12).

☐ Yes   ☐ No

11. How long do you plan to continue teaching in a high-need school?

☐   ☐   ☐   ☐   ☐   ☐
0-2 yrs   2-5 yrs   5-10 yrs   10+ yrs   until retirement undecided

12. I am generally satisfied with being a teacher at my current school.

☐ 1   ☐ 2   ☐ 3   ☐ 4
strongly   somewhat   somewhat   strongly
disagree   disagree   agree   agree

13. Suppose you could start all over, would you become a teacher again?

☐ Certainly would become a teacher

☐ Probably would become a teacher

☐ Chances about even for and against

☐ Probably would not become a teacher

☐ Certainly would not become a teacher

14. How long do you plan to remain in teaching?

☐ As long as I am able

☐ Until I am eligible for retirement benefits from this job

☐ Until I am eligible for retirement benefits from a previous job

☐ Until I am eligible for Social Security benefits

☐ Until a specific life event occurs (e.g., parenthood, marriage)

☐ Until a more desirable job opportunity comes along

☐ Definitely plan to leave as soon as I can

☐ Undecided at this time

A number of statements about organizations, people, and teaching are presented in the following questions (15-35). The purpose is to gather information regarding the actual attitudes of educators concerning these statements. There are no correct or incorrect answers. I am interested only in your frank opinions. Your responses will remain completely confidential.

INSTRUCTIONS: Please indicate your personal opinion about each statement by selecting the appropriate response below each statement.

KEY: 1=Strongly Disagree   4=Agree slightly more than disagree
**   2=Moderately Disagree   5=Moderately Agree**
**   3=Disagree slightly more than agree   6=Strongly Agree**

15. When a student does better than usual, many times it is because I exert a little extra effort.
□1   □2   □3   □4   □5   □6

16. The hours in my class have little influence on students compared to the influence of their home environment.
□1   □2   □3   □4   □5   □6

17. The amount a student can learn is primarily related to family background.
□1   □2   □3   □4   □5   □6

18. If students aren't disciplined at home, they aren't likely to accept any discipline.
□1   □2   □3   □4   □5   □6

19. When a student is having difficulty with an assignment, I am usually able to adjust it to his/her level.
□1   □2   □3   □4   □5   □6

20. When a student gets a better grade than he/she usually gets, it is usually because I found better ways of teaching that student.
□1   □2   □3   □4   □5   □6

21. When I really try, I can get through to most difficult students.
□1   □2   □3   □4   □5   □6

22. A teacher is very limited in what he/she can achieve because a student's home environment is a large influence on his/her achievement.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

23. Teachers are not a very powerful influence on student achievement when all factors are considered.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

24. When the grades of my students improve, it is usually because I found more effective approaches.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

25. If a student masters a new concept quickly, this might be because I knew the necessary steps in teaching that concept.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

26. If parents would do more for their children, I could do more.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

27. If a student did not remember information I gave in a previous lesson, I would know how to increase his/her retention in the next lesson.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

28. The influences of a student's home experiences can be overcome by good teaching.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

29. If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

30. Even a teacher with good teaching abilities may not reach many students.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

31. If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

32. If I really try hard, I can get through to even the most difficult or unmotivated students.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

33. When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

34. Some students need to be placed in slower groups so they are not subjected to unrealistic expectations.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

35. My teacher training program and/or experience has given me the necessary skills to be an effective teacher.
☐1   ☐2   ☐3   ☐4   ☐5   ☐6

APPENDIX B

E-MAIL SOLICITATION FOR SURVEY

Dear MAT@USC graduate,

I am launching a research project about the MAT@USC in an effort to learn
about graduates' employment information and feelings regarding the teaching profession
after completion of the program. This information will then be used to assist the
MAT@USC in its continual development.

This Web survey should take about 20 minutes to complete. At the end of the
survey, you can enter a drawing where four randomly selected respondents will receive
an iPod touch, a $100 Amazon.com gift certificate, a $50 Amazon.com gift certificate, or
a $25 gift certificate. The odds of winning are 4 in 154 or better, depending on the
number of respondents.

Your participation is voluntary, and your responses will be kept <u>completely confidential</u>.
Your place of employment will never see your responses, and the MAT@USC program
will not see any identifiable data. Codes will be assigned to all participants that are
analyzed; no names will be used.

I realize that you are all very busy, but I would greatly appreciate your time. The
survey will remain open for 4 weeks to provide ample time for you to take it at a
convenient time.

To take the survey, please click the link below:

https://usceducation.qualtrics.com/SE/?SID=SV_1Gmm8Db4hE88uUY

You may start and stop the survey, but please use the same computer and browser

to avoid any technical problems.

Feel free to contact me if you have any questions.

Thank you,
Julie Nollner
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If you have questions regarding your rights as a research subject, contact:
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