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Pre-Service Teachers' Motivations for Choosing a Teaching Career and Intention to Teach in Urban Settings: A Multilevel Analysis

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PRE-SERVICE TEACHERS' MOTIVATIONS

FOR CHOOSING A TEACHING CAREER AND INTENTION

TO TEACH IN URBAN SETTINGS: A MULTILEVEL ANALYSIS

A Dissertation

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

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ABSTRACT

Title: Pre-Service Teachers' Motivations for Choosing a Teaching Career and Intention to
Teach in Urban Settings: A Multilevel Analysis

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This study uses quantitative and qualitative designs to examine if motivations for choosing a teaching career influence the intention to teach or not to teach in urban settings, and if a short-term urban field experience has significant impact on the change in the motivations as well as the intention to teach in urban settings.

Overall, pre-service teachers in the study chose a teaching career due to the influence of such factors as beliefs of teaching ability, intrinsic, social, and personal values of teaching, perception of teaching, prior learning and teaching experiences, and social influence. Among these factors, teaching ability, social value, and perception of teaching were significantly correlated with the intention to teach in urban settings, though the relationships were relatively weak. Intrinsic value, however, had no significant correlation with the intention to teach in urban settings.

Quantitative data analyses indicated that the short-term urban field experience had a significant impact on both the entry motivations for teaching and the intention to teach in urban settings. The qualitative data, however, showed mixed results, suggesting that the relationships between motivation factors, the choice of a teaching career, and the intention to teach in urban settings, were more complicated than they appeared to be.

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CHAPTER 1

INTRODUCTION

Among all school-related factors, teacher quality is found to have the strongest influence on student achievement, even when student characteristics such as social economic status and language background are controlled (Darling-Hammond, 2000a; Haycock, 2000). Despite *No Child Left Behind* mandates that all teachers in core academic areas must be highly qualified in the core academic subjects they teach by the end of the 2005–06 school year (U.S. Department of Education, 2004), the shortage of effective teachers still prevails in many schools. Although researchers found that, nationally, the total number of teacher education graduates is more than the number of teachers needed, there is a shortage of teachers in certain geographic regions and some subject fields (Ingersoll, 2001a; Zeichner, 2003). Urban school districts that serve high concentrations of poor students and students of color are having difficulty recruiting teachers who are certified in the fields of math, science, special education, English as a Second Language, and technology service. As a result, students in those schools are more likely to have teachers who are teaching outside their certified subject areas, or who are not certified at all (Berry, 2001; Haycock, 2000).

Urban schools are facing considerable challenges tackling the problem of teacher shortages. It was found that teacher education graduates showed a preference to take their first teaching jobs very close to their hometown, or where they attended college. They prefer to teach in areas which have similar characteristics to the culture and community in which they grew up (Boyd, Lankford, Loeb, & Myckoff, 2005; Leland & Harste, 2005). Given the fact that many universities and colleges are located in suburbs and small towns

in the United States, and that the majority of teacher education students are white, from suburban and/or small town backgrounds, and of middle-class families, urban schools are greatly disadvantaged in recruiting qualified teachers who are willing to teach in the urban classrooms. Even when the urban school districts can manage to hire enough teachers, teacher shortages remain as a problem due to the high rate of attrition. It is reported that about 30% of the teachers hired in urban school districts leave their teaching positions in the first three years. By the end of the first five years, close to half of the teachers hired in urban schools leave, either to other schools or to other professions (Ingersoll, 2001b; Liu et al. 2000). The high teacher turnover rate greatly affects the adequacy of education in urban schools. It reinforces the perception that urban education is challenging and that students in urban settings have a low motivation for learning.

To meet the challenge of teacher shortages, states and school districts have responded with a variety of policies intended to attract and retain qualified teachers in the difficult-to-staff schools. Some states and districts offer scholarships to college students and bonuses to teachers who sign to teach in the high-need schools. Others have initiated efforts to increase recruiting teachers by "growing their own teachers" and attract more minority teacher candidates within the districts. Still others focus on broadening entry to the teaching profession through alternative certification programs. Meanwhile, teacher education institutions also have actively responded to the challenge of teacher shortages by integrating into the existing curriculum various programs that are intended to prepare pre-service teachers for diverse school settings in urban areas.

Statement of the Problem

In spite of the good intentions, the efforts to alleviate teacher shortages in urban schools have not been effective. Most of these efforts are based on several assumptions that are not supported by research evidence. For example, the effectiveness of the strategy to attract people to teach in urban schools through financial incentives is supported by little evidence from research or systematic evaluation of the existing programs. As a matter of fact, some researchers argue that the initiatives of expanding the entry to the teaching profession through local recruitment and alternative certification programs produce some negative effects on teacher quality and reinforce the cycle of education inequality (Darling-Hammond, 2000a; Boyd et al., 2005). In spite of the abundant studies asserting that teacher education students, who had diverse cultural experiences as part of their education, reported change of values, beliefs, and attitudes toward urban schools and urban children, there is little evidence indicating such transformation leads to a decision to teach in urban areas.

The major problem underlying the situation is that the initiatives intended to meet the demand for qualified teachers may not be addressing the most important factors contributing to people's decision to teach in urban schools. Most teachers cite intrinsic and altruistic factors, for example, the interest of working with children and the ambition to provide service to the society, as their motivations for choosing a teaching career (Watt & Richardson, 2006, 2007). However, research on teacher shortages found that teachers leave their positions in urban schools due to such factors as low salary, poor working conditions, low student learning motivation and discipline issues, and little involvement in decision making, all of which are extrinsic (Ingersoll, 2001a). Interestingly, between

the choice of a teaching career and the decision to leave urban schools, little explanation is available about why teachers decide to teach or not to teach in urban settings apart from geographic proximity and social identity (Boyd et al., 2005; Strunk & Robinson, 2006). Therefore, research evidence is needed to develop effective solutions to the problem of teacher shortages with better understanding of what factors influence teachers' choices to teach in urban schools.

Purpose of the Study

This study will examine a range of motivational factors contributing to teacher career choices at multiple levels. The purpose is to examine whether or not there is any relationship between pre-service teachers' initial motivations for choosing a teaching career and their intention to teach or not to teach in urban areas; and, if any, what motivational factors contribute to that intention.

The study will take advantage of the opportunity presented by the existence of a short-term urban field experience. The researcher will measure a sample of pre-service teachers' motivations for choosing a teaching career prior to and after the experience using the FIT-Choice (Factors Influence Teaching) Scale (See Appendix A) (Watt & Richardson, 2007). The students' intention of teaching in urban settings will be measured with a researcher-developed instrument (See Appendix C) consisting of items that measure factors relating to the participants' motivations for participating in the short-term urban field experience. Since the data will be collected before and after the short-term urban field experience, the study will also be able to examine the effect of the experience on participants' motivations for becoming a teacher and their intention to teach in urban schools.

Theoretical Framework

The expectancy-value theory has been one of the important views on the nature of achievement motivation and career decision. It proposes that individuals' expectancies for success and the value they have for succeeding are important determinants of their motivation to perform different achievement tasks. The theory began with Atkinson (1957) who defined expectancies as individuals' anticipation that their performance will be followed by either success or failure, and value as the relative attractiveness of succeeding or failing on a task.

Eccles et al. (1983) expanded these definitions and constructed an expectancy-value model of achievement choice as a framework to understanding early adolescents' and adolescents' performance and choice in the mathematics achievement domain. The major constructs of the model are the belief and value constructs including subjective task values, expectancies for success, achievement goals, and beliefs about ability or competence. Eccles et al. proposed four major components of subjective values: attainment value or importance, intrinsic value, utility value or usefulness of the task, and cost (Eccles et al., 1983; Wigfield & Eccles, 1992). Attainment value is defined as the importance of doing well on a given task. Intrinsic value is the enjoyment one gains from doing the task. Utility value or usefulness refers to how a task fits a requirement for a science degree. Cost refers to what the individual has to give up to a task. Eccles and colleagues found that students' competence-related beliefs predict children's subsequent grades in mathematics and English. They also found children's subjective task values are the strongest predictor of both intentions and actual decisions to keep taking mathematics and English (Eccles, 2005; Eccles et al., 1983; Meece, Wigfield, & Eccles, 1990).

Guided by Eccles et al.'s expectancy-value framework (1983), Watt and Richardson (2006, 2007) further expanded the expectancy-value theory to the field of teaching as a career choice and developed their own model, the FIT-Choice (Factors Influence Teaching) scale, to measure factors influencing the choice to teach for beginning pre-service teacher education candidates. The scale is based on three major variables that predict choice in Eccles et al.'s model. These variables include ability beliefs, values, and task perceptions. The construct of ability beliefs asks teachers' perceptions of their teaching abilities. The value construct consists of intrinsic value, subjective attainment value, and utility value. The construct of task perceptions are composed of task demand and task return. The discrepancy between task demand and task return is related to the component of *cost* in Eccles et al.'s expectancy-value model (1983). Watt and Richardson rename subjective attainment values as personal utility value (including job security, time for family and job transferability), and utility values as social utility value (including the desire to shape the future, enhance social equity, make a social contribution and work with children). The FIT-Choice scale also includes two other constructs identified in the expectancy-value theory, namely, prior learning and teaching experiences and social influences. The last construct of the scale, drawn from the prior motivation literature (Book, Freeman, & Brousseau, 1985; Haubrich, 1960; Robertson, Keith, & Page, 1983), focuses on whether or not the choice of teaching is made as a fallback career. It indicates the possibility of people not so much choosing teaching, but rather defaulting to it, for example, after failing to be accepted into their career of choice or otherwise having been unable to pursue their first-choice career.

In the study intended to validate the scale, Watt and Richardson (2007) found that it displayed sound convergent and divergent construct validity and good reliability across two independent, large-scale, and representative samples. Intrinsic value, social utility value, and perceived teaching ability emerging from the study as the highest rated influences on the choice of a teaching career, followed by positive prior teaching and learning experiences and personal utility value. Personal utility factors exhibited either negative or non-significant correlations with the choice of a teaching career. In a more recent study, Watt and Richardson (2008) identified three types of beginning teachers—highly engaged persisters, highly engaged switchers, and lower engaged desisters—who differed in career intentions, motivations for having chosen a teaching career, and perceptions regarding the teaching profession.

Based on the related literature, the researcher of this study hypothesizes that Eccles et al.'s expectancy-value framework and the FIT-Choice scale provide a comprehensive and systematic theoretical perspective to understanding why individuals intend and decide to teach or not to teach in urban settings. The motivational factors influencing pre-service teachers' choice of teaching career not only predict their engagement and commitment to teaching, but are also correlated with their intention and decision to teach in certain settings. Perceived belief of teaching ability, expectancies for success, intrinsic interest value, and social utility value may be positively related to the intention to teach in urban settings while personal value and cost may present negative relations. Liu et al. (2000) noted that while money is not the primary incentive to enter teaching, it can serve as a disincentive or a barrier for those who might otherwise be attractive to teaching. They also found that the costs of entering teaching are quite high

and very discouraging. While teachers stressed that "they did not enter teaching 'for the money', they worried about whether they could 'afford teaching' and stay in the profession over the long term." (Liu et al., 2000, p.6)

Given the reality that many urban school districts are facing, a decision to teach in urban settings means higher cost —lower salary versus higher living expenses, poor working conditions, lack of resources, discipline issues, low student motivation and low achievement, all of which create more demand on the aspect of teaching. According to the expectancy-value theory, the subject value of a certain task results from the interaction of its four composing constructs. If an individual's intrinsic and utility value outweigh personal attainment and cost, then he or she is more likely to choose to teach in an urban setting; if personal attainment and cost outweigh intrinsic and utility value, then an individual is more likely to choose to teach in nonurban settings, where it is more likely to meet their personal attainment with lower cost. Similarly, an individual with a strong belief in his or her teaching ability is more likely to choose to teach in urban settings than an individual who is not so confident of his or her ability of teaching due to the perceived challenges to be encountered in urban schools.

Research Questions and Hypotheses

The study is intended to explore the following research questions and hypotheses.

Research question #1: What are the motivation factors that influence pre-service teachers' choice of a teaching career? The researcher expects to find some factors that are consistent and/or inconsistent with the previous research findings. It is also hypothesized that there is significant difference between the experimental group and control group in terms of the participants' motivation for entering the teaching profession (Hypothesis 1).

Research question #2: Are there any identifiable types of pre-service teachers, based on their motivations for choosing a teaching career, as they relate to an intention to teach in urban settings?

The researcher considers it likely that there are different types of pre-service teachers who are different in their motivations for choice of a teaching career and their intention to teach in urban areas. Based on the related literature, the researcher predicts a high intention and a low intention group, and potentially additional groups who may present other patterns of career intentions (Hypothesis 2). The researcher hypothesizes the different types of pre-service teachers to vary in their motivations for having chosen a teaching career in the first place and their intentions to teach in urban settings (Hypothesis 2a). The researcher expects that the high intention type would score high on intrinsic and social utility value motivations for teaching, and lower on having chosen teaching as a "fallback" career. The converse would be true for the low intention type (Hypothesis 2b). The researcher is not sure what to expect regarding differences in personal utility value and cost. It is hypothesized that a high intention type might be less motivated by personal values and opportunity costs than a low intention type (Hypothesis 2c). As for perceptions about the teaching profession, the researcher expects that a high intention type might rate the demands of teaching and reward of teaching higher than a low intention type, while a low intention group might rate the demands of teaching high but the reward of teaching lower (Hypothesis 2d). Finally, it is expected that individuals with high intention to teach in urban settings will rate high on positive prior learning and teaching experiences than those with lower intention (Hypothesis 2e).

Research questions #3: To what extent are the motivational factors influencing pre-service teachers' intention to teach or not to teach in urban settings? The researcher hypothesizes that certain motivational factors contribute to pre-service teachers' intention to teach or not to teach in urban schools (Hypothesis 3). It is expected that perceived teaching ability, intrinsic and social utility value are positively related to pre-service teachers' intention to teach in urban areas (Hypothesis 3a). It is also expected that personal utility value, cost, and choosing teaching as a "fallback" career will be negatively related to the intention to in urban settings (Hypothesis 3b).

Research question #4: What are the factors that influence pre-service teachers' decision to participate in a short-term urban field experience? The researcher expects to find some motivation factors that fall into the different constructs of the FIT-Choice Scale. It is also hypothesized that there is significant difference among the subgroups of the participants in terms of their motivation to participate in the urban field experience (Hypothesis 4).

Research question #5: Are there any identifiable types of pre-service teachers, based on their motivations for participating in a short-term urban field experience and intention to teach in urban settings? The research hypothesizes that there are identifiable groups of pre-service teachers who differ in their motivations for participating in a short-term urban field experience (Hypothesis 5). Based on the related literature, the researcher anticipates that some participants would score high on social utility values and perceived ability of teaching in urban settings, but relatively low on personal utility values (Hypothesis 5a). The converse is also true, that some participants would score low on social utility values and perceived ability of teaching in urban settings, but relatively high

on personal utility values (Hypothesis 5b). The former group would also show stronger intention to teach in urban setting than the latter (Hypothesis 5c).

Research question #6: To what extent are the initial motivations for choosing a teaching career related to the motivation for participating in a short-term urban field experience? The researcher hypothesizes the factors influencing pre-service teachers' participation in a short-term urban field experience are correlated to their initial motivation of choosing a teaching career (Hypothesis 6). Individuals who choose teaching for intrinsic and social utility motivation are likely to choose participation for similar types of reasons (Hypothesis 6a). Likewise, individuals who were motivated to choose a teaching career by personal utility values and opportunity cost are likely to participate in the urban field experience for the same motivations (Hypothesis 6b).

Research question #7: To what extent can a short-term urban field experience influence pre-service teachers' motivation for choosing a teaching career? The researcher expects that a short-term urban field experience can influence pre-service teachers' motivation for choosing a teaching career (Hypothesis 7).

Research question #8: To what extent can a short-term urban field experience influence pre-service teachers' intention to teach in urban settings? It is hypothesized that a short-term urban field experience can influence pre-service teachers' intention to teach in urban settings (Hypothesis 8).

Significance of the Study

The study is significant in two major aspects. Practically, it provides a multidimensional approach to better understand what factors motivate individuals to choose a teaching career and what motivates them to teach in urban settings. As the

current and recent recruiting policies have been targeting a limited subset of the

motivations, such knowledge will help policy makers to develop comprehensive

strategies that can attract people to teach in urban schools effectively. The study also

provides valuable information for teacher educators in higher education institutions

regarding recruiting candidates into teacher education programs, understanding what

contributes to pre-service teachers' likelihood to teach or not to teach in urban settings,

and developing curricula accordingly to enhance the positive intention of teaching in high

need schools.

In the theoretical aspect, the study provides a clear test of the applicability of

expectancy-value theory to career choices of teachers. The theory was first applied to

predicting adolescent students' achievement in academic study and their intention to

select certain academic courses (Eccles et al., 1983). It was then tested through the FIT-

Choice scale (Richardson & Watt, 2006; Watt & Richardson, 2007, 2008) in

understanding the relationship between pre-service teachers' initial motivation for

becoming a teacher and their professional persistence, career intention, and perception of

the teaching profession. Given the fact that the previous studies were conducted in either

different fields from teacher career choice, or with participants from very different

cultural and social backgrounds, the current study has the promise to provide expanded

opportunity for demonstrating the applicability of the expectancy-value framework.

Definition of Terms

Expectancy

Eccles and colleagues (1983) defined *expectancies for success* as individuals'

beliefs about how well they will do on upcoming tasks, either in the immediate or longer-

term future. These expectancy beliefs are measured in a manner analogous to measures of Bandura's (1997) personal efficacy expectations.

Ability Beliefs

Eccles et al (1983) defined *ability beliefs* as individuals' evaluations of their competence in different areas. In the expectancy-value model, ability beliefs are conceived as broad beliefs about competence in a given domain, in contrast to one's expectancies for success on a specific upcoming task. In Watt and Richardson's FIT-Choice model, ability belief is defined as *self perceptions of ability*.

Expectancy-Value Theory

Early e*xpectancy-value theory* proposed that individuals' achievement performance, persistence, and choice were directly related to expectancy-related and task-value beliefs (Atkinson, 1957). Eccles and her colleagues elaborated the original modal and tested it on examining motivations for high school students' achievement-related choices (Eccles et al. 1983, 1984; Meece et al. 1990). In the modified model, e*xpectancies for success* was defined as beliefs about how one will perform on upcoming tasks (Eccles & Wigfield, 1995; Wigfield & Eccles, 2000). *Values* consist of subcomponents of *intrinsic value*, *utility value*, *attainment value*, and *cost* (Eccles etl, 1983; Eccles, 2005b).

FIT-Choice Scale

FIT-Choice Scale (Factors Influencing Teaching Choice Scale) was developed by Watt and Richardson (2007) to measure factors influence the choice to teach for beginning per-service teacher education candidates in Australia. It extended the expectancy-value motivational framework beyond high school students' academic

achievements to the domain of decision of a teaching career. The scale consists of 60

items, which measure 18 first-order and 4 higher-order motivation al factors.

Subjective Task Value

Eccles and her colleague (Eccles et al., 1983) conceptualized that values are

linked to more stable self-schema and identity constructs, and that choice is not

necessarily the result of conscious rational decision-making processes. *Subjective task*

values have been defined as how a task meets different needs of individuals (Eccles et al.,

1983; Wigfield & Eccles, 1992). In the expectancy-value model, task-value consists of

four components: *attainment value, intrinsic value, utility value,* and *cost*.

Intrinsic Career Value

Intrinsic career value is the enjoyment that individual gets from performing the

activity or the subjective interests the individual has in the subject (Eccles et al. 1983). In

the FIT-Choice model, the construct of intrinsic career value measures individuals'

interest in and desire for a teaching career (Watt & Richardson, 2007).

Attainment Value

Eccles et al. (1983) defined *attainment value* as the personal importance of

doing well on the task. A task will have higher attainment value to the extent that it

allows the individual to confirm salient aspects of these self-schemata. Watt and

Richardson (2007) suggest that subjective attainment value relates to the extent to which

individuals consider tasks to be important, in terms of their personal goals. Individuals

have frequently chosen teaching for reasons independent of the career content, but rather,

for reasons relating to quality of life issues. They, therefore, rename this set of factors in

the FIT-Choice Scale as *personal utility value*.

Utility Value

Utility value is determined by how well a task relates to current and future goals, such as career goals. A task can have positive value to a person because it facilitates important future goals, even if he or she is not interested in the task for its own sake. It captures the extrinsic reasons for engaging in a task (Deci &Ryan, 1985; Harter, 1981), while relating directly to an individual's internalized short- and long-term goals. Watt and Richardson (2007) renamed utility value in the FIT-Choice model as *social utility value*, "in view of research findings that entrants to the teaching profession often nominate a strong desire to make a social contribution or to give back to society in a meaningful way as a reason for becoming a teacher " (p. 172).

Cost

Eccles and her colleagues identified *cost* as the negative aspects of engaging in a task (Eccles, 1987; Eccles et al., 1983). It refers to the effort required to complete the task, as well as what an individual has to sacrifice to carry out a task, for example, the lost opportunities that result from making one choice rather than another. In the FIT-Choice Scale, *cost* refers to the disparity between *task demand* and *task return* (Watt & Richardson, 2007).

Task Perceptions

Task perception is a subscale in Watt and Richardson's FIT-Choice Scale (Richardson & Watt, 2006; Watt & Richardson, 2007). It consists of two higher-order factors, namely, *task demand* and *task return*. *Task demand* assesses the extent to which individuals perceive teaching requires highly expertise knowledge and skills, as well as time and emotional investment. *Task return* is concerned about the extent to which

teaching is perceived as respected, valued, and well paid. It is composed of such factors as social status of teachers and salary.

Antecedent Socialization

Antecedent socialization is s new construct that was not included in the original expectancy-value motivational model. As a subscale in the FIT-Choice Scale, antecedent socialization was developed to measure the influences of *prior teaching and learning experiences*, *social influences* (positive influences that encouraged individuals to pursue a teaching career), as well as *social dissuasion* (negative influences that discouraged individuals from a teaching career) (Watt & Richardson, 2007).

Fallback Career

Fallback Career is another subscale added by Watt and Richardson to the FIT-Choice Scale. It measures the extent to which "participants had chosen teaching for reasons relating to not being accepted into their university degree of choice or being unsure what career they wanted" (Watt & Richardson, 2007, p. 174).

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Limitations of the Study

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The current study has three major limitations. First, it is limited geographically. The participants in the study are sampled from the universities located within the state of Pennsylvania. It is cautioned that the results may not be generalized to teacher education candidates in other geographic regions due to the possibility of different findings among different population groups.

Short duration is a second limitation of the study. Both the quantitative and qualitative data are collected during a two-week short-term field experience. It may fail to present whether or not the changes in the participants' motivations for choosing a

teaching career, or their intention to teach in urban settings, if any, continue to be effective after the completion of the field experience.

One more major limitation of the study is perhaps the variable, *choice of a teaching career*, is a possibility instead of an actual decision since all participants are teacher education students at the point of study. Future research that follows these participants may be able to provide in-depth understanding about how individuals' initial motivation for entering a teaching career is related to their decision to teach in urban settings as well as their persistence in the profession. It may also be able to further test the applicability of the expectancy-value theory as a viable theoretical framework in explaining teacher career choice.

Summary

This chapter identified the challenge of teacher shortages faced in American schools, particularly schools that serve high-poverty, high concentrations of racial/ethnic minority students. It was noted that while school districts and teacher education programs have responded actively to attract individuals to teach in urban settings, little is known about what actually motivates individuals to teach in urban schools. Based on the expectancy-value theory and the findings of previous research applications of the theory in teacher career choice, the researcher proposed that pre-service teachers' motivations for the choice of a teaching career were related to their subsequent intention and actual decision to teach or not to teach in urban areas. There would be identifiable types of teachers who differed in their motivations for choosing a teaching career at the beginning of their teacher preparation program, and some of those motivational factors would be correlated to their intentions to teach in urban schools. The findings of the study would

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provide guidance to policy makers of the school districts to target recruiting strategies accordingly. Also benefiting from the study will be teacher educators who could build the information into teacher preparation curriculum to enhance the positively-related motivational factors that might influence teacher candidates' choice to teach in urban settings.

In Chapter 2, which follows, a comprehensive review of the theoretical and empirical literature will be presented.

CHAPTER 2

REVIEW OF LITERATURE

As stated in the previous chapter, the current study aims to examine whether or not there is any relationship between pre-service teachers' initial motivations for choosing a teaching career and their intention to teach or not to teach in urban areas. It also explores how a short-term urban field experience can influence the change of the participants' motivation for entering a teaching career or their intention to teach in urban settings. To provide an informed background for the study, this chapter reviews three topics that are related to the problem. Section one discusses teacher shortages and urban education in the United States. Section two reviews studies exploring motivations for choosing a teaching career and whether motivation changes over time and how it is related to career choice. Section three examines research findings for field experience and its role in the professional growth of pre-service teachers.

Teacher Shortages and Urban Education in United States

The following section reviews four topics related to the shortage of teachers in the United States. It first examines teacher shortages in general, focusing on the different arguments as well as definitions and assumptions behind the arguments, the particular features of urban schools and their influence on the challenges of teacher shortages faced by urban school districts. Next, it explores the factors that contribute to teacher shortages, including increasing student enrollment, teacher retirement, class-size reduction policy, and teacher turnover. It then discusses the consequences of teacher shortages on schools and districts, on teacher qualities, and most importantly, on students. Finally, in this

section, is a description of what has been done to alleviate the challenges of teacher shortages.

Teacher Shortages and Urban Schools

Teacher shortages began to attract public attention in the 1980s and have been extensively documented ever since. The following discussion first reviews different arguments about whether there is a teacher shortage and how it is defined. It also examines the challenges of teacher shortages in urban schools and how the challenges are related to urban school characteristics.

Is there a teacher shortage? Teacher shortage is not a new topic. It began to draw attention nationwide almost three decades ago. However, it is interesting to note that there have always been arguments about whether there is really a teacher shortage. Some researchers and policy makers warn the public that there is a teacher shortage because of the inadequate supply of teachers and the increased demand for teachers. Attention was raised in 1980s when a number of studies and government reports predicted that there would be teacher shortages in American schools due to a dramatic increase in the demand for new teachers as the result of growing student enrollment and teacher retirement (Darling-Hammond, 1984; Haggstrom, Darling-Hammond, & Grissmer, 1988; National Academy of Science, 1987; National Commission on Excellence in Education, 1983). Teacher shortages reached a state of crisis in 1990s when the National Center of Educational Statistics (NCES) (Hussar, 1999; NCES 1998) predicted that at least 2 million newly hired public school teachers and about 500,000 newly hired private school teachers would be needed between 1998 and 2008 in

American schools, and that our teacher training institutions were simply not producing sufficient numbers of teachers to meet the demand.

Consistent with the concerns at the national level, the possibility of a teacher shortage has gained much local concern, particularly in states that experienced the most population growth over the past decade. In California, for example, it is predicted that severe teacher shortages would continue between 2006-2016, caused partially by student enrollment growth and, more significantly, by an increase in teacher retirement and the decreasing number of newly credentialed teachers by state and university teacher preparation programs (California Department of Education, 2006). The gap between teacher supply and demand is estimated to reach 52,000 in 2012-13 (Esch, Chang-Ross, Guha, Tiffany-Morales, & Shields, 2004). Texas is facing similar challenges. At the beginning of the 2002 fall semester, there were roughly 37,000 teaching vacancies to be filled in Texas schools. Among the nearly 290,000 teachers eventually hired, almost 33,900 were not holding a standard certificate and over 56,000 of those holding certificates were teaching out of their field of study (Texas Higher Education Coordinating Board, 2002).

However, some researchers do not agree that there is a teacher shortage, arguing that, overall, there are more than enough licensed teachers to fill all of the openings in the United States. Although NCES predicted that about 200,000 teachers would be needed annually between 1998 and 2008 (Gerald & Hussar, 1998), it was observed that the majority of the newly-hired teachers each year are not the newly-certified teacher-education graduates who had never taught before. For example, in 1999, 232,000 teachers were newly hired into the system, but only 85,000 were newly graduated from college,

which was less than 60% of the new teacher graduates that year. Almost 80,000 of the new hires were re-entrants—teachers who had taught sometime in the past and were re-entering the profession. Moreover, an additional 67,000 were delayed entrants – teachers who were prepared for teaching but who never entered the profession (The National Commission of Teaching and America's Future (NCTAF), 2002). These two types of new hires from the reserve pool accounted for 63% of the total number of teachers newly hired in 1999.

Recent studies reported that over 150,000 new teachers have graduated from traditional preparation programs annually (NCTAF, 2003; National Education Association, 2003). Moreover, non-traditional teacher-education programs, such as an alternative certification programs, have been sending more and more teachers to the classrooms. NCES (2009) reported that the percentage with other types of teacher certifications in American schools was higher in 2003–04 than in 1993–94 (9.8 vs. 4.4 percent). The National Center for Education Information (2008) estimates that more than 250,000 persons have been licensed through alternative routes to teacher certification programs since the mid-1980s, with most of the growth occurring in the last decade. Approximately 35,000 individuals are entering teaching through alternative teacher certification routes each year. When the reserved supply is added to the above two sources of teacher supply, the nation has an increased, rather than reduced, supply of teachers. According to the American Association of State Colleges and Universities (AASCU) (2005), between 1988 and 2001, the number of teachers in public elementary and secondary schools increased 29 percent, more than matching student enrollment growth of 19 percent. NCES also estimated that the number of teachers will increase five

percent between 2001 and 2013, which can adequately meet expected student enrollment growth (Gruber, Willey, Broughman, Strizek, & Burian-Fitzgerald, 2002).

In spite of the argument that there are sufficient numbers of teacher to fill the openings in American schools, teacher shortages already occurred years ago in specific regions and subject matter areas, and these shortfalls are most likely to continue into the next few years. It was noted more than 30 years ago "national figures frequently cited on teacher supply and demand are not uniformly distributed across state boundaries and schools district lines" (Merseth, 1983, p. 5). Although national data are useful, it is clear that the nature and extent of teacher shortages differ greatly depending on the school and its location. When disaggregated, the data reveal a somewhat different picture —demand outstrips the number of teachers available in certain locations and subject areas. There is no doubt that a teacher shortage does exist. However, as Ingersoll (2003) suggests, it should be examined at the organizational level – the issue is not whether the overall supply is adequate nationwide, instead, it is which school has staffing problems and a supply-demand imbalance.

What is teacher shortage? Based on the complexity of teacher shortages, it is necessary to examine the nature of teacher shortages because "misconceptions will lead to poor policy decision and waste of resources" (Gau, Palmer, Melnick, & Heffernon, 2003, p. 2), and, very likely, will intensify the already challenging situation. Generally, the term "teacher shortage" is used in its broad sense to mean "insufficient supply of qualified teachers" (Ingersoll, 2003, p. 3). This definition fails to capture the nature of the teacher shortage and has caused people to argue that overall there is a surplus between supply and demand. Other terms, such as "school staffing problems", "hiring challenge",

were used interchangeably with teacher shortage to refer to the inability of schools

adequately to staff classrooms with qualified teachers (e.g. Darling-Hammond, 2000b;

Jacob, 2007; Ingersoll, 2001b, p. 500).

Although it may be misleading, the nature of teacher shortage does result from the

imbalance between supply and demand. When demand in a specific geographical area or

school or subject area exceeds the supply available, a teacher shortage occurs. An

analysis released by Texas Higher Education Coordinating Board (2002) provides a

better understanding about how different definitions of teacher shortage influence the

estimates of the problem (Table 1).

Table 1

Determining the Teacher Shortage

		Shortage of Teachers	
	Methods Used	2000-2001	2001-2002
1	Number of classrooms without an adult to instruct students	0	0
2	Number of certified teachers available to teach	0	0
3	Number of teaching positions to be filled before the start of school	39,652	37,000
4	Number of teachers on emergency permit	14,440	14,488
5	Number of teachers not holding a standard certificate	21,077	33,899
6	Number of teacher full-time equivalents assigned to teach out of their field of expertise	42,237	47,053
7	Number of teachers assigned to teach out of their field more than 50% of the day using a subject area analysis	40,138	42,808
8	Number of teacher full-time equivalents assigned to teach out-of-field using a subject level analysis	45,155	56,551
9	Number of teachers assigned to teach out of their field of expertise for more than 50% of the day	41,197	50,381

Note. Adapted from *Texas strategic plan to address the teacher shortage* by Texas Higher Education
Coordinating Board (2002, p.4)

As Table 1 indicates, if teacher shortage is defined as the number of certified

teacher available to teach (overall supply) in Texas versus the number of teachers

currently employed in Texas public schools (demand), there would be no teacher

shortage, as method 2 shows. However, if teacher shortage is defined as the number of teacher full-time equivalents assigned to teach out of their field of expertise (supply available) versus the number of teachers fully certified in that particular subject area (demand), 47,053 teachers were needed in 2001-02 as indicated in method 6. As the estimate of teacher shortage in Texas varies from 0 to 41,197 in 2000-01 and 50,381 in 2001-02, the assumption of qualified teacher also changes from a certified teacher to a teacher fully certified to teach a particular subject area.

The different assumptions behind the definitions reflect another aspect of teacher shortage– namely, that the supply-demand imbalance is both quantitative and qualitative. The two aspects intertwine with each other and make the problem even more complicated. Some qualifications are easier to measure, for example, the type of certificate held, subject matter taught, the number of attempts to pass the state certification exams, SAT scores, the selectiveness of the undergraduate college attended, and GPA attained (Lankford, Loeb, & Wyckoff, 2002; Wayne & Young, 2003). Yet some qualifications are not so easily measurable. In spite of the number of studies on teacher qualities, no conclusive causal relationship between a teacher's academic ability and student achievement has been established (Merseth, 1983). Jacob (2007) suggests that people should use caution in relying on teacher characteristics to determine teacher effectiveness, warning that it is not clear that teachers who themselves have stronger academic backgrounds are actually better teachers.

So far, this chapter has reviewed evidence about the existence of a teacher shortage in American schools. It also examined how teacher shortage is defined and how different definitions can influence the different estimates of the problem. The following

part will examine the particular challenges of teacher shortages encountered in urban schools.

What challenges are urban schools facing? Although urban schools are not the only ones affected by teacher shortages, they are the primary ones. They are facing several challenges of staffing the classroom with highly-qualified teachers. First, urban schools, typically in low-income areas, experience more difficulties recruiting teachers than any other type of school (Ingersoll, 2001a, 2001b; Howard, 2003). According to NCES 2003-04 Schools and Staffing Survey (SASS) (Strizek, et al. 2006), 34.7% of central city schools had difficulty hiring a math teacher, compared with only 25.1% of suburban schools. In some states where there is a high need for teachers, the situation is even more severe. A study (Bohrnstedt & Stecher, 1999) conducted in California found that 80% of urban principals reported having difficulty hiring credentialed teachers, compared with only 52.2% of suburban principals and 49.9% of rural principals. Many teachers refuse to enter urban schools despite the fact that in some suburban school districts it is not uncommon to have a thousand applicants for every one teaching position that opens each year (Brown, 2002).

Second, urban schools have higher number of teachers who are teaching out of the certified subject fields or who are not certified at all. According to the survey of the Recruiting New Teachers, Inc. (RNT) (2000), more than 80% of urban districts hire non-certified teachers; close to 60% hire teachers with emergency permits; 60% use long-term substitutes; and over 12% of all newly hired teachers in urban districts enter classrooms without any training as a teacher. As a result, students who attend urban schools,

particularly schools that serve high-poverty, high-minority, and low-achieving students, are more likely than their peers elsewhere to have under-qualified teachers.

Third, urban schools have higher rates of teacher turnover. Ingersoll (2001b) found that urban schools as a whole had only slightly more turnover (14 percent) than did suburban (13 percent) and rural public schools (11.2 percent). However, he also found that high-poverty (i.e., poverty enrollment of 50% or more) public schools had much higher turnover rates (15.2 percent) than did more affluent (i.e., poverty enrollment below 15 percent) public schools (10.5 percent) (Ingersoll, 2001b). New teachers in urban districts exit or migrate at higher rates than their suburban counterparts do (Hanushek, Kain, & Rivkin, 1999). The pattern of teacher turnover has been found to be significantly related to the poverty level, enrollment of minority students, and student achievement levels (Hanushek, Kain, & Rivkin, 2004; Ingersoll, 2001a; Luekens, Lyter, Fox, & Chandler, 2004).

In order to understand why urban schools are facing these critical challenges, it is necessary to look at some important features of urban schools and how these characteristics contribute to the challenges of urban education.

What are the characteristics of urban schools? By definition, urban schools refer to schools located in large central cities. However, apart from geographical location, urban schools have quite a few other characteristics that distinguish them from both rural and suburban districts. These characteristics include poverty, a high-proportion of minority students, low student achievement, large numbers of English language learners, high student mobility, a higher rate of violence, and larger district size.

Urban location. Location of urban schools is associated with the teacher shortage because teacher labor markets are local in nature. Boyd, Lankford, Loeb, and Wyckoff (2005) studied the new teachers hired in New York public schools from 1999 to 2002 to examine the geography of teacher labor markets. They found that teachers seemed to prefer teaching close to where they grew up, or in similar areas. This makes urban districts an importer of teachers and may put them at a competitive disadvantage against other districts. In order to attract teachers, urban districts have to offer more competitive salaries and benefits. Otherwise, teachers with suburban hometowns who take jobs in urban areas are likely to be less qualified than those who teach in the suburbs. Further, Boyd et al. suggest that if graduates of urban high schools have not received adequate education, then the cities face a less-qualified pool of potential teachers. "Preferences for proximity lead to the perpetuation of inequalities in the qualifications of teachers. Inadequate education is a cycle that is difficult to break" (2005, p. 127). Such a finding is consistent with the study of Liu and colleagues' (Liu, Rosenstein, Swan, & Khalil, 2008). The researchers examined the nature and extent of the shortage of math teachers in six urban districts in Northeastern United States and found that these urban districts lost their most highly qualified candidates to other districts, which offered more money, particularly for math and science teachers.

Poverty. Apart from geographical location, poverty is probably the number one problem existing in urban schools. One indicator of poverty in the urban schools is the high unemployment rate, which was 7.5% in central cities as against 4.6% in the suburbs in 2000. Unemployed people were nearly five times as likely to be in poverty as employed people (27.9% versus 5.8%) (U.S. Census Bureau, 2003). Poverty in urban

schools is also marked by the high percentage of students who were eligible for free or reduced-price lunch. In the school year of 2006-07, 32.2% of students in city schools are eligible for free or reduced-price lunch, compared to 9.7% in the suburban schools, and 7.6% in the rural schools. Furthermore, more minority students (for example, 45.7% Black students and 46.7% Hispanic students) in urban schools are eligible for free or reduced-price lunch than White students (9.8 percent) (NCES, 2009). Poverty contributes to teacher shortages in several ways. It is related to poor school conditions, which are reported as one of the major causes of job dissatisfaction that leads to teacher turnover. Poverty also influences the extent to which parents are involved in their children's education, student discipline problems, and academic achievement, which are all found to be related to a teacher's career choice (Ingersoll, 2001a, 2001b). Teachers are more likely to leave poor, urban schools and transfer to schools located in wealthier communities (Johnson & Birkeland, 2003; Lankford, Loeb, & Wyckoff, 2002).

High proportion of minority students. Urban schools serve high concentrations of minority students. Approximately 64% of the students in central cities are from an ethnic minority, while in suburban areas or large towns there are only 32 percent. In addition, there are higher rates of minority students attending high-poverty schools. In 2006-07, among students attending city schools, 46% of Blacks, 47% of Hispanics, 27% of American Indians/Alaska Natives, and 22% of Asians/Pacific Islanders attended high-poverty schools, compared with 10% of Whites (NCES, 2009). The minority composition puts urban schools at a great disadvantage in attracting and retaining teachers, who are largely White and prefer to teach students who share similar characteristics such as social expectations, race, ethnicity, and language (Boyd, et al., 2005; Johnson & Birkeland,

2003; Strunk & Robinson, 2006). A higher rate of minority enrollment increases the probability that White teachers will exit a school (Hanushek, Kain, & Rivkin, 2004).

*Low student achievement***.** Urban students score lower on standardized achievement exams than their suburban counterparts. It is found that economically disadvantaged students systematically achieve less than more advantaged students in reading and mathematics, on an average falling some 0.6 standard deviations behind their more affluent counterparts (Rivkin, Hanushek, & Kain, 2005). Only 17% of fourth graders in central cities scored at the proficient level on the National Assessment of Educational Progress (NAEP) math exam, compared with 27% in suburban schools (Strizek, et al., 2006). And the achievement gap between minority and White students continues to exist. In 2007's NAEP reading exam, at the 4th-grade level, Blacks scored, on average, 27 points lower than Whites, and Hispanics scored, on average, 26 points lower than Whites. In the same year's NAEP math test, the achievement gap was 26 points between White and Black 4th-graders and 21 points between White and Hispanic 4th-graders (NCES, 2009). Research found that the teacher turnover pattern is closely related to student achievement. Teachers are found to move from schools serving a large number of low-performing students to schools serving a large number of high-achieving students (Hanushek et al., 2004; Ingersoll, 2001b; Johnson & Birkeland, 2003; Rivkin et al., 2005). Teacher transition rates for schools in the bottom achievement quartile are much higher (20 percent) than those in the top quartile (15 percent) (Hanushek et al., 2004).

Large number of English Language Learners. Urban schools educate many of the nations' immigrant children for whom English is a second language. The share of

students classified as limited English proficient is twice as high in central cities as it is in the suburbs (17.3 versus 8.2) (Strizek, et al., 2006). Moreover, the percentage of school-age children who spoke a language other than English at home and who spoke English with difficulty was related to such factors as race/ethnicity and poverty status. In 2007, among school-age children, 18% of Hispanics and 16% of Asians spoke a non-English language at home and spoke English with difficulty, compared with seven percent of Pacific Islanders, three percent of American Indians/Alaska Natives, and one percent each of Whites, Blacks, and children of more than one race. In terms of poverty status, a higher percentage of poor (10 percent) and near-poor (8 percent) school-age children spoke a non-English language at home and spoke English with difficulty than did non-poor school-age children (3 percent). English-speaking ability also varied by state and region of the country, with Texas (10 percent), Arizona (9 percent), and California (11 percent) being the highest states (NCES, 2009). The three states with the highest percentage of English language learners are also the states facing the most severe challenges of teacher shortages (California Department of Education, 2006; Gau, et al., 2003; Texas Higher Education Coordinating Board, 2002). The larger number of English language learners in urban schools increases teachers' reluctance to teach in urban settings for the concerns of communication difficulty and different cultural backgrounds.

High student mobility. Like students in rural schools in some areas of the nation, students in urban schools tend to have extremely high rates of mobility. An earlier study (Alexander & Entwisle, 1996) found that between 13% and 21% of school-age children in city schools relocated in 1982, and 25% left the city school system during the 5-year period. It also found that more moves were associated with poorer adjustment--lower test

scores, lower marks, elevated risk of retention, and receipt of more elaborate special education services. A recent study (Offenberg, 2004) found that the incidences of students transferring and exiting the Philadelphia School District were high. At an average school, 40.2% of the students completing first grade did not attend the same school continuously for the next three years. The range was from 6.l% of the students in the most stable school to 69.6% *in* the least stable school. The study also showed that the characteristics of students who are likely to transfer away from a school could affect school-based outcomes. Jacob (2007) suggests that when teachers are forced to adjust to accommodate an ever-changing set of students, the high mobility becomes disruptive not only for the "movers" but also for stable students. Student mobility not only increases the difficulty of teaching, it can also affect the overall achievement level of the school, and, therefore, is likely to cause a teacher to leave.

   High rate of violence. Urban areas have higher violence rates compared with non-urban regions. The rate of violent crime per 100,000 inhabitants was 506 in urban areas, compared with 377 in the suburbs, and only 202 in non-metropolitan counties (Federal Bureau of Investigation, 2004). Accordingly, the rates of violent crime at school were higher for urban students than for suburban students. In the 2005-06 school year, a larger percentage of city schools (53 percent) experienced 20 or more violent incidents than did urban fringe schools (42 percent) and rural schools (43 percent). Crime rate is also related to poverty level. As the percentage of students eligible for free or reduced-price lunch increased, so did the percentage of schools that experienced 20 or more violent incidents. In 2005-06, a higher percentage of high poverty schools (55 percent) had 20 or more violent incidents than mid-poverty schools (45 percent) and low poverty

schools (29 percent) (NCES, 2009). A high crime rate may discourage teachers from teaching in urban schools due to safety concerns.

Large district size. Urban districts are much larger than their suburban and rural counterparts are. Of the top 10 largest school districts that enroll 170,000 and more students in the United States, at least five are located in urban areas (NCES, 2009). In the school year of 2003-04, public schools in central cities enrolled 13,972,000 students in 1,400 districts, with an average enrollment of 9,980 students in each school district. In the same year, public schools in urban fringe and large towns enrolled 24,915,800 students in total 6,800 school districts, with an average enrollment of 3,664 students in each school district (Strizek, et al. 2006). The large size may be an advantage as well as a disadvantage. For example, large urban school districts may be able to negotiate a better rate for supplies and can organize large-scale recruitment. However, they are also likely to have complicated bureaucratic systems that impede them from quick and decisive actions (Jacob, 2007). The effect of large district size is found to be related to the location and poverty level of the school district. Larger district size appears to benefit suburban districts but poses problems for urban districts, perhaps because large urban districts are generally politically more complex and contentious than large suburban districts (Hannaway, 1993). Larger district size also appears to contribute to reform progress in significant ways. Districts and schools with lower levels of poverty appear to be making greater progress than those with higher poverty levels. The beneficial effects of large size are significantly lower when the district is also poor (Hannaway & Kimball, 1998). District size contributes to teacher shortages by the district hiring practices, which affect applicant attrition and teacher quality (e.g. (Levin & Quinn, 2003).

To summarize, urban schools are defined not only by their geographical location, but also by the students and communities they serve. The school characteristics, such as geographic location, high poverty, high proportions of minority students, low student achievement, large numbers of English language learners, high student mobility, and larger district size are all important contributors to the challenges of teacher shortages in urban schools. Teachers consistently move from schools with higher poverty, more students of color, lower student achievement levels, higher rates of behavior problems, and lower salaries to schools with more wealth and/or fewer minority students (Hanushek et al., 2004; Haycock, 2000; Ingersoll, 2001b; Johnson & Birkeland, 2003; Lankford et al., 2002; Scafidi, Sjoquist, & Stinebrickner, 2007).

However, teacher shortages are caused by many additional factors and complications. The next part of this chapter will review some of the major factors that were found to be related to teacher shortages in the United States.

Factors Contributing to Teacher Shortages

As discussed earlier in the chapter, teacher shortages should be examined at the organizational level rather than the national or even regional level. To be specific, teacher shortages occur when the demand for teachers in a particular geographical, organizational, or subject area exceeds the supply of teachers available within that particular area. A number of factors have been documented in the related literature that contributes to teacher shortages. Some of the factors are directly related to supply or demand of teachers, while others are found to influence both supply and demand. In spite of the ongoing discussions and arguments, four factors appear as most commonly cited reasons for the teacher shortage: an increasing student enrollment, teacher retirement, class-size

reduction policies, and teacher turnover. Each of these factors will be reviewed in the following part of this chapter.

Student enrollment. According to the NCES (Planty, Hussar, Snyder, Kena, KewalRamani, Kemp, Bianco, & Dinkes, 2009; Snyder, Dillow, &Hoffman, 2009) analyses, a pattern of annual increase of student enrollment began in 1985. Between 1985 and 2008, public school enrollment rose 26 percent, from 39.4 million to 49.8 million. An early report (Gerald & Hussar, 1998) projected that between 1996 and 2006, the total enrollment in public and private schools in the United States would increase from 51.4 million to 54.3 million, an increase of six percent from 1996. The most recent NCES survey indicated that the actual school enrollment increased to 55.4 million in 2006, an increase of 7.6% from 1996 (Planty, et al., 2009).

During the same period, public school enrollment increased from 45.6 million in 1996 to 49.3 million in 2006, an increase of 8.1 percent. However, such increase varied at elementary and secondary levels. Between 1996 and 2006, public secondary school (grade 9 through 12) enrollment rose 17 percent, compared with 4.5% for public elementary school (pre-kindergarten through grade 8) enrollment. It was projected that the growth pattern would continue through 2018, the last year for which the projected data are available. However, Public elementary school enrollment is projected to increase faster by 11.8% between 2006 and 2018, compared with 4.5% increase for public secondary school enrollment. The total public school enrollment is expected to gain 9.4% increase between 2006 and 2018 (Planty, et al., 2009).

Compared to public schools, private school enrollment grew more slowly during the period of 1996-2006, rising 3 percent, from 5.9 million to 6.1 million. As a matter of

fact, the percentage of elementary and secondary students enrolled in private schools declined from 12.4% in 1985 to 10.8% in 2008 (Snyder, et al., 2009). Private school enrollment is projected to reach 6.4 million by 2017, an increase of 5.1% from 2006 (Planty, et al., 2009).

The increase of public school enrollment also varies according to the regions and states. Between 1996 and 2006, the actual public school enrollment increased 3.1% in the Northwest, but it is projected to decrease by 5.4% by 2018. In the Midwest, public school enrollment increased slightly by 1.6% during the same time and is projected to rise very little (0.3 percent) by 2018 (Planty, et al., 2009).

Southern and Western regions, however, have experienced more increases in public school enrollment in the past decade and are expected to witness a higher rate of growth in the next decade. In the South, public school enrollment grew by 11.7% from 16.3million in 1996 to 18.2 million in 2006. By 2018, it is projected to rise by 18 percent, reaching 21.5 million. The growth rate among the Southern states is not even, ranging from a decrease of 2.4% in West Virginia to an increase of 32.1% in Texas. Three other states projected to experience higher growth rates are Georgia (25.2 percent), Florida (24 percent), and North Carolina (22.9 percent) (Planty, et al., 2009).

A similar trend was found in the West, in which public school enrollment increased from 10.6 million in 1996 to 11.9 million in 2006, an increase of 12.7%. By 2018, the public school enrollment in the region is projected to rise by 14.7% to 13.7 million. The imbalanced enrollment growth is represented in the West by Arizona, which is projected to have an increase of 42.2 percent, followed by Nevada (40.2 percent), Utah (29.7 percent), and Idaho (26.1 percent). However, Hawaii is projected to have a decrease

of 5.7% for enrollment in its public schools by 2018. Although California is projected to have a moderate increase (8.6 percent) by 2018, it will continue to be the state with the largest public school enrollment in the United States, educating 6.96 million students. Texas will remain as the second largest state, though the gap between the two states will narrow from 1.87 million in 2006 to 0.88 million in 2018 (Planty, et al., 2009).

Consistent with the overall growth of school enrollment, the nation is also experiencing increased enrollments of minority students and students with limited English proficiency. Between 1972 and 2007, the percentage of public school students who were White decreased from 78% to 56%. During that period, the percentage of students from other racial/ethnic groups increased from 22% to 44%. The increase differed by region. In each year, the West and South had larger enrollments of minority students than other regions. The enrollment of minority students in public schools in the West increased from 27.2% in 1972 to 57% in 2007, making it the region with the largest minority enrollment. Over the same period, minority student enrollment in the South increased from 30.3% to 48.9%. In spite of the overall increase of minority student enrollment, the Midwest has maintained the highest percentage of White student enrollment, though it decreased from 87.5% in 1972 to 72% in 2007(Planty, et al., 2009).

The percentage of public school students who spoke a language other than English at home increased from nine percent in 1979 to 20% in 2007. Among them, the percentage of students who spoke English with difficulty increased from three percent to a little more than five percent. Seventy-five percent of those who spoke English with difficulty spoke Spanish. The increases varied by race/ethnicity, poverty status, region and states. For example, more Hispanic (18%) and Black students (16%) spoke English

with difficulty than Asian/Pacific Islanders (seven percent). In addition, higher

percentages of poor (10%), and near-poor (eight percent) school children spoke a non-

English language at home and spoke English with difficulty than did their non-poor peers

(3 percent). The percentage of school students who spoke a non-English language and

who spoke English with difficulty was about one percent in several states, including

Maine, New Hampshire, Vermont, South Dakota, Mississippi, West Virginia, Montana,

and Wyoming. However, it was higher in the southern state of Texas (10 percent) and in

several western states, including Arizona (9 percent) and California (11 percent) (Planty,

et al., 2009).

The increased student enrollment increased the demand for teachers. Although the

numbers of public school teachers increased much faster between 1996 and 2006 than the

student enrollment (19% vs. eight percent) (Snyder, et al, 2009), teacher shortages

continued. For example, full-time school teachers with a regular or standard state

certificate decreased from 91% in 1993–94 to 83% in 2003-04, while the percentages

with other types of certifications (for example, provisional certificates, probationary

certificates, temporary certificates, and emergency certificates) were each higher in

2003–04 than in 1993–94 (U.S. Department of Education, NCES, 2007). As discussed in

the previous part of the chapter, if teacher shortage is defined as "number of teachers not

holding a standard certificate" (Texas Higher Education Coordinating Board, 2002, p.4),

then there was 17% shortage of school teachers in 2004 nationwide. This did not include

those who held standard certificate but taught outside the certified field.

The patterns of student enrollment increases are also consistent with teacher

shortages documented in the related literature. First, both occurred at about the same

time. The School and Staff Survey data of the NCES (U.S. Bureau of the Census, 1998) showed that demand for teachers has increased since the mid-1980s, when student enrollments started to increase. Substantial numbers of schools with teaching openings have experienced difficulties with recruitment. Forty-seven percent of both 1990-91 and 1993-94 of those with openings reported some degree of difficulty finding qualified candidates in one or more fields.

Second, there were higher numbers of teacher shortages at the secondary level than at the elementary level, which was possibly related to the higher increase of student enrollment at secondary public schools. Ingersoll (1999) found out-of-field-teaching to be wide-spread at the secondary level, especially in schools serving a large share of low-income students. Overall, he found that 57% of physical science teachers, 53% of history teachers, and 33% of secondary math teachers lacked degrees in the subjects they were teaching.

Third, teacher shortages were found to be more pervasive in several states in the South and West. Such pattern echoed the larger increase of school enrollment in these states, particularly the uneven growth of minority students and students who spoke a non-English language at home (Gau, et al., 2003; California Department of Education, 2006; Texas Higher Education Coordinating Board, 2002; U.S. Department of Education, NCES, 2007). For example, California was estimated to employ 52,000 underprepared teachers in its school classrooms in 2012-13, which was approximately 16% of the workforce that year. Even when interns were included in the supply of teachers, the gap between supply and demand was projected to be 38,000 teachers, or 12% of the workforce (Esch, et al., 2004). Teacher shortages were so severe that the incentives for

completing a teacher education program before assuming responsibility for a classroom are disappearing. Increasingly teacher education institutions were serving students who were already full-time teachers of record. An earlier survey of California teachers with fewer than 5 years of experience found that more than 50% of those surveyed did some or all of their student teaching while working as the teacher of record in their own classroom (Shields et al., 2001).

In Arizona, the rapid growth of school-age Hispanic children required more teachers with special language training. Although math and science were considered as the high need subject areas, the biggest hiring challenge for schools was finding enough certified special education teachers (Gau, et al., 2003). Texas, too, has been facing great challenges of teacher shortages. According to the Texas Public Policy Foundation (2002), in large urban school districts, more than 30% of classes in the following subject areas are taught by teachers who are certified, but not certified to teach the subject they are teaching: elementary bilingual/ESL, secondary math, elementary and secondary special education, secondary science, and secondary foreign language.

Finally, the increased enrollment of students from racial/ethnic minority groups created increasing demand for minority teachers. Although the percentage of full-time teachers who were racial/ethnic minorities increased from 13% in 1993-94 to 17% in 2003-04 (U.S. Department of Education, NCES, 2007), the students who were racial/ethnic minorities grew at a higher rate during the same time period (34.2% vs. 42.6%) (Planty, et al., 2009). This cultural divide between teachers and their students was further complicated by the lack of sustained attention to preparing teachers to teach

across lines of race/ethnicity, language, and social class in most teacher education institutions (Zeichner, 2003).

Overall, student enrollment in American schools started to increase in the middle of the 1980s and this increase pattern is projected to continue through 2018. The increases varied by school level, geographical regions and states, race/ethnicity, and English proficiency. The increased enrollment caused increased demand for teachers and was consistent with teacher shortages reported in the existing literature. Student enrollment increase is not the only cause of teacher shortage, but it is one of the major factors which contribute to teacher shortages. Teacher retirement is another factor frequently reported to have increased demand for teacher, in combination with increased school enrollment.

Teacher retirement. Increasing teacher retirement occurred when a large number of teachers employed during the baby boom enrollment years approached retirement. The fact is indicated by the percentage of teachers who are over age 50 or 55 and have at least 20 years teaching experience (American Federation of Teachers (AFT), 1998; Hussar, 1999). In 1996, 25.8% of school teachers passed the age of 50, compared with 21.2% in 1986 (AFT, 1998). According to NCES data (Coopersmith, 2009), in 2007, the percentage of public school teachers who were over the age of 50 increased to 32% and 18.7% were past the age of 55.

The age distribution of public school teachers varied by region, school level, and school type (Coopersmith, 2009). In 2007, there were more teachers over the age of 50 in central city schools (34.3 percent) than in suburban schools (30.4 percent). In addition, there were more teachers past the age of 50 in secondary public schools (33.5 percent)

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than in public elementary schools (30.8 percent). Moreover, urban public schools had few teachers over the age of 55 (21 percent) than private schools (26 percent), and the average age of teachers in urban public schools was younger than in private schools (42.9 vs. 44.2). Although age distribution did not differ very much among public schools by poverty levels, there was a large gap between the high- and low-poverty private schools. There were more teachers over the age of 50 in low-poverty private schools (41.8 percent) than high-poverty private schools (25.9 percent), and the average age of teachers in low-poverty private schools was much older compared to those in high-poverty private schools (45.1 vs. 40.8).

The percentage of teachers past the age of 50 is usually used to predict the number of teacher retirements and the need for teachers. For example, using an algebraic model based on SASS teacher demographic data of 1993-94 and 1994-95, Hussar (1999) projected that 765,000 teachers would retire from 1998-99 to 2008-09, and at least 2.2 million teachers would be needed due to teachers leaving the work force and the predicted enrollment increases. In 2008, the National Commission of Teaching and America's Future (NCTAF) (2008) projected that in 2008-2009, more than half of the teachers would be over age fifty in 18 states and the District of Columbia. The average teacher retirement age is 59. Seventeen more states are right behind the first 19 states with over 45% of their teachers over age 50. It predicted that America would experience the biggest wave of retirement in history which would reach the peak in 2010-11 school year, when one third, or more than 100,000 of the veteran teachers could leave.

Studies at the local level echoed the national trend of increasing teacher retirement. One study (Esch, et al., 2004) reported that in 2003-04 California had

approximately 60,000 teachers older than 55 and 106,000 teachers older than 50. If all

these teachers left the profession at the average teacher retirement age of 60, California

would need to replace 60,000 teaches, or 20% of the state's current teaching force, in the

next 5 years. Over the next 10 years, the state would need to replace 106,000 teachers, or

more than 30% of the teacher workforce. The 2008 progress report on supply and

demand in New York State (State Education Department of New York, 2008) indicated

that in 2006-2007, 18% of full-time employed teaching positions were held by teachers

who were age 55 or older, a larger share than in prior years. There were large percentages

of this age cohort in every subject area and region. All of these studies suggest that more

teachers will be needed to replace the many who will retire soon.

Along with the increasing rate of teacher retirement was a concern that it

contributes to the shortage of teachers. Many studies cited teacher retirement as one of

the major factors that created greater demand for teachers (for example, Howard, 2003;

Murnane & Steele, 2007; Zeichner, 2003). In a survey conducted by AFT (1998),

increasing normal teacher retirement was reported by 47% of the participating districts as

one of the major reasons for the teacher shortage, next to increasing numbers of special

needs students (82 percent), fewer graduates from teacher education institutions (82

percent), and increasing enrollment and class size reduction efforts (50 percent). The

results from the 2004-05 NCES Teacher Follow-up Survey (Marvel, Lyter, Peltola,

Strizek, & Morton, 2006) indicated that retirement was rated by 31.4% public school

teachers as important to their decision to leave a K-12 teaching position.

While there is evidence to support the role of teacher retirements as contributing

to the teacher shortage, there also exist misconceptions. For example, some research

referred to the U.S. Education Department's projection of teachers needed to be hired between 1998 and 2008 as "a shortage of 2.2 million teachers" (Spencer, cited in Pushikin, 2001, p114). In a recent NCES symposium, Hussar (2007) pointed that these projections measured the demand for newly hired teachers and that it was assumed that the supply of newly hired teachers would equal the demand, and, therefore, should not be interpreted as predicting teacher shortages. Ingersoll (2001b) pointed out that although teacher retirements had increased in the recent years, it accounted for a very small proportion of the teachers who left teaching. His analysis indicated that retirement was among the least prominent reasons for teacher turnover, which accounted for 27% of those who left the occupation and only 12% of the total turnover. However, he further found that urban, high-poverty public schools had far higher levels of retirement turnover than do small private schools (32% vs. eight percent).

Another reason for cautious interpretation of teacher retirement data is that some retired teachers may seek active re-employment in teaching. A recent survey (MetLife Foundation/Civic Ventures, 2005) on 1000 people of age 50 and 70 found that 62% of baby boom teachers said they would consider working in a different capacity in the field of education post-retirement because they wanted to stay active and productive, and continue to help students. Re-employment is particularly likely among the early retirees, who retired earlier than the traditional expected retirement age. According to NCES 1994–95 Teacher Follow-up Survey (Hussar, 1999), fewer than four percent of teachers under age 50 retired; 53% of those in their fifties retired; and more than 90% of teachers 60 years old and over retired.

Early retirement was partially caused by the retirement pension system, apart from personal and/or family factors. Costrell and Podgursky (2007) found that there were peaks and valleys in pension wealth accumulation that operate over the course of a teacher's career in a representative set of state systems. In many states, teachers would accumulate very little pension wealth until their early 50s, at which point they could suddenly reap very large increases. Nevertheless, if they stay much beyond such a pension "peak", they could suffer from declines in pension wealth—punishing them for staying too long. They concluded that retirement pension plans encouraged early retirement and shorten, rather than lengthen, professional careers. Furgeson, Strauss, and Vogt (2006) found that Pennsylvania teachers' retirement decisions were highly responsive to incentives for early retirement. Costrell and Podgursky (2007) noticed that the incentive to "retire" at or near a pension spike became more pronounced since there was not a downside if employment could continue. Retired teachers could be re-employed from part time to full time jobs, plus there was no obstacle to retirees resuming employment in other fields, or even in teaching itself, by crossing a state line or a district boundary to work in a different pension system. In an AFT survey, about 37% of districts reported that the impact of early retirement incentives was one of the causes for the teacher shortage (AFT, 1998).

In summary, teacher retirement has increased during the past few decades and the increase varies by region, school level, school type, and poverty level. Although teacher retirement has been used in predicting the number of teachers needed to be hired, the number predicted should be not interpreted as the number of teacher shortages. This is because teacher retirement only accounts for a small proportion of teacher attrition.

Besides, some retired teachers, particularly those who retire earlier, remain active in the employment market. Policy makers need to consider appropriate strategies to attract these valuable resources in combating teacher shortages. They also need to re-examine the current retirement system to avoid losing experienced teachers by encouraging early retirement.

Class-size reduction policies. The class-size-reduction efforts began in the middle of 1980s with the well-designed longitudinal study of Project STAR (Student/Teacher Achievement Ratio) (Tennessee State Department of Education, 1990). The 79 project schools, more than 300 classrooms and 7,000 students, were followed through a four years of experience in the given class size -- a small class size with 13-17 students per teacher, a regular-sized class with 22-25 students per teacher, or a regular class with 22-25 students per teacher plus a full-time teacher aide. Teachers and students were randomly assigned to the three different kinds of classes in order to ensure that the study was not biased by who was in which type of class. The study found the students in the smaller classes outperformed the students in the larger classes in reading and math. The state put the findings to use by implementing smaller class sizes in 16 of its poorest school districts at the K-3 grade levels. The results indicated that the participating districts moved from near the bottom of school district performance in Tennessee to near the middle in both reading and mathematics for second grade (Finn, 1998).

The findings from the Tennessee studies promoted class-size-reduction-efforts in other states. Many of the efforts continued to show positive effects of small class in student achievements. For example, an initiative to reduce class size in North Carolina found that students in small classes (15 or fewer) outperformed comparison group in

grades 1-3 on both reading and math test scores (Egelson, Harman, & Achilles, 1996). The SAGE (Student Achievement Guarantee in Education) program in Wisconsin was an effort to reduce class size in K-3 grades in school districts serving students from low-income families. Research found that SAGE first-grade students consistently performed better than students in the control group in mathematics, reading, and language arts. Moreover, the achievement gap lessened between White and African-American students in the SAGE smaller classes in the first grade (Molnar, Percy, Smith, & Zahorik, 1998).

However, the statewide CSR (Class Size Reduction) reform started in California in 1996 generated inconclusive results in terms of the relationship between the reform and student achievement. Besides, CSR was associated with declines in teacher qualifications and a more inequitable distribution of credentialed teachers. The proportion of K-3 teachers who were not fully credentialed (e.g. teachers with an intern or emergency credential) increased from 1.8% before the program to 12.5% in the second year of the program. This was particularly the case in schools serving a higher percentage of low-income and minority students partially because these schools were slow to implement CSR, and more certified teachers had been hired elsewhere. By 1998–99, K–3 teachers without full credentials increased to 21.2% in schools with at least 30% low-income students, but to only 4.3% in schools with less than 7.5% low-income students (Bohrnstedt & Stecher, 2002).

The class-size reduction policies contribute to the teacher shortages in a number of ways. One of the most apparent impacts is that cutting class size means hiring more teachers. With the looming shortage of qualified teachers, specifically in the states and districts where there was already a shortfall of teachers, recruiting more teachers may

become increasingly difficult (Biddle & Berliner, 2008). Between 1995-96 and 1998-99, the total number of K-3 teachers in California increased 46% (Bohrnstedt & Stecher, 2002). In order to meet the increased demand, many districts hired teachers without full credentials. This may have had a counterproductive effect against the state efforts to improve teacher quality by raising teacher preparation and licensure standards, as well as the goal of improving student achievement by reducing class size. Robbie, Finn, and Harman (1998) noted that an adequate supply of good teachers was critical to achieving the small-class effect and that no organizational arrangement, including small class size, can compensate for poor teaching. This argument was supported by the fact that, even in small classes, some teachers were more effective than others were.

Class-size reduction also contributes to the turnover of teachers. There had been concerns that class-size reduction would result in two types of teacher mobility – teachers from urban schools moving into suburban and upper grade elementary teachers moving into K–3 (Bohrnstedt & Stecher, 2002). For example, new openings in middle-class neighborhood schools may attract teachers who were working in the high-poverty areas if they had the appropriate levels of seniority. Teacher quality in the middle-class schools would not decline. However, teacher quality in the high-poverty school may fall if that school was unable to find suitable replacements (Jepsen & Rivkin, 2002). While this was not the focus of the majority of class-size reduction studies, the California Department of Education (Bohrnstedt & Stecher, 2002) found CSR had only a modest effect on teacher mobility. There was some initial increase, but the effect was small and soon disappeared. Approximately seven percent of first-grade teachers in 1995–96 had been teaching in a different school the previous year. That percentage rose to 11% in 1996–97 and dropped

back down to five percent by 1999–00. Further studies are needed to find out whether there is a stable relationship between class-size reduction and teacher mobility, given the fact that teachers have been found consistently moving from schools serving low-income and more minority students to those serving high-income and fewer minority students.

It is interesting to notice that class-size reduction occurred almost at the same time, in the middle of 1980s, as student enrollment began to increase and the nation's schools started to experience large waves of teacher retirements. The convergence of the three factors contributed, to a large extent, to the increasing demand for teachers. However, there is argument that the teacher shortage was only partly accounted for by the student enrollment increase or teacher retirement. The real problem is that teaching is like a "revolving door" –"an occupation in which there are relatively large flows in, through, and out of schools in recent years" (Ingersoll, 2001b, p. 514). This phenomenon is recognized as teacher turnover and has been extensively studied as a dominant cause for the teacher shortage.

Teacher turnover. In the related literature, "turnover" is used as an umbrella term to describe "the departure of teachers from their teaching jobs" (Ingersoll, 2001b, p. 500). To distinguish different types of departure, researchers often use the term "attrition" to refer to the phenomenon of teachers leaving the profession, and the term "migration" or "mobility" to describe the transfer of teachers from one school to another (Darling-Hammond, 2000; Hanushek, 2004; Ingersoll, 2001b; Luekens, Lyter, & Fox, 2004; Marvel, Lyter, Peltola, Strizek, & Morton, 2006). They also label those who continue to teach in the same school from one year to the next as "stayers," those who migrate as

"movers," and those who leave teaching altogether as "leavers." (Johnson & Birkeland, 2003; Luekens et al., 2004)

Teaching is found to have a relatively higher turnover rate compared to other occupations. The national levels of total employee departures in the United States averaged 11% annually in the 1990s (Bureau of National Affairs, 1998). However, the turnover of school teachers was 13.2% from 1991 to 1992, and 14.3% from 1994 to 1995 (Ingersoll, 2001b). Moreover, teacher turnover has been increasing. In 2004-2005, 8.1% public school teachers moved to a different school and 8.4% left the teaching profession (Marvel, et al., 2006). As indicated in Table 2, in 2004-05, 16.5% American public school teachers left their schools. In order to have an in-depth understanding of teacher turnover, three issues will be discussed in detail in the following paragraphs: What characteristics are evident in the schools left behind? Who leaves? And why do they leave?

What schools are left behind? First, urban schools are more likely to experience a higher turnover rate compared to their suburban and rural counterparts. In the 2004-05 school year, teacher turnover was 20.2% in urban public schools compared to 15.2% in suburban schools and 15% in rural schools nationwide (Marvel, et al., 2006). In urban districts in the New York City Region, 38% of teachers were in the same school five years later, compared to 46% in suburban schools (Lankford, Loeb, Wyckoff, 2002).

Second, smaller schools are more likely to lose teachers than larger schools (Ingersoll, 2001b; Luekens, et al., 2004; Marvel, et al., 2006). Ingersoll (2001b) found an enrollment difference of 100 students was associated with a four percent difference in the odds of teachers departing. The most recent NCES Teacher Follow-up Survey showed

Table 2

Public School Stayers, Movers, and Leavers: 2004-05

School or teacher characteristics	Total number	Stayers (%)	Movers(%)	Leavers(%)
Total	3,214,900	83.5	8.1	8.4
Age				
Less than 30 years	593,200	76.3	14.7	9.0
30–39 years	765,900	84.2	9.0	6.8
40–49 years	847,000	87.6	7.1	5.3
50 years or more	1,008,800	83.7	4.5	11.8
Experience				
1–3 years	598,300	77.1	14.8	8.1
4–9 years	867,200	82.7	9.4	7.9
10–19 years	812,600	88.2	6.3	5.5
20 years or more	908,600	84.9	3.9	11.2
Gender				
Male	783,700	83.9	8.3	7.7
Female	2,431,200	83.4	8.1	8.6
Race/ethnicity				
White, non-Hispanic	2,726,900	83.9	7.9	8.2
Black, non-Hispanic	242,500	79.3	9.7	11.0
Hispanic	137,800	80.6	10.1	9.3
Asian, Pacific Islander	49,300	81.8	7.9	10.3
American Indian/Alaska Native	24,700	93.1	5.0	1.9
Certification type*				
Regular or standard	2,814,900	84.5	7.2	8.2
Probationary	116,800	77.5	14.8	7.7
Provisional or temporary	206,700	77.2	15.0	7.8
Waiver or emergency	26,900	76.3	9.9	13.7
Main assignment field				
Early childhood/general	1,127,900	84.5	7.4	8.1
Special education	412,700	78.9	11.1	10.0
Arts/music	193,300	84.7	9.3	6.0
English/language arts	323,300	83.2	9.0	7.8
Mathematics	238,000	84.6	8.6	6.8
Natural sciences	214,000	88.5	5.6	5.9
Social sciences	187,700	85.6	6.0	8.4
Other	518,000	81.3	8.0	10.7
Community type				
Central city	853,300	79.8	10.3	9.9
Urban fringe/large town	1,747,600	84.8	7.3	7.9
Rural/small town	614,000	85.0	7.3	7.7
School enrollment				
Less than 200	146,300	80.3	10.0	9.7
200–499	990,100	82.2	8.3	9.5
500–749	830,500	84.8	8.2	7.0
750 or more	1,248,000	84.0	7.8	8.2
Minority enrollment				
Less than 10%	926,500	86.4	5.6	8.1
10–34%	816,400	85.5	7.8	6.7
35% or more	1,472,000	80.6	9.9	9.5
Students eligible for free or reduced-price lunch				
Less than 15%	650,100	85.8	6.4	7.9

15–49%	1,433,700	85.4	7.2	7.4
50% or more	1,074,900	80.0	10.3	9.7

Note. A probationary certificate is issued after an individual satisfies all regular certification requirements except the completion of a probationary period. A provisional certificate is given to individuals who are still participating in what states call an "alternative certification program". Temporary certification requires some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained, and a waiver or emergency certificate is issued to individuals with insufficient teacher preparation who must complete a regular certification program in order to continue teaching.
Adapted from *Teacher Attrition and Mobility: Results from the 2004–05 Teacher Follow-up Survey* (NCES 2007–307) by Marvel, J., Lyter, D.M., Peltola, P., Strizek, G.A., & Morton, B.A. (2006). U.S. Department of Education, National Center for Education Statistics.

the turnover rate in small public schools (less than 200 student enrollment) was much

higher than larger public schools (750 and more) (19.7 vs. 16 percent).

Third, teachers consistently transferred to schools where their salaries are higher

(Hanushek et al., 2004; Johnsons & Birkeland, 2003; Theobald, 1990). For example, in

1999-2000, approximately 34% of public school movers earned $40,000 or more, in

comparison to 50% of public school stayers and leavers. Additionally, both public school

movers and leavers were more likely to earn less than $30,000 (23% and 21%,

respectively) compared to public school stayers (16%). In Texas, young teachers who

switched schools gained an average of 0.4% in salary. After variables including region,

community type, district average achievement score, and the district average percentages

of Black, Hispanic and low income students were controlled, the average adjusted

salaries increased by 25% more than raw salaries (0.5% vs. 0.4%) (Hanushek et al., 2004).

Finally, teachers, particularly new teachers, systematically depart schools serving

low-income, low-achieving and high-proportion minority students (Boyd et al., 2005;

Hanushek et al., 2004; Johnsons & Birkland, 2003). In Johnson and Birkeland's study

(2003), the average change in student eligibility for free or reduced-priced lunch from the

movers' first schools to their second was 46 percentage points. Theobald (1990) found

that the decision to stay in teaching was negatively correlated with the percentage of

Indians and Asians in the student population. Scafidi and colleagues (2007) found that the wage increases experienced by teacher who changed schools were not substantially higher than the increase experienced by teachers who stayed. However, teachers who moved to new schools experienced significant increases in test score and decreases in poverty and the proportion of Black students.

Who leaves? Research found that younger teachers and teachers with less teaching experience are more likely to change schools or leave teaching compared to their middle-aged colleagues (Darling-Hammond, 2000; Ingersoll, 2001b; Luekens et al., 2004; Marvel et al., 2006). For example, the NCES data (Marvel et al., 2006) showed that the turnover among teachers less than 30 years of age was 31.9% compared to 19.4% for teachers in their 30s and 15.7% for those in their 40s. Similarly, teachers with less than 3-year experience had a higher turnover than teachers with more than 4-9 and 10-19 years of experience (29% vs. 22.8% vs. 11.6%). A recent 3-year longitudinal study (Johnson & Birkland, 2003) in Massachusetts public schools found 14% of teachers moved to new schools and 12% left teaching after the first year. Eighteen percent moved to new schools and eight percent left teaching after the second year. This is consistent with the finding that half of the new teachers had either changed schools or left teaching completely by the end of the third year (Darling-Hammond, 2000; Ingersoll, 2001b).

In addition to age and experience, researchers found a number of other characteristics among the teachers who switched schools or left teaching. Ingersoll (2001b) found that male teachers were more likely to stay than female teachers; minority teachers were slightly more likely to stay than non-minority teachers; and teachers of

general education were more likely to stay than special education teachers. However, only the general education effect was significant (Ingersoll, 2001b).

Ingersoll's finding on gender is supported by some other studies (Luekens et al., 2004; Marvel et al., 2006) but inconsistent with others. For example, Henke, Chen, and Geis's report (2000) indicates that, among teachers, college graduates who started teaching in 1992-1993, 23.5% males left teaching in 1997 compared to 19.5% of female teachers. Johnson and Birkeland's (2003) study also reflected the similar pattern that female teachers were slightly more likely than male teachers to stay.

Ingersoll's finding on race/ethnicity is echoed by many studies (e.g. Hanushek et al., 2004; Scafidi et al., 2007) which found that White teachers were more likely to leave schools serving a high concentration of minority students. Besides, Black and Hispanic teachers were less likely to exit a school if there are higher proportions of Black and Hispanic students. However, an increase in the percentage of teachers of one's own race increased the likelihood of attrition for both Asian and Hispanic teachers (Strunk & Robinson, 2006). The effect of workplace racial diversity in turnover was also documented in a more recent study (Sohn, 2009) which found young White teachers were more likely to stay in their original schools when the proportion of minority teachers is smaller, while the opposite pattern emerged for older teachers.

The high turnover of special education teachers has been studied by a number of researchers (Billingsley, 2004; Gersten, Keating, Yovanoff, & Harniss, 2001). Although the NCES data did not find that math and science teachers are more likely to leave schools (Ingersoll, 2001b; Luekens et al., 2004; Marvel et al., 2006), the turnover of math and science teachers was documented in other studies (Darling-Hammond, 2000;

Patterson, Roehrig, & Luff, 2003). National Science Teachers Association's (NTSA) survey (2000) indicated that 35% of the teachers' schools and districts faced frequent science teacher turnover. High schools had greater difficulty finding qualified science teachers (61%) than middle schools (48%).

Beyond demographic characteristics, researchers found that teachers who stayed have different qualifications in comparison with those who changed schools or left teaching. Teachers who held traditional or standard certificates were less likely to depart than their colleagues who had alternative certificates (Darling-Hammnd, 2003: Henke et al., 2000; Marvel et al., 2006). In addition, teachers who transferred to other schools and teachers who left the profession were less likely to have failed the certification exam and more likely to have graduated from a competitive college than those who remained in the same school (Lankford et al, 2002). Furthermore, Henke et al. (2000) found that graduates with college entrance exam scores in the top quartile were twice as likely as those with scores in the bottom quartile to have left without returning. Although there is no conclusive evidence that these qualifications determine teacher competence or effectiveness, it is of concern that the best and brightest are more likely to exit teaching.

Based on the above research findings, it is evident that certain teachers are more likely to leave teaching, and certain schools are more likely to lose their teachers. In order to retain the teachers and decrease the demand caused by turnover, it is necessary to understand what causes teachers to leave. Otherwise, "policymakers and practitioners will continue to introduce what they believe to be promising recruitment and retention strategies, and new teachers will continue to abandon schools, districts, and the profession" (Johnson & Birkeland, 2003, p. 588).

Why do teachers leave? Teachers reported a number of factors as the reasons for

leaving their schools, including personal factors (e.g. pregnancy, child rearing, health

problems, and family moving), retirement, pursuit of other jobs, or job dissatisfaction

(Ingersoll, 2001b; Luekens et al., 2004; Marvel et al., 2006). Ingersoll (2001b) found that

33% of the movers and 45% of the leavers reported personal factors as the reason for

their departure. In addition, retirement accounts for 27% of the reasons for the leavers.

Although the percentages are considerably high, there is not much that can be done to

retain those teachers who leave their schools for personal reasons. Relatively speaking, it

is of greater significance to examine the factors contributing to dissatisfaction of teachers

who exit.

The following discussion first examines several issues related to teacher efficacy.

Next, it reviews studies that investigate the influence of salary on teacher turnover. It then

examines how working conditions affect teachers' decisions to stay or to leave teaching,

focusing on the facilities and supplies, as well as teaching assignment. This is followed

by the discussion of the relationship between colleagues, school leaders, students and

teacher turnover respectively. Finally, it discusses how hiring practices contribute to

teacher turnover.

Teacher efficacy. In Ingersoll's study, 27% of the movers and 25% of the leavers

reported job dissatisfaction as the reason for their leaving. Such dissatisfaction was

caused by low salary, a lack of support from the administration, student discipline

problems, lack of student motivation, and lack of influence on decision-making (Ingersoll,

2001b). The findings were consistent with other studies (AARP, 2003; Ingersoll, 2004;

Johnson & Birkeland, 2003). Johnson and Birkeland (2003) found that teachers'

dissatisfaction with their job was mainly caused by their sense of efficacy, that is, the belief of whether or not they were successful or effective in their classrooms. They noticed that central to all of the teachers' explanations of their decisions to stay in their schools, to move, or to leave teaching was "whether they believed that they were achieving success with their students" (Johnson & Birkeland, 2003, p.593). Teachers reported that achieving success in their teaching depended largely on a set of school-site factors – the role and contributions of the principal and colleagues, the teachers' assignments and workload, and the availability of curriculums and resources. "In deciding whether to stay or leave, teachers weighed these factors and judged to what extent shortcomings in one or more compromised their chances of teaching effectively" (Johnson & Birkeland, 2003, p. 594).

Bandura (1986, 1997) postulated four sources of self-efficacy information: mastery experience, physiological and emotional cues, vicarious experience, and verbal persuasion. Other researchers found that student teachers' personal motivation, particularly their affection for pupils and their desire to improve their teaching performance, their beliefs about control, and their personality characteristics were also important sources of teaching efficacy (Poulou, 2007; Woolfolk & Hoy, 1990). The relationship between motivation and self-efficacy was also documented within the motivation literature (see e.g. Linnenbrink & Pintrich, 2003; Watt Richardson, 2007). In addition, university training also played an important role in the formation of teacher efficacy in terms of the frequency of course attendance, the type and number of courses offered during teacher training programs, and teaching practice (Poulou, 2007; Yeung & Watkins, 2000).

Teacher efficacy, however, is context-specific. Teachers do not feel equally efficacious for all teaching situations. Tschannen-Moran, Hoy, and Hoy (1998) suggest that teachers may feel efficacious for teaching particular subjects to certain students in specific settings, but may feel more or less efficacious under different circumstances. Therefore, in making judgments about efficacy, teachers must assess the teaching task and its context. The analysis of teaching task includes such factors as the students' abilities and motivation, appropriate instructional strategies, managerial issues, the availability and quality of instructional materials, access to technology, and the physical conditions of the teaching space. Contextual factors include the leadership of the principal, the climate of the school, and the supportiveness of other teachers. In addition to analysis of teaching task and its context, teachers also assess their strengths and weaknesses in relation to the requirements. Tschannen-Moran and colleagues (Tschannen-Moran, Hoy, & Hoy, 1998) argue that teacher efficacy is partially determined by the individual's comparative judgment of whether his or her current abilities and strategies are adequate for the teaching task in question. Whether the person believes that these abilities and strategies are fixed and immutable or can be acquired and improved through additional training and experience affects a teacher's efficacy beliefs.

Research shows that teacher efficacy have a number of effects on teaching and learning, for example, teachers' efforts, commitment to and persistent in teaching, classroom performance, as well as students' motivation and achievements, to name just a few. Teachers with higher levels of self-efficacy were less critical of students when they made errors (Ashton & Webb, 1986), less inclined to refer a difficult student to special education (Meijer & Foster, 1988; Podell & Soodak, 1993), and more willing to support

and cope with students' emotional and behavioral difficulties (Poulou & Norwich, 2002).

Gibson and Dembo (1984) predicted that teachers who had high efficacy would persist longer, while teachers who had low efficacy were expected to give up readily if they did not get results. Consistent with these predications and the findings in the literature of teacher turnover, Glickman and Tamashiro (1982) found teachers who left teaching were found to have significant lower teacher efficacy than teachers remained in teaching. A recent study (Scharlach, 2008) found that teachers who have high self-efficacy were also more likely to have high expectations for their students and more likely to assume personal responsibility when expectations were not met. Although they believed that student factors can interfere with progress, they did not cite student factors as the reason for the students' achievement. Tschannen-Moran et al. called this belief "resilient sense of teacher efficacy" (1998, p.233). Such efficacy belief explains, at least in part, why some teachers continue teaching in public schools in urban settings while others left.

Bandura (1997) proposes two features that define the process of development of efficacy beliefs. One is the cyclical nature of teacher efficacy. Great teacher efficacy usually generates greater efforts and persistence, which in turn lead to better performance and student outcome. Better student achievement contributes to greater teacher efficacy. This successful cycle will become the new mastery experience of the teacher and a source of future efficacy beliefs. The reverse is also true—low teacher efficacy leads to low student efficacy and low academic achievement, which in turn leads to further declines in teacher efficacy. The other is the difficulty for efficacy beliefs to change. Bandura (1997) warned that producing positive changes in established efficacy beliefs requires "compelling feedback that forcefully disputes the preexisting disbelief in one's

capabilities" (p. 82). Among experienced teachers, efficacy beliefs appear to be quite

stable, even when they are exposed to professional development programs (Ross, 1994;

Ross, & Bruce, 2007). Therefore, helping teachers develop strong efficacy beliefs early in

their career will pay lasting dividends throughout their career life.

Salary. Historically, teachers are paid much less compared to educated workers

with similar education background in other occupations and the gap has been increasing

(Allegretto, Corcoran, & Mishel, 2004; Henke et al., 2000; Leob & Reininge, 2004).

Although teachers do not choose teaching because of the salary, they are more likely to

leave teaching when outside wage options are higher (Dolton & Klaaw, 1999;

Stinebrickner, 1998, 2002). In addition, increases in other local districts' salaries relative

to wages in a given district are positively associated with teacher leaving behavior from

that given district (Brewer, 1996; Imazeki, 2004). In a more recent study, Ingersoll (2004)

found that approximately 70% of the teachers who have moved from, or have left their

teaching jobs reported that they would have remained in teaching if provided with higher

salaries and/or better fringe benefits. Kirby, Berends, and Naftel (1999) drew upon a

longitudinal data set for all public school teachers in Texas from 1979-1996 and found

that a $1,000 salary increase was associated with an average reduced attrition rate of

2.9% for all teachers and five to six percent for Hispanic and Black teachers.

How does salary affect teachers' decision to stay or to leave? Research finds that

teachers are largely drawn to teaching by non-financial, intrinsic rewards they hope to

attain (See, e.g. Goodlad, 1985; Johnson, 1990). Low salary is associated with lack of

respect for the profession, and therefore, low status. Some leavers said they would have

been willing to endure low pay and low status if teaching had been intrinsically more

rewarding. However, low salary became a source of irritation for some when working

conditions made it hard to succeed in the classroom (Johnson, 1990; Johnson &

Birkeland, 2003). High salary alone is not likely to retain the teachers, if poor working

conditions prevent them from feeling effective in the classroom or from attaining the

intrinsic rewards for which they initially entered teaching.

This relationship is supported in several recent studies. Johnson and Birkelands'

(2003) found that although many of the 50 new teachers studied reported dissatisfaction

with pay and low status of teaching, salary was not the primary reason for turnover. None

of the teachers who transferred did so in pursuit of higher pay, rather, they said they were

looking for better working conditions such as more orderly schools, better facilities and

supplies, better professional development, or smaller classes. In the NCES 2004-05

Teacher Follow-up Survey (Marvel et al., 2006), "higher salary or benefits" was rated by

16.5% of the public school teacher movers as very important in their decision to move to

other schools. It ranked as the ninth important factor among 11 factors reported, with

"opportunity for better teaching assignment" as the most important one (38%). However,

it is worth noting that schools with better working conditions usually offer higher salaries.

John and Birkeland (2003), therefore, warn against concluding that teachers who migrate

prefer to earn higher salaries and teach wealthier students and neglect the possibility that

they are seeking a sense of success.

Working conditions. As discussed previously, working conditions are reported by

teachers as more important than salary in their decision to leave or to stay in teaching.

However, what is included in working conditions varies by researchers and studies,

ranging from poverty, racial makeup of the students and teaching staff, to equipments and

curriculum. This following discussion examines two aspects of working conditions and the effect on teachers' dissatisfaction: the facilities and supplies and teaching assignments.

Facilities and supplies. Although the majority of public schools in America are in adequate or better conditions, a few are not. In 1995, the U.S. General Accounting Office (GAO) studied the adequacy of school facilities and found that 54% of all public schools had unsatisfactory instructional space to implement effective teaching strategies; one-third of schools that had sufficient computers were not networked; and 40% of schools could not adequately meet the functional requirements for laboratory science or large-group instruction. According to a report on school conditions conducted by the U.S. Department of Education (Lewis, Snow, Farris, & Smerdon, 2000), approximately 15% of the schools reported that at least one type of onsite building was in less than adequate conditions; 50% reported that at least one building feature was in less than adequate condition; and about 40% reported at least one unsatisfactory environmental condition. In any of the above cases, schools with high concentration of poverty were more likely than schools with low concentration of poverty, and schools in central cities were more likely than schools in urban fringe and large towns, to report problems with the physical conditions of their schools.

Teachers reported the importance of working in safe buildings and well-equipped schools. Research found teachers, especially those working in low-income settings, frequently said that they lacked sufficient resources for their teaching—paper, crayons, pencils, chalk, and textbooks for each student. They often lacked physical supports, such as a clean, well maintained, and adequately ventilated classroom, which would enable them to teach effectively (Johnson, 1990). In order to carry on with teaching in their

classrooms, new teachers reported spending their own money on supplies from paperback books to chemicals for science experiments (Johnson et al., 2004; Quality Education Data, 2002).

Research found that inadequate resources limit teachers' effectiveness and affect teachers' willingness to remain in these schools because "conditions in their schools do not meet even the most basic requirements for successful teaching and learning" (Carroll, Fulton, Abercrombie, & Yoon, 2004, p. 8). Working conditions are cited far less often as reasons for teachers planning to leave low-risk (high-income) schools than high-risk (low-income) schools, where the poor conditions increase the likelihood for teachers to leave their schools or teaching prematurely because they fail to succeed with their students. As researchers observed, "Teachers in low-risk schools are able to make a career commitment to teaching, because teaching conditions in their schools provide a quality opportunity for success" (Carroll et al., 2004, p. 23).

Schneider (2003) studied the quality of working conditions and the effect of those working conditions on teachers' sense of job performance and effectiveness among teachers in Chicago and Washington D.C. and found about one-third of the teachers in Chicago and more than one-half in Washington, D.C. were dissatisfied with their facilities. Nearly 60% of the respondents reported that science labs were somewhat or very inadequate, or nonexistent. More than 40% of the respondents said that their "classrooms were the wrong size for the type of education they were trying to deliver. Twenty-five percent of the sample reported having taught in non-classroom spaces such as hallways and even closets. In addition, "more than one-quarter of the Chicago teachers and about one-third of the Washington teachers reported suffering health problems rooted

in poor environmental conditions in their schools" (Schneider, 2003, p. 2). Schneider reports that more than 40% of the teachers who graded their facilities with a C (on an A-through-F scale) or below said that poor conditions had led them to consider changing schools. Those percentages were somewhat higher among teachers who reported having health effects related to poor facilities.

Another study (Buckley, Schneider, & Shang, 2004) examined the extent to which the quality of facilities affects teachers' retention within their current schools. The researchers found that "as the perceived quality of the school facilities improves, ceteris paribus, the probability of retention increases" (p. 7). Although the effect of facilities' quality was not as significant as other factors, such as the teachers' age and dissatisfaction with the involvement of parents and community, it was larger than the effect of dissatisfaction with pay. The researchers, therefore, suggest that spending money to improve facilities, which they identify as a "one-time expense," would have as much or greater effect on teacher retention as pay increases (Buckley et al., 2004).

Teaching assignment. Teachers' satisfaction with teaching is significantly influenced by the subject area, grade level, and workload they are assigned to. The most recent NCES Teacher Follow-up Survey (Marvel et al., 2006) indicates that "opportunity for a better teaching assignment was rated by 38% public school teacher movers as very important or extremely important in their decision to leave their schools in 2004-05, and thus making it the number one reason for teacher migration. Teaching assignment was also one of the top five most important reasons for teacher attrition, rated by 16 public school leavers as important in their decision to leave.

Research found many teachers were assigned to teach courses in fields that did not match their formal background preparation. An earlier analysis of the U.S. Department of Education (National Center for Education Statistics, 1996) on out-of-field teaching showed that 20% of all American public school students enrolled in English classes in grades 7-12, 15% in math classes, 39% in life science or biology classes, 56% in physical science classes, and more than 50% in history or world civilization classes were taught by teachers without at least a minor in their assigned field. In addition, low-income schools had higher levels of out-of-field teaching in several of the core academic fields than did schools that were more affluent. A more recent report of NCES (Snyder et al., 2009) suggested that out-of-field teaching was still a problem in American public schools. In the 2003-04 school year, 29% English teachers in grades 9 through 12, 39.7% math teachers, 22.5% sciences teachers, and 28.6% social sciences teachers were teaching outside their undergraduate field of study.

Research suggests that when teachers feel well prepared and have a sense of confidence about their work, they are more effective and derive a greater sense of satisfaction from teaching (Rosenholtz, 1989). In contrast, they experience stress when unprepared for the subjects they are assigned to teach (Johnson et al., 2004). In Johnson and Birkeland's (2003) study, many of the leavers were overwhelmed by inappropriate teaching assignment or excessive teaching loads, and they resented the lack of curriculums and resources. For example, a Latina first-career teacher was assigned two different English courses and two different history courses, which she was not certified to teacher, in her second year at a large, urban middle school. Furthermore, two of her courses included a significant number of students with learning disabilities and she felt

she was not given "the right facilities, or books, or materials, or whatever it was to help these kids along" (Johnson & Birkeland, 2003, p. 595). Overwhelmed and frustrated, she quit in the middle of the school year to take a job in another field.

Even when the assignment falls within teachers' field of expertise, it can significantly affect their capacity to do a good job and satisfaction with teaching, if given a heavy workload. Luekens et al.'s (2004) analysis shows that 24.2% of public school teachers who leave teaching and 30.6% of teachers who changes schools strongly agree that their teaching workload was too heavy. A first-year science teacher in Johnson and Birkeland's (2003) study was assigned to teach five heterogeneously grouped science classes with students of a wide range of abilities and interests. The difficulty of fighting heavy workload increased her frustration, in combination with her lack of formal preparation as a teacher, no books or supplies for the first 6 weeks, and minimal collegial support. At the end of her first year, she left teaching, feeling "she had failed as a teacher" (p. 596).

Research on teaching assignments sheds some lights on the practice of recruiting and retaining teachers in several aspects. First of all, as Ingersoll (2002) suggests, although sometimes mis-assignment results from a shortage of appropriately qualified teachers, the practice is largely the result of administrative mismanagement due to "the leadership performance of principals" (p. 25). Second, although many teachers are given inappropriate or unmanageable assignments, new teachers are more likely to experience the challenges of out-of-field class, many course preparations, and an excessive work load in combination (Johnson et al., 2004). Last but not least, despite that teaching assignment is reported as very important in teachers' decision to leave or stay in teaching,

in and by itself, it might not be strong enough to drive teachers away without the co-existence of other factors such as poor facilities and supplies and minimal collegial support. As a result, new teachers who might have been effective and satisfied with a reasonable assignment may become overwhelmed and discouraged and, thus, decide to change schools or leave teaching.

School leadership and collegiality. Research suggests that teachers are more likely to stay in teaching when schools are organized for productive collegial work under a principal's effective leadership (Johnson & Birkeland, 2003; Johnson et al., 2004). Such schools make it possible for teachers to succeed with their students and, thus, to realize the psychic rewards of teaching that initially attracted them to the career. Achieving such satisfaction makes it more likely than they will remain invested in the work (Johnson, Berg, & Donaldson, 2005).

School leadership has always been reported as an important factor contributing to teacher satisfaction. Teachers who felt that their principals were sufficiently influential with their superiors within the district had higher personal teacher efficacy (Hoy & Woolfolk, 1993). Principals who used their leadership to provide resources from teachers and to buffer them from disruptive factors, but allowed teachers' flexibility over classroom affairs, created a context that allowed efficacy to develop. Conversely, schools where there was lack of administration support, increased bureaucracy, and lack of influence over decision-making were more likely to experience higher teacher turnover (National Retired Teacher Association (NRTA), 2003; Ingersoll, 2001b, 2004). Lueken et al.'s (2004) analysis of the NCES 2000-2001 SASS data showed that 38.9% of the public school teachers who moved to other schools that year reported dissatisfaction with

support from administrators as very important or extremely important in their decision to leave. The percentage is much higher in public schools in central cities (47 percent) in comparison to those in urban fringe, large towns (35.7 percent), or rural areas (32.5 percent). Moreover, movers in public schools with higher proportions of minority enrollment were more likely to report dissatisfaction with administrator support (43.4 percent) than those in schools with lower minority enrollment (28.6 percent).

Qualitative studies found similar effect of collegial and leadership support in teacher turnover. Weiss (1999) found that new teachers were particularly attentive to whether they were included in making decision about such things as curriculum, discipline policy, and the school budget. She suggested that school leadership incorporating teacher participation influenced "whether new teachers feel it is worthwhile to do their best work, whether they would choose teaching again as a career, and whether they plan to remain in teaching" (p. 866). A more recent study (Useem, 2003) examined the turnover of a cohort of 60 new teachers in seven high-poverty middle schools in Philadelphia and found at one school where the new teachers reported being "unhappy with the school's climate and administrative practices"(p.18), all 12 of them transferred to other schools or left teaching. Other schools where there were "strong administrators and a collegial staff climate" maintained high retention (p. 18).

Echoing such research findings, the movers and leavers in Johnson and Birkeland's study (2003) reported feelings of ineffectiveness and sense of failure as teachers. They spoke principals who were arbitrary, abusive, or neglectful. They were disappointed with colleagues who failed to support them as they struggled to teach. Teachers left schools where teachers worked in isolation, and where novices were left to

sink or swim, and transferred to schools that offered organized support for new teachers and school-wide collegial interaction, where the other teachers and principals coordinated sources of external assistance and established norms and expectation about the importance of maintaining an orderly, respectful learning environment. The stayers, on the other hand, were confident about being effective teachers. They attributed their satisfaction to supportive administrators and colleagues, speaking of principals who understood the idea of continuous improvement and colleagues who encouraged them to set reasonable goals for themselves.

There is also evidence on how collegial collaboration affects teachers' satisfaction. Louis, Marks, and Kruse (1996) examined the relationship between collaboration and teachers' satisfaction and found a higher level of professional community in schools where teachers were empowered with influence over school, teacher, and student policy. Such professional communities were distinguished by five elements of practice: shared values, focus on student learning, collaboration, deprivatized practice, and reflective dialogue. Other researchers (Bryk, Camburn, & Louis, 1999) found a number of important variables supporting the development of professional communities where teachers could do their best work and reap its intrinsic rewards. These variables included social trust among faculty members, small school size, facilitative principal leadership and principal supervision.

McLaughlin and Talbert (2001) found that weak and strong professional communities have different contributions to teachers' satisfaction. In weak professional communities, teachers keep their thoughts and practices private, while in strong professional communities, "teachers can more readily experience the intrinsic rewards of

teaching—satisfying relationships with colleagues and growth in one's subject area, as well as success in promoting students' learning" (p. 68). They concluded that teachers who worked in isolation paid a stiff price: "Whatever pride in professional autonomy teachers may take from this condition (working alone), most feel isolated in their work and frustrated by the lack of support they get from their colleagues" (p. 69). The authors contended that having access to such opportunities augmented satisfaction with the choice of a teaching career.

In another study (Bryk & Schneider, 2002), researchers found a strong link between improvement in "relational trust" among teachers, administrators, students, and parents in the school and student achievement. Reported increases in relational trust during the course of the study were accompanied by evidence of greater commitment by teachers to their schools. Based on their findings, Bryk and Schneider suggested that socially supportive workplace was important to retaining teachers, particularly those in urban settings.

> In urban contexts such as Chicago, dedicated, energetic young teachers often encounter anomic school norms where teachers are alienated by basic work conditions. Many veteran teachers have come to view their students' needs as so overwhelming that resignation becomes the only survival strategy. Such contexts create a revolving door for young teachers. Unable to establish supportive work relations that make sense to them, these individuals quickly spin out of urban public schools; unfortunately, they often exit the profession as well. (2002, p. 136)

Similar to the idea of professional communities, Johnson and Birkeland (2003) suggested that school culture, how school leaders arranged schedules that accommodated team planning and structured explicit opportunities for collegial interaction, was critical to the success and satisfaction of novice teachers. They identified three types of professional cultures. Veteran-oriented professional cultures were determined by and designed to serve veteran faculty members, with emphasis on privacy and professional autonomy. Novice-oriented professional cultures, by contrast, were dominated by new teachers and featured youth, idealism and inexperience. Although new teachers remain at the center of the cultures, they received little professional guidance due to the lack of experienced and expert peers. Integrated professional cultures were organized to engage teachers of all experience levels in collegial and collaborative efforts. New teachers who worked in integrated cultures not only reported greater satisfaction but were also more likely to remain in public schools (Johnson & Birkeland, 2003).

The studies in teacher efficacy offer some evidence for understanding how school structure and climate can affect teachers' sense of efficacy. Chester and Beaudin (1996) examined the efficacy beliefs of both novice and experienced teachers beginning work in an urban context and found that certain school practices apparently contributed to increased efficacy among the newly hired teachers. The greater the opportunity for collaboration with other adults and the more observations that were made, the greater was the teachers' sense of efficacy. Other factors such as professional isolation, uncertainty, and alienation tended to weaken teachers' sense of efficacy (Webb & Ashton, 1987).

In a recent review, Johnson and colleagues (2005) noticed that the current generation of teachers' view of collaboration has changed as a result of school reform and

the policy context in which it takes place. Unlike their colleagues who entered teaching 40 years ago, new teachers today regard positive interactions with colleagues as an essential part of their work and that they are wary of being isolated in their classrooms. Kardos (2004) suggested that new teachers' preference for such collegial work had implications for novices' career decisions. Dissatisfaction with isolated work may drive them from their current schools or from teaching altogether. However, very little has been done to examine systematically how these factors affect teacher turnover or retention. Further research effort in the related field is needed.

Characteristics of the students. Students have traditionally been viewed by school teachers as the core source of their' satisfaction as well as the greatest source of uncertainty (Lortie, 1975). "Through their positive feedback and compliance they (students) enable teachers to reap the psychic rewards they seek; through misbehavior, disrespect, and disengagement, they leave teachers wondering whether their effort is worth the paltry extrinsic rewards they receive" (Johnson et al., 2005, p. 75). Useem (2003) found that 52% of the third-year teachers who were planning to leave reported dissatisfaction with student behavior as the primary factor contributing to their desire to leave. For these teachers, it seemed student behavior impeded them from deriving the psychic rewards they sought and there was not enough incentive to stay.

Research produces ample evidence about the effect of students on teacher turnover. In Ingersoll's (2001b) study, student discipline problems and lack of student motivation were cited as two of the major factors contributing to dissatisfaction with teaching. In a more recent study, Ingersoll (2004) found 39.3% of the movers and leavers in the sample suggested that better student discipline would encourage teachers to stay in

teaching. Such findings were consistent with other studies which found that unmotivated students, pressures of classroom management and discipline were important in their decision to leave teaching or move to other schools (NRTA, 2003; Lueken et al., 2004). Although no teacher ever reported that student achievement level, race/ethnicity, and poverty were the cause for their leaving teaching, researchers consistently found that teacher turnover was more systematically related with such student characteristics (Hanushek et al., 2004; Johnson & Birkeland, 2003).

As discussed earlier in this section, teachers' efficacy beliefs is the joint outcome of analysis of teaching task and assessment of their personal teaching competence (Bandura, 1997; Tschannen-Moran et al., 1998). Student factors, as part of the teaching task and its context, strengthen or weaken teachers' efficacy beliefs, which in turn influence an individual's commitment to teaching and career choice (Ware & Kitsantas, 2007). For example, low socioeconomic status of students may cause the teacher to feel overwhelmed by external constraints and personally inadequate and, therefore, decreases the collective efficacy of teachers (Bandura, 1997).

Consistent with the proposal that teacher efficacy results, in part, from teachers evaluation of their personal strength and weakness, researchers found personal characteristics of teachers play an important role in their efficacy formation. Teachers who see teaching more as a moral activity than a job feel heavy responsibility for their student. They are more vulnerable to their students whose feedback and behavior defines their sense of accomplishment (Metz, 1993). Teachers in urban public school who are motivated by the love for children are also likely to experience low sense of effectiveness if they find the students there are "difficulty to teach and to love" because the challenging

life they lead makes them "restless and confrontational" (Anyone, 1995, p. 80). Teacher resilience, the ability to use energy productively to achieve school goal in the face of adverse conditions, is also found to contribute to strong teacher efficacy (Patterson, Collins, & Abbott, 2004).

Research indicates that a number of factors may act either for or against teachers' sense of efficacy in urban schools. A White teacher teaching in a school serving dominantly minority students may feel the difference of their cultural and social identity limit their ability to reach out the student and to succeed in such context and, therefore, may decide to leave (Strunk & Robinson, 2006). However, different race/ethnicity does not necessarily inhibit teachers from succeeding if they have had experience in diverse life and education contexts and social justice awareness. For example, Brown (2002) found that the non-minority teachers who stayed in urban schools had either experience of growing up in the cities or student teaching in urban schools. They all demonstrated enthusiasm, concern about their students, commitment, and high efficacy beliefs. Maguine (2001) studied a small sample of long-stay inner-city teachers in London and found that these teachers shared an affinity with the children they taught, affinity which was not "merely related to empathetic understanding but was marked in their practices. … They were seen as 'aligned with the kids' rather than some of their colleagues – working in the classed interests of those they taught, rather than (some of) those they taught with" (Maguine, 2001, p. 329).

Johnson et al., (2005) suggest that one reason why student characteristics of race and poverty might be associated with low teacher efficacy for some teachers was their lack of preparedness to work with these students. Teachers reported they were trained to

teach students very different from the ones they teach in today's classrooms, however, they were expected to teach all of them (McLaughlin & Talbert, 2001). Other researchers noted that teacher education institutions did not incorporate the needs of urban teaching as one of its curriculum components (see, e.g. Haberman, 1987; Zeichner, 2003). Many efforts have been documented about the efforts of preparing teachers for all children effectively, a topic that will be discussed later in this chapter.

Hiring practice. The hiring practice is both a cause for teachers' satisfaction with their job and school and a factor contributing to the teacher shortage in general. The hiring experience can affect a teacher's job satisfaction in basically two ways. First, a hiring process that provides inadequate information exchange for the applicants and schools can result in a poor match and less satisfaction. Second, late hiring create extra difficulties for new teachers in terms of understanding the new teacher environment and getting prepared teaching, and, therefore, can cause stress and dissatisfaction. In addition, late hiring also contributes to the teacher shortage also by causing a school and/or district to lose competent applicants who might have taken a job in the school if offered in a timely manner.

Hiring process. Relatively speaking, research is scant on hiring and how it influences teachers' satisfaction and retention. Among the limited number of studies, many focused on the perspective of district administrators and principals (Baker & Cooper, 2005; Cain-Caston, 1999; Kersten, 2008; Papa Jr. & Baxter, 2008; Ralph, Kesten, & Lang, 1998; Williby, 2004), or strategies and tools used in screening and selecting the candidates (Metzger, & Wu, 2008; Rutledge, Harris, Thompson, & Ingle, 2008; Theel & Tallerico, 2004). Very a few examined the process of hiring and the post-

hire effect on teacher applicants. Several studies that did look at the hiring process suggest that hiring should be a two-way process in which schools and candidates exchange information and evaluate each other before they make decisions (Liu & Johnson, 2006; Winter, Ronau, & Muñoz, 2004). In order for the decisions to lead to a good fit between the new teacher and his school, an "information-rich hiring process" is critical (Liu & Johnson, 2006, p. 326).

Liu and Johnson (2006) contended that an information-rich hiring process provided the candidate an accurate and a "realistic job preview" (Breaugh, 1983, cited in Liu & Johnson, 2006, p. 330), and multiple opportunities of information exchange between the candidate and school-based decision makers, which contributed to a good teacher-job and teacher-school match and high-level satisfaction. An information-poor hiring, in contrast, failed to provide the candidate and hiring representative accurate information about each other. As a result, the candidate was likely to accept positions that might not be a great match for them in terms of preferred grade level or pedagogical approach promoted at the school; and the school was also likely to hire candidate who turned out to be ineffective. The researchers found new teachers who experience better job previews reported higher level of fit with their schools and higher-lever of job satisfaction. In the study of 50 new teachers in Massachusetts public schools, Johnson and Birkeland (2003) found the extent to which there was a good teacher-school fit was critical in a teacher's eventual satisfaction. Hired late in the summer through an abbreviated hiring process with a little opportunity for them to discover whether the new school would be a good match for their skills and interests, several new teachers in the sample left their first placement and looked for schools that better matched their needs.

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These findings are consistent with research in organizational behavior and management that has found links between person-organization or person-job fit and work outcomes, such as job satisfaction and intentions to quit (Cable & Judge, 1996; Chatman, 1991; Kristof, 1996).

It is noteworthy that although hiring process is found to be decentralized (i.e. school-based) rather than centralized (i.e. district-based) in many states, most new teachers report having limited interactions with school-based personnel as part of this process (Levin & Quinn, 2003; Liu & Johnson, 2006). Research found hiring process relied heavily on reviews of paper credentials and interviews and that schools and districts seldom observe candidates teaching (Liu & Johnson, 2006). Therefore, the hiring process experienced by many teachers is not yet information-rich though it is decentralized. In some large urban school districts, hiring process is somewhere along the continuum of centralization and decentralization. Typically, teachers send applications to the human resources department in the district. Interviews maybe conducted at either the district or school level, or both (Levin & Quinn, 2003). In some other urban districts, hiring is still highly centralized – district hires teachers and controls their school placements (Neild, Useem, Travers, & Lesnick, 2003).

Late hiring. Many new teachers are hired late in summer. Liu and Johnson (2006) surveyed a random sample of first and second-year teachers in California, Florida, Massachusetts and Michigan and found that approximately 64% were hired within one month of the first day of school. In California and Florida, approximately 30% of new teachers were hired after the start of the school year. Public school districts in Delaware hire approximately 66% of their new teachers in August or later (Delaware Education

Research & Development Center. 2005). A recent report of The New Teacher Project (2009) indicates that over 1/3 of the new hires to San Francisco Unified School District in the past two years reported receiving an offer in August. Late hiring is particularly common in urban districts.

Late hiring has several negative effects on teachers' satisfaction and retention. Johnson et al. (2004) found that new teachers hired late were less likely to have chosen a job and school that resembled their desired placement. Late hiring, therefore, increased the likelihood of a poor match and job dissatisfaction. Besides, teachers hired late "have little time to prepare their curriculum or classroom and begin school in a rush" (Johnson et al., 2004, p.173). It was made more difficult for new teachers to get to know their new colleagues and school communities (Delaware Education Research & Development Center, 2005). This is also applicable to teachers who were hired earlier but were not informed of the school and/or grade level until later (Neild et al., 2003). The possible poor performance, stress, and dissatisfaction may finally cause new teachers to leave.

Another negative effect of late hiring is it disadvantages urban school district in retaining the more highly-qualified candidates. Levin and Quinn (2003) examined the influence of late hiring in four large urban districts. They found that in spite of the large number of applicants, many withdrew when the districts failed to make a timely job offer and took jobs in districts that hire earlier. Furthermore, they found substantial numbers of the withdrawers were high-demand applicants in such shortage-areas as math, science, special education, and education for English language learners. The authors concluded, "The most serious consequence of late hiring is that schools lose the stronger candidates and end up hiring the weaker ones" (2003, p. 16).

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Research evidence indicates that although urban school districts successfully recruit sufficient number of teacher candidates, the current hiring practice hinders successful hiring and retaining those teachers. An information-rich hiring process can provide both the candidate and the school adequate information exchange and, thus, leads to a good fit and higher-level of job satisfaction. Moreover, a delayed hiring not only contributes to a poor fit, but also leaves new teachers insufficient time to prepare for teaching and increases the likelihood of unsatisfactory performance, stress, and intention to quit. The most significant consequence of late hiring is perhaps attrition of teachers, particularly those with high qualifications, occurs early in the process of hiring.

To summarize, research results indicate that a number of factors contributing the teacher shortage, among which teacher turnover is considered as critical. Apart from personal and family factors (for example, pregnancy, rearing children, and family moving), turnover is mainly caused by dissatisfaction with teaching and low sense of teacher efficacy, both of which are associated with a complicated array of other elements, such as salary, working conditions, collegial relationship and school leadership, students, and hiring practice. It is reminded that teacher turnover is usually not caused by one single factor, but rather, by the coexistence and interplay of several. These factors are also related, directly or indirectly, to the consequences of teacher shortages, which will be discussed in the following section.

Consequences of Teacher Shortages

Teacher shortages have significant negative effect on districts, schools, teachers, and students. The following discussion first considers the financial cost of teacher shortages, particularly when caused by teacher turnover. It then examines the impact of

teacher shortages on school effectiveness. Finally, it reviews the studies that examine the consequences of teacher shortages on students.

Financial cost. The exit of teachers from the profession and the migration of teachers from low-performing and high-poverty schools are costly. When teachers leave the profession or change schools and districts, extra cost occurs in addition to the normal expenses needed for school operation. The estimate of how much it cost to fill a vacancy, particularly the one left behind by a new teacher, varies depending on district size and a variety of other factors included in the estimation.

A study conducted by Texas Center for Educational Research (2003) examined teacher turnover cost in Texas school systems based on five different models. The most conservative model, an industry model which estimated turnover rate at a 25-30% of an employ's wages and benefits, estimated the turnover cost per teacher in Texas ranged from $ 8,231(for a teacher with no experience) to $13,122 (for a teacher with 20 years of experience). Researchers from Clark County School District, the fifth largest district in the country, used a similar model and estimated that the district spent approximately $14.9 million on teacher turnover in 2008 (Clark County School District, 2008). However, a different pragmatic model, which included cost related to termination, recruitment and hiring, substitute salaries, learning curve loss, or training, generated an average estimated cost of $56,115, which was approximately 150% of the leaver's salary. It estimated that, statewide, teacher turnover cost Texas systems from $329 million to $2.1 billion per year (Texas Center for Educational Research, 2003).

Another study, conducted for 64 public elementary schools serving a large number of low-income and minority children in Chicago, estimated even higher costs of

turnover (Chicago Association of Community Organizations for Reform Now (ACORN, 2003). The cost of turnover in the Chicago ACORN neighborhood schools was estimated using three models employed in teacher turnover research. The first model was based on 20% of leaving teacher's salary and arrived at a cost of $10, 329 per teacher. The second model was based on 150% of a leaving teacher's salary, a model used in Texas study discussed earlier, and estimated a turnover cost of $77,470 per teacher. The third model was based on an estimate of 2.5 times the average teacher preparation cost statewide and calculated a cost of $63,689 per teacher. The three models resulted in a total turnover cost in these 64 schools from $5.6 million to $34.7 million in the 2001-2002 school year.

A more recent study conducted by the National Commission on Teaching and American's Future (NCTAF) (2007) examined the cost of teacher turnover in five school districts. Using the NCTAF Teacher Turnover Cost Calculator, the study found the cost of per teacher leaver varied from $4,366 in a small rural district to $17,872 in a very large urban district like Chicago. According to this report, teacher turnover cost Chicago Public Schools $86 per year, a number much greater than the cost estimated by ACORN. Furthermore, in average, each teacher leaver cost an urban district $8,750 and a non-urban district $6,250. Additionally, individual urban schools spent $70,000 a year on costs associated with teacher transfers, whether they left the district or not, while nonurban schools spent $33,000 each. Nationwide, the total cost to hire, recruit, and train the replacement teachers in school and district together added up to $7.34 billion (NCTAF, 2007).

While the cost of turnover varies by districts and schools, the consequences do not. High teacher turnover is an added burden of cost and inefficiency for school

districts. It poses a particular threat to the fiscal health of already financially strapped districts. School district funds drained by turnover-related costs could be used in much more productive ways to benefit the effectiveness of schools and student achievement.

School effectiveness. Although focusing on economic costs of teacher turnover is important, it fails to capture the importance of "intangible costs" or those that are difficult to quantify (Guin, 2004, p. 3). In order to examine such costs, Guin (2004) studied five schools with variation in their student demographics and turnover rates within a large urban district. Analysis of the qualitative data indicates that teacher turnover affects schools' instructional program coherence. A constant new team of colleague in a high-turnover school disrupted teachers' regular daily activities and created challenges for planning and implementation, as well as the momentum of instruction. Similar problem was also documented in the study of Neild and colleagues (Neild et al., 2003) who examined teacher turnover pattern in Philadelphia public schools.

In schools with high teacher turnover, professional development was found to be ineffective on school improvement. In Guin's (2004) study, teachers who stayed viewed the idea of repeating the same professional development as a waste of time and often chose not to participate. Some teachers pointed out the continual loss of resource and knowledge when the teachers received training left to teach in other schools. Carroll, Richards, and Guarino (2000) also observed that teachers who initially benefit from staff-development investments in low-performing schools often ended up leaving the profession or moving on to more desirable teaching positions in affluent communities, contributing to the talent drain in the most troubled schools.

High-turnover schools are also unable to build and sustain the professional teaching communities needed to support school improvement. The instability of teaching team impedes staff cohesion and forces teachers and administrators to constantly reinvest in establishing professional relationships and re-establish routines for shared work (Neild et al., 2003). Teachers reported lack of trust among each other and weak collaboration, indicating that it took some time to understand how a person worked and to get a group work together (Guin, 2004). The energy required to build a relationship with a new teacher, paired with the uncertainty of the length of time one would be working with that person, made collaboration extremely difficult. By contrast, when turnover became lower, "test scores are improving and the teachers are becoming cohesive" (Guin, 2004, p. 15).

There is research evidence that the coherence of instructional programs, structural support, and collaboration among teachers are the necessary elements for school effectiveness. The alignment and coordination of curriculum and instruction within and between grade levels and staff trust can enhance the organizational efficacy and improve student achievement (Bryk & Schneider, 2002; Newmann, Smith, Allensworth, & Bryk,). Guin (2004) contended that turnover disrupted team-based organizational structure and functioning of a school. In addition, "if high teacher turnover negatively affects schools as organizations, it is likely that these schools will struggle to improve student learning" (2004, p. 2).

Consequences for students. The most serious long-term consequence of high teacher turnover is the erosion of teaching quality and student achievement. In spite of the different definition and measurement, many researchers agree that teacher quality is

the most important school-related factor influencing student achievement (Darling-Harmmond, 2000; Ferguson, 1998; Hanushek & Pace, 1995; Rivkin, et al., 2005). Students of first or second-year teachers consistently do worse than those of more experienced teachers (Rockoff, 2004). Teachers who had higher test scores on verbal skills and mathematics in their licensure examinations were more likely to have higher gains in student test scores in reading and mathematics (Ferguson, 1998; Hanushek, 1992; Rowan, Chiang, & Miller, 1997). Students at all school level learned more from teachers who had more knowledge of mathematics (e.g. teachers with more mathematics-related coursework and degrees), but particularly at the secondary level (Goldhaber & Brewer, 1997, 2000; Hill & Lubianski, 2007; Kukla-Acevedo, 2009). Moreover, students had higher mathematic gains when their teachers had standard certification in mathematics as compared with the gains of those with teachers held either no certification in mathematics or private school certification in mathematics (Goldhaber & Brewer, 2000).

Given the critical impact of teacher quality on students, qualified teachers are not equally distributed in public schools in the United States. Darling-Hammond (1997) contended that the single greatest source of inequity in education was the disparity in the availability and distribution of well-qualified teachers. Better-trained and more experienced teachers tended to be assigned to or transfer to schools that served students of non-color, more affluent families and higher-level of academic achievement (Clotfelter, Ladd, & Vigdor, 2006; Johnson & Birkeland, 2003). The high-turnover schools, by contrast, were more likely to have substantially less qualified teacher, no matter how qualification was defined and measured (Guin, 2004; Hanusheck et al., 2004; Hanushek & Pace, 1995; Lankford et al., 2002). High-minority schools had fewer fully credentialed

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teachers, more teachers teaching out of field, and less experienced teachers than low-minority schools (Powers, 2004); and schools with minority enrollment over 80% had higher proportions of teachers in their first three years of teaching (Loeb & Reininger, 2004). The disparity in teacher quality leads to unequal opportunities to access quality education, which is consistently reflected in student achievement gap (Ferguson, 1998; Flores, 2007; Rivkin et al., 2005). Consequently, it is the students, particularly those attending high-poverty and high-minority schools, who are receiving the short end of the teacher shortage (Howard, 2003; Haycock, 1998).

High-turnover schools are also more likely to be staffed with teachers who hold negative dispositions against urban schools and urban students (Howard, 2003). These teachers tend to have negative attitude and lower expectations for their students. They spend less time proving a framework for student learning, provide less feedback, question their students using less higher-order questions, and manage students' behavior more negatively (Rubie-Davies, 2007). They are also more likely to treat students of color from a deficit perspective and less likely to incorporate multicultural content and culturally responsive teaching methods into their teaching strategies, which may greatly affect student achievement (Gay, 2000). Many teachers who do not want to teach in urban schools simply served their time and requested transfers at the first opportunity (Bruno & Doscher, 1981; Viadero, 2009). All these negative factors contribute to inadequate social support available to students at school, which, in turn, affect student social-emotional competence, which is found to be significantly correlated with academic achievement (Elias & Haynes, 2008).

Viewed as "life skills for adaptation to diverse ecologies and settings" (Haggerty et al., 1994, p. 275), social-emotional competences are particularly important for minority and low-income students to achieve school success (Baker, 1999; Banks et al., 2001; Luthar, 1995; Reyes, Gillock, Kobus, & Sanchez, 2000). Apart from negative teacher dispositions, the instability of the teaching team at high-turnover schools is another factor contributing to students' social-emotional competence. Comer and Maholmes (1999) suggested that when school staff came and went in a parade of changing faces, children's emotional and social development suffered the consequences. Similar effect was also documented in Guin's (2004) study, in which a teacher participant commented:

> A stable environment makes the classroom a secure and calm place where students can relax and learn regardless of the troubles in their home life and neighborhood. … By contrast, when teachers are just so burned out that they are interviewing for other jobs and just trying to get out of here while they can, then the kids' focus is not on the instruction. They can instantly feel that, this chaotic environment. They cannot focus because they can see that everyone is on edge…if those kids are not in a stable environment, it is affecting them constantly. (p.12)

When minority and poor students in urban schools do not necessarily have the opportunity to learn social-emotional skills at home, they are more dependent on school to develop the skills and to achieve greater academic success (Baker, 1999). Without an equal opportunity to access high quality teachers and very unstable school context, they are put in odds against success.

Lack of minority teachers also affects student learning. Based on the most recent data available, nationwide, 42.4% of public school students were students of color while only 15% of their teachers were (Planty et al., 2009; National Center for Education Information, 2005). In some large urban school districts, the mismatch between students of color and their teacher is even wider. For example, in 2007, 85% of Philadelphia's students are minorities compared to only 38% of their teachers (Research for Action, 2007). Such reality communicates to the students something about authority and power in contemporary America. It influences their attitudes toward school, their academic accomplishments, and their views of their own and others' intrinsic worth (Carnegie Task Force on Teaching as a Profession, 1986). Although research about the effect of teachers' race on academic achievement is inconclusive, there is evidence that students, Black and White, gained more in reading and mathematics achievement when having a same-race teacher (e.g. Dee, 2004; Hanushek, Kain, O'Brien, & Rivkin, 2005). By contrast, different cultural beliefs and practices and lack of cultural or language familiarity and understanding became a frequent barrier to effective teacher-student interaction as well as a hurdle for urban children to achieve their potentials (Gay, 2000; Gay, 2002; Harry, Kalyanpur and Day, 1999; Howard, 1999). In addition, if students rarely or never see individuals who look like them in the classroom, it is less likely for them to consider teaching as a profession (Howard, 2003). Haberman (1987) argued that the shortage of minority teachers reflected the failure of traditional education to provide teachers for the urban poor and the unequal opportunity for minority children in inadequate urban schools.

In summary, the consequences of teacher shortages are costly. The process of recruiting, hiring, and training the replacement teachers wastes a huge amount of money which could otherwise be invested in more productive activities, such as improving school conditions and professional development programs, which can contribute teacher retention. The cost of teacher turnover to school effectiveness is also significant. When new teacher constantly come and go, the instruction coherence is disrupted, and collegial collaboration weakened. More importantly, teacher shortages perpetuate the unequal distribution of high-quality teachers and the achievement gap. Unless effective actions are taken to alleviate the teacher shortage, education will remain costly and ineffective.

Strategies and Efforts to Alleviate the Teacher Shortage

As teacher shortages continue to hold public attention, many strategies and efforts have been initiated by states, districts and schools, as well as teacher education institutions to alleviate the challenges. Some strategies focus on either attracting or retaining teachers, while others on both. The following discussion will first consider financial incentives that are intended to attract and retain teachers. It then examines several non-monetary recruiting and retention strategies, such as induction and mentoring and professional development opportunities. Next, it examines the alternative routes into teaching. The final part of this discussion reviews responses of traditional teacher education programs to teacher shortages.

Financial incentives. Using financial incentives to attract teachers and to retain them in the teaching profession has been a common strategy to combat teacher shortages. The assumptions are that higher salaries will make teaching more attractive to individuals with better quality; and that better pay will be more likely to increase teachers' job

satisfaction and, therefore, keep them in their teaching position. According to the 2007-2008 school year School and Staff Survey (Aritomi, Coopersmith, Gruber, & National Center for Education Statistics, 2009), 24% of public school districts offered pay incentives to teachers if they attained certification from the National Board for Professional Teachers Standards Certification; 15% to recruit or retain teachers to teach in the fields of shortage; 10% to reward excellence in teaching, and six percent to recruit or retain teachers to teach in a less desirable location. Most commonly, the incentives are offered either as input-based compensation pay, for example, college scholarships, student loan forgiveness, housing benefits, free or discounted teacher training, or output-based/performance-based pay, such as annual salary raise or bonus (Beng Huat, 2004; Clabaugh, 2009; Clotfelter, Glennie, Ladd, & Vigdor, 2008a, 2008b; Goldhaber, DeArmond, Player, & Choi, 2008; Johnson, 2005; Liu, Johnson, & Peske, 2004). This section reviews several issues related to these two general forms of incentives.

Input-based incentives. Input-based incentives usually involve one-time or long-term extra pay to teachers who decide to teach in high-need schools or subject areas, or to participate in professional development program to improve performance. For example, between 1998 and 2002, Massachusetts instituted $ 20,000 Signing Bonus to attract talented individuals to teaching. The bonus recipients would be eligible for each year's bonus payment as long as they were certified to teach in the state and employed as a teacher by one of the state's public schools (Liu et al., 2004). From 2001 to 2004, North Carolina awarded an annual bonus of $1800 to certified math, science and special education teachers working in public secondary schools with either high-poverty rates or low test scores (Clotfelter et al., 2008a). California offered teachers willing to teach in

hard-to-staff schools loan forgiveness, one-time salary bonuses if they attained National Board for Professional Teachers Standards Certification, and low-interest mortgages, tax credits, and deferred payment loads for first-time homebuyers (Johnson, 2005).

Input-based incentives such as signing bonus and higher starting salary have the potential benefits of attracting and retaining talented individuals who are committed to teaching, or hopefully those who consider teaching as one of their career choices. However, such ways of paying teachers also face a number of challenges. If an individual chooses to teach or not to teach based on his perception of the profession or his own ability, higher salary probably will not be effective to attract him or her to teaching (Beng Huat, 2004). If a teacher enters the profession more for such extrinsic factors as salary and benefits than the intrinsic reward, the pay level needed to entice him or her will probably be considerably high (Milanowski, 2003). Other determinants, for example, unfavorable working conditions, may pose significant counter effect to the influence of input-based incentives (Horng, 2009).

Research on input-based incentives is relatively limited in number and generates mixed evidence. One study (Liu et al., 2004) examined the Massachusetts Signing Bonus and found the program failed to attract people who had not seriously considered teaching. A majority of the recipients had considered teaching prior to receiving the Signing Bonus and had taken steps toward the profession. The bonus recipients reported that they were attracted by the program's accelerated route to certification instead of the bonus money. The study also found that the program had limited effect on retention. More than 60% of the bonus recipients in the study left public school teaching in Massachusetts without collecting the full bonus payment. The study highlighted the importance of considering

both intrinsic and extrinsic rewards in designing programs and policies to recruit and retain new teachers.

Another study (Clotfelter et al., 2008a, 2008b) examined the Signing Bonus program in North Carolina and found that the bonus payment reduced turnover of the targeted teachers by approximately 12 percent, compared to what it would have been in the absence of the program. However, no significant effect on student achievement was detected. Interview of the district officials, principals and teachers eligible for the bonus revealed a complicated picture. Two thirds of the district officials interviewed believed that the program was helping schools retain teachers. Yet many of them were reluctant to use the program to recruit teachers because they were not confident whether the program would be continued. A significant number of principals and teachers responded to the bonus program positively, believing it was worth continuing. However, they suspected that $1,800 was not sufficient and the amount should be increased. The study found several problems impeded the successful implementation of the program.

Some researchers argue that financial incentives are not effective in attracting individuals who do not consider teaching as a possible career choice, and even when they are, the amount has to be significant. Milanowski (2003) studied 658 undergraduate students in math, science, and technology to explore what salary levels might be needed to entice them to K-12 teaching. The results indicated that a beginning salary increase of about 25% would be needed to attract about 20% of the respondents. The amount of increase varied by student major, with higher increases needed to attract more engineering students than pure and applied science students. The study also found that interest and ability factors limited the attractive effects of higher pay. Students who were

more concerned about the intrinsic aspects of teaching relating to their interests and abilities than with some of the extrinsic features such as benefits and prestige would be willing to consider teaching at a lower salary than they expected to receive in their current choice. Other students, by contrast, were willing to consider teaching only for a higher salary than expected. Moreover, a significant minority of these students were not likely to be attracted to teaching by even very large increases in entry pay, due to their commitments to another career and concerns about their ability to teach.

Similarly, Beng Huat's (2004) surveyed a sample of 1845 students and professional trainees in the UK and found that financial incentives did not dramatically change individual career plans, although they did make it easier for those who wanted to teach to go into teaching. As determinants of career choice, financial incentives were not as important as the values people attached to a job and their perceptions of teaching. They did not appear to have much influence in persuading non-teachers into teaching. These people have already made up their minds about their career paths and would not be likely to be persuaded otherwise. It is also found that financial incentives, for example, training salaries, were mostly likely to attract marginal candidates including male and non-white students to consider teaching as a career choice.

Finally, a recent study (Horng, 2009) conducted in California explored the influence of salary on teachers' decisions of where to teach, in comparison with the influence of student characteristics and working condition. It found that salaries were 30% less important than working conditions (e.g. school facilities, administrative support, and class sizes) were to a teacher's school selection. If the teachers had to choose between working at a school that was clean and safe or to receive an $ 8,000 annual

salary increase, on average, they would choose the former over the latter. The study also found that the influence of financial incentives varied by teachers' individual characteristics. Salary was significantly more important to teachers who were 30 years old or younger, teachers with only a Bachelor's degree, teachers in their first 5 years of teaching, and teachers who were not very satisfied with their current teaching assignment. Results of the study indicated that monetary incentives would have to be substantial to effectively attract teachers to hard-to-staff schools, particularly if they are not accompanied by improvements in working conditions.

Although financial incentives offered for teachers to teach in the high-need schools or subject areas, or to participate in certain professional development program are a promising strategy of recruiting and retaining teachers, both the intrinsic and extrinsic factors that influence teachers' career decision should be taken into consideration in creating a program. Also should be considered are the characteristics of the teacher population targeted and the pay level needed to make these incentives cost-effective. More importantly, offering input-based financial incentives alone is not likely to solve the problem of teacher shortage and should be accompanied by other strategies.

Performance-based pay. Financial incentives offered to teachers based on their performance usually involve some objective assessment of teachers' efforts or success or some measure of their students' performance (Lavy, 2007). The reward can be a one-time event or it can be ongoing, leading to a permanent salary increase. The performance criteria can include outcomes for the teachers themselves (e.g. measures of absenteeism or performance on a test). They can also include measures of their students' performance (e.g. attendance, grade retention, dropout rates, or performance on tests). In many cases,

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these criteria are not mutually exclusive. For example, ASPIRE Award (Accelerating Student Progress ·Increasing Results & Expectations) is the largest performance pay program in the United States that rewards teachers in the Houston Independent School District according to improvements made in students' test scores (Houston Independent School District, 2006). Another well-know performance pay plan is the one implemented in Douglas County, Colorado, which rewards teachers based on such performance of teaching, taking on additional responsibilities, completing specific skill training, and participating in group incentive plans (Reichardt & Van Buhler, 2003).

Theoretically, performance-based pay has a number of potential benefits. The most frequently noted advantage is that it provides incentives for schools and teachers to do what is valued by the society, the "right thing", regardless of their personal value and preference (Lavy, 2007, p. 90). The second benefit of performance-base pay, mainly for the merit pay model, is it can sort and select teachers. If the compensation system can accurately identify productivity, performance pay has the promise of attracting and retaining the most productive teachers. It also tends to encourage less effective teacher so seek other careers (Hassel, 2002; Lazear, 2003). Another benefit of performance-based pay is to improve school productivity by inducing better governance. It requires school principals to monitor closely the quality of their teachers' work (Murnane & Cohen, 1986). It is also assumed to bring about more coherent and common teacher management goals in additional to an improved flow of information and feedback among all school agents (Kelley, 1999). Performance pay also has the advantage of being more equitable than the traditional single schedule system. Rather than rewarding teachers according to

their experience and qualifications, performance pay rewards the extra effort of highly motivated, effective, and efficient teachers (Hoerr, 1998).

In spite of the theoretical benefits, performance-based pay offers many practical challenges. The most critical challenge is the difficulty of measurement. Without clear measures and criteria for judging success, decisions about rewarding performance are, at best, subjective and, at worst, unworkable (Murnane & Cohen, 1986). Performance pay may also have negative effects on motivation and collegiality. Extrinsic incentives may undermine intrinsic motivation to teach, resulting in worse performance than would have resulted without extrinsic incentives (Schwartz, 2009). It can demoralize teachers and corrode teacher collegiality by introducing competition (Clabaugh, 2009; Murnane & Cohen, 1986). In addition, if compensation is linked to test score, it may cause teachers to teach to the test, sacrificing the nurturing of curiosity and creative thinking (Clabaugh, 2009). It may also stimulate teachers to participate in inappropriate or deviant behavior, such as cheating (Jacob & Levitt, 2003; Malen, 1999). Finally, opposition from union and teachers poses huge drawback for performance-based pay. Teacher unions view any sort of subjective evaluation of teachers as threats to their collective bargaining strategies strongly oppose performance pay. In addition, lobbying by unions has often halted efforts to legislate performance-based rewards (Ballou & Podgursky, 1993). Teachers generally do not welcome performance pay either. They see it as a threat to their autonomy (Kelley, Heneman, & Milanowski, 2002). When the possibility of incurring an unknown reward is compared with the possibility of receiving an assured reward, teachers tend to be prone toward minimizing potential cost (i.e., opting to the security of uniform increase) rather than maximizing profit (i.e., taking a chance on merit increases) (Bogie & Bogie, 1978).

Research on the effect of performance-based pay is limited in base and mixed in findings. One of the studies (Dee & Keys, 2004) analyzed data from Tennessee's Project STAR class-size experiment and the contemporaneous Career Ladder Evaluation System. The results of the study indicated that teachers who had been certified by the career-ladder evaluations were related to large and statistically significant increases in mathematics scores (roughly three percentile points). However, these gains in mathematics scores appear to have been concentrated among teachers who were on the lower rungs of the career ladder. In contrast, only assignment to a teacher who had reached the top of the career ladder led to statistically significant gains in reading achievement. The researchers suggest that the career-ladder system was partially successful at rewarding teachers who were relatively effective at promoting student achievement.

Another study (Eberts, Hollenbeck, & Stone, 2000) assessed the effect of a merit pay scheme in Michigan on student achievement. The scheme rewarded individual teachers according to student retention rates and student evaluation. The study found that the merit pay program improved student retention. However, the student pass rate fell, while attendance rates and grade point averages remained unchanged. The authors concluded that incentive systems within such complex organizations as schools might produce unintended and misdirected results.

A third study (Belfield & Heywood, 2008) used the national data of the 2000 School and Staff Survey (SASS) to examine the consequences of performance-based pay. Three hypotheses were tested in the study: 1) performance-related pay among teachers is more likely to be observed when there are evident indicators of team production; 2)

teachers receiving performance pay will earn more in total than otherwise equal teachers without performance pay*;* and 3) teachers receiving performance pay should have higher job satisfaction. Results indicated that cooperative working conditions did increase the probability of receiving performance pay and that performance increased total compensation. However, teachers who received such pay awards had lower job satisfaction than those who did not.

A study conducted by the Center for Educator Compensation Reform (2008) reported the obstacles and success of the ASPIRE Award program in Houston Independent School District (HISD) based on document reviews and interview with officials of the district and teacher labor organization. The study found the district and teacher labor organization disagreed with each other regarding the effectiveness of performance pay in Houston. The district data showed that teacher attrition had decreased since the implementation of the performance pay program. The district officials attributed student test-score improvement in the 2007-2008 school year to the performance pay and data model. The union's data, by contrast, indicated that more teachers left the district after the district introduced the performance pay plan. In addition, Union officials were skeptical about the availability of data to evaluate the program's effectiveness and the validity of claims of any positive effect. They claimed that it was too early to draw conclusions about the success of the program. The study summarized several lessons learned from HISD's experience of performance-related pay, such as essential communication, balance between fairness and complexity, and significance of guiding performance pay with explicit goals. It concluded that although it was still too early to

evaluate the success of program, there was much to be learned from the obstacles and successes in Houston as other districts embarked on similar performance pay initiatives.

Generally, research evidence suggests that well-designed performance-related pay programs can improve student achievement and teacher retention, although the number of studies existing is limited, and implementing such programs presents many challenges. Financial incentives, including input-based and performance-based pay, are useful strategies that have been used in alleviating the challenges of teacher shortages.

Induction and mentoring. Induction refers to support, guidance, and orientation programs for beginning elementary and secondary teachers during the transition into their first teaching jobs (Smith & Ingersoll, 2004). Although induction programs vary widely in type and components, they are generally intended to increase the confidence and effectiveness of new teachers, and thus to decrease the high level of teacher attrition among beginning teachers (Ingersoll & Kralik, 2004). Induction programs have increased in recent years. In early 1990, only 40% new teachers participated in a formal induction program. This number rose to 80% in 1999-2000 (Smith & Ingersoll, 2004).

Research indicated that induction has shown positive effects on retention when well-conceived, carefully implemented, and soundly-supported by the school in which new teacher works. The impact of induction relies on its components, such as having a mentor of the same subject, grade, and school, frequently supportive communication with an administrator, and the assistance of a teacher's aide (Kardos, 2004; Smith & Ingersoll, 2004). Smith and Ingersoll (2004) found that basic induction (with only mentoring and supportive administrator communication) did not have significant influence on teacher retention, while a bundle of seven components of induction (which included mentoring,

administrator communication, collaborative/common planning time, seminars, teacher network, aide, and reduced course load) did positively affect teacher retention. However, only one percent new teachers in their national data received the seven-component induction package while the majority participated in basic induction. A recent national study (Glazerman, Dolfin, Bleeker, Johnson, Isenberg, Lugo-Gil, Grider, Britton , & Ali, 2008) examined the comprehensive teacher induction and found that it had no impact on teacher practice and teacher retention. Future studies need to explore other factors contributing to the effect of induction so that new teachers can benefit fully from such support programs.

Although induction and mentoring have been used interchangeably, they are conceptually distinct. Mentoring is a component of induction. Like induction, quality of mentoring varied extensively (Feiman-Nemser, 2001). Nonetheless, two elements are found concurrent with effective mentoring. One is the alignment between a new teacher and his or her mentor by subject, grade, and school. Research found that a mentor who taught the same subject, grade, and school as the novice had significant positive effects on new teachers' instruction and retention (Kardos, 2004; Smith and Ingersoll, 2004; The Public Education Network (PEN), 2004). The other beneficial element is frequent interaction between new teachers and their mentors. New teachers report benefit from the mentorship if the pair work with together more often, for example, three times a week (Kardos, 2004; PEN, 2004). Despite the possibility of positive impact, high quality mentoring is rare and substantive interactions are infrequent (PEN, 2004). The match between beginning teachers and their mentors was required and not ensured (Smith, 2007). In addition, new teachers in high-poverty schools were less likely to have a mentor

and a mentor who shared their subject, grade, and school compared to their colleagues in low-poverty schools (Kardos, 2004).

Overall, induction and mentoring can have a positive impact on new teachers' instructional practice and retention under certain conditions. As Johnson et al. (2005) summarized,

> Mentoring or 'basic' induction alone appear to have little effect on satisfaction or retention. However, given supportive conditions (i.e. a shared field, grade, school, and substantive exchange), mentoring has a positive effect on new teacher satisfaction and retention. Likewise, in the case of induction, the type and number of induction components mediates its effect on retention. (p.89)

Alternative routes to teaching. Alternative teacher certification refers to non-traditional methods that an individual may use to become licensed to teach other than the common approach of graduating from a college or university with a degree in education (Feistritzer, 1999). Alternative programs are designed to recruit, prepare, licensed talented individuals for teaching. Candidates for these programs already have at least a bachelor's degree and have to pass rigorous screening process. The programs are field-based and include coursework or equivalent experiences in professional education studies before and while teaching. Candidates in these programs work closely with mentor teachers. The National Center for Education Information (NCEI) (2008) advocates that teacher candidates of alternative certification programs must meet high performance standards for completion of the program. The programs range from 2 weeks of training prior to classroom assignment to 2 years of coursework and up to 3 years of mentoring. The agency responsible for the program may be a school district, regional service center,

university, teacher union, business community, or a combination of any of these or other agencies (Haberman, 2001). In 2005, 47 states, plus the District of Columbia, report 122 alternative routes to teacher certification. More than 250,000 people have been licensed through alternative routes to teacher certification programs since the mid-1980s. Approximately 35,000 individuals are entering teaching through alternative teacher certification routes each year (NCEI, 2008).

Compared to traditional teacher education programs, alternative teacher certification programs have a number of advantages. They brought more males, minorities, and mature individuals into the teaching profession (Feistritzer, 2005; NCEI, 2008; Shen, 2000; Shepard, 1999). The programs also supplied more teachers to urban schools (Feistritzer, 2005; Shen, 2000). In addition to the benefits, alternative teacher programs have several major problems. One major problem is the assertion that subject knowledge alone is sufficient to be a successful teacher of subject matter to diverse learners. The inadequate preparation of pedagogical knowledge and skills, as well as the missing need to develop teachers' intercultural competencies disadvantage the teachers trained through alternative programs from being effective with all students including those who have cultural and linguistic backgrounds different from themselves (Zeichner, 2003). Another weakness of the alternative certification programs is its uncritical advocacy of alternative routes to certification without attention to the conditions that need to exist in these programs for their educative potential to be realized (Zeichner, 2003). In order for alternatively prepared teachers to succeed and to stay in teaching, mentoring and principal's support are critical (Brennan & Bliss, 1998; Brown, 2001; Chesley, Wood,

& Zepeda, 1997; Suell & Piotrowski, 2006; Zeichner & Schulte, 2001), particularly in urban schools (Brennan & Bliss, 1998).

Research on the effect of alternative teacher certification produces conflicting results over teacher retention and teacher quality. Many studies found alternatively certified teachers leave teaching at considerably higher rates (Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Laczko-Kerr & Bediner, 2002; Raymond, Fletcher, & Luque, 2001). Darling-Hammond and colleagues (Darling-Hammond et al., 2005) studied teachers certified through Teacher for America (TFA) in Houston and found few TFA recruits stayed in the district after they had completed their initial preparation for teaching. The attrition rates were about twice as high as for non-TFA teachers. Harris, Camp, and Adkison (2003) found that there was a general lack of commitment to teaching as a long-term career among teachers prepared in nontraditional programs. The alternative certified teachers were undecided about staying in teaching compared to the traditional certified teachers. Other studies either found no difference in attrition of the two groups (Gerson, 2002), or reported higher retention rate for the alternative teachers (Feistritzer, 2005). In NCEI's survey (Feistritzer, 2005), the retention rate of certified teachers were found to be higher than the national level of 50% in the fifth year. States with highest percentage of alternative teachers reported that 87% of them were still teaching in year 5. In addition, 62% of the respondents indicated they were expected to staying teaching in public schools in the coming five years.

Whether alternative teacher certification programs produce highly qualified teachers is another controversial topic. Some studies examined teacher quality or effectiveness through classroom observation, students test scores in reading and

mathematics, and perceived teacher efficacy and found no significant difference between alternatively and traditionally prepared teachers (Miller, McKenna, & McKanna, 1998; Suell & Piotrowski, 2006; Tournaki, Lyublinskaya, & Carolan, 2009). Other studies, however, found that teachers certified through alternative paths generally less effective than standard certified teachers did. Darling-Hammond et al., (2005) found students achieved stronger achievement gains in both reading and mathematics when they were taught by standard certified teachers rather than TFA recruits and other uncertified teachers. Although Teach for American and the district offered professional development opportunity in the second or third year of teaching, students did benefit from these efforts as majority of TFA recruits left after their second or third year of teaching. Due to the different understanding and measurement of teacher effectiveness and different research method, the answer to whether alternatively certified teachers are as effective as their traditionally certified colleagues remains inconclusive.

Zeichner (2003) suggests that all forms of teacher education have a wide range of quality from awful to excellent. Rather than continuing the debate over which is better, it would be more useful to focus on gaining a better understanding of the components of good teacher education regardless of the structural model of the program. Zeichner contends:

> We need to continue developing multiple pathways into teaching and focus on making sure that the components of high quality teacher education, something we are beginning to learn more about from recent in-depth case studies of teacher education institutions are present in all of these various structural models. (2003, p. 506)

In general, there is evidence that alternative teacher certification programs have had positive impact on providing nontraditional individuals to the teaching profession and alleviating teacher shortage in urban schools and the high-need subject areas. Without the alternative programs, the schools "might otherwise experience an even more quickly revolving door for teachers in and out of classrooms" (Darling-Hammond et al., 2005, p. 21). Many problems are not unique to the alternative teachers, but rather, applicable to all teachers regardless of the preparation they experienced. The following section will examine what has been done by traditional teacher education programs to meet the challenge of teacher shortages.

Responses of traditional teacher education institutions. In response to the ongoing challenge of teacher shortages, teacher education institutions have taken a number of reform efforts to better prepare teachers to teach all children, through specific admission strategies, coursework, and opportunities for diverse field experiences. The assumption behind these efforts is that if teacher education institutions can enroll people who are committed to teach children, particularly children who have inequitable opportunities to succeed in life and education; and if they can equip these candidates with the knowledge, skills, and dispositions essential to teach students of diverse cultural and linguistic backgrounds, they will be able to contribute significantly to solving the problem of teacher shortages.

The general principle guiding these reform efforts is embedded in a social justice agenda, which is an outgrowth of the social reconstructionist tradition of reform in American teacher education (Zeichner, 2003). The mission is to place the preparation of teachers for cultural diversity at the center of teacher education programs. It has several

major objectives, including a) to prepare teachers to teach all students to reach high levels of learning and to prepare them all for active and full participation in a democracy (Villegas, 2007); and b) to prepare teachers to become agents of social change who view teaching as a political act and who develop knowledge of students that takes account of their ties to oppressed groups such as those based on race, ethnicity, class, and/or language (McDonald, 2007).

The practices inspired by a social justice agenda of teacher education have been variously referred to as culturally responsive teaching (Gay, 2000; Irvine & Armento, 2001; Villegas & Lucas, 2002), culturally relevant teaching (Ladson-Billings, 1994); teaching against the grain (Cochran-Smith, 1991), teaching to change the world (Oakes & Lipton, 1999), teaching for diversity (Zeichner, 1993), and multicultural education (Banks, 1993; Nieto, 1999; Sleeter & Grant, 2007). Despite the lack of evidence for an overall infusion of social justice perspectives throughout pre-service teacher education programs, research has illuminated a number of teacher education strategies that are effective in preparing teachers to become culturally competent teachers. The following discussion will review some of the strategies used in the admission process, course works, and field experiences.

Admission process. Traditionally, varieties of criteria have been used in the selection process of teacher candidates. These criteria include such aspects as academic measures, personal information, and personality/interests of the students, though more emphasis is given on an individual's attitude and scholastic aptitude than on measures of professional interest or personality characteristics (Uno, Blackwell, & Leonardson, 1981). Little importance is attached to using students' experiences with children and

youth as a selection criterion (Haberman, 1972). Brown, Brown, and Brown (2008) argued that using minimum scores on tests such as the SAT for admission criteria to teacher certification programs may only insure corresponding scores on PRAXIS II but may not help insure more effective teachers. The overemphasis on using academic measures as the standard of admitting students into teacher education programs reflects the debate about teacher effectiveness. As discussed earlier, research has failed to provide consistent evidence for what contribute to the effectiveness of a teacher. Therefore, it does not seem to be reasonable to select teacher candidates according to their test scores only.

Research noted that many teacher education programs in the United States admit individuals with minimal qualifications (Kent, 2005). Most of the nation's teachers come from the bottom third of high school graduates going to college. By contrast, countries whose students consistently outperform American students attract more elite students, the top five percent in South Korea, the top 10% in Finland, and the top 30% in Singapore (McKinsey & Co., 2007). A recent study evaluated eight teacher education programs in New Mexico and found very little improvement in the pool of teacher candidates (Greenberg, Jacobs, & National Council on Teacher Quality, 2009). Some researchers recommended changing admission standards in order to help insure that high quality students are admitted to teacher education programs (Kent, 2005). Some suggestions for changes in admission criteria have included assessing personality types, increasing field experience requirements, insuring that teacher candidates have the dispositions as well as the academic standards to become high quality teachers, and requiring the completion of

a successful group interview (Kent, 2005; Farnsworth, Benson, Peterson, Shaha, & Hudson, 2003; Thornton, Peltier, & Hill, 2005).

In spite of the advocacy for changing admission standards, there is little evidence for whether admission criteria used currently in teacher education programs have attracted individuals with better quality. Several studies, however, did shed light on practices that show promise. One study (Villegas, 2007) discussed the importance of dispositions related to social justice and suggested that they should be assessed and enhanced throughout teacher education programs. She described an example of how a disposition was addressed in the entry interview of an admission process. During the interview, faculty members purposefully sought out evidence of applicants' beliefs about the educability of all children. However, rather than denying admission to applicants perceived to have deficit views of diverse student, Villegas and colleagues opted for an approach in which applicants play a central role in selecting themselves into or out of teacher education, based on an understanding of the core values of the program, that is, the educability of the children. In the admission process, faculty members made it clear to applicants that their performance in the program, including in their fieldwork and student teaching, will be assessed for evidence that they hold the belief that all children are capable of learning. If applicants feel that this is not consistent with their own beliefs, they might decide not to enroll in the program. In some cases, students were admitted conditionally, pending on taking a course that will help expand their understanding of different worldviews and ways of learning.

Another study (Faulk, 2008) investigated the ability of a group assessment interview used as an admission criterion into a teacher education program to predict

future teaching success. Group assessments do not look at academic ability, rather, they are "designed to help selection committee members assess teacher applicant's verbal skills, interpersonal skills, and leadership skills" (p. 3). The procedure included five activities involving eight applicants and two trained faculty members and lasted 90 minutes. The author studied 192 current teachers who took part in a group assessment interview at Utah State University between 1998 and 2002 during the admission process. Results indicated that group assessment scores were the only admission variable associated with future teaching success. No relationship was found between teacher success and principal interview data, GPA at time of admission, or ACT scores. The author suggested that group interviews appeared to be a better tool for identifying applicants who were more likely to succeed in the teaching profession.

International evidence also indicates that a written exam and the interview alone are not enough for a high-quality selection process for teacher education. Valli and Johnson (2007) studied applicants' performance in their entrance examination to teacher education in Finland and their performance in student teaching in order to examine the effectiveness of the selection process. The entrance examination not only aimed to find good and motivated students, but also good future teachers and was composed of a 10-15-minute demonstration lesson and an interview. Results indicated that the demonstration lesson was the best way to measure an applicant's suitability for the teaching profession. The authors suggested that interaction skills of the applicants should be evaluated before they are selected for teacher studies, in necessary education environments. They also pointed out the possible factors that might affect the validity of

the selection process, for example, subjectivity of interpretation, situational factors, and evaluators' experience at evaluating such situation.

In general, the admission process of teacher education programs has predominantly focused on minimal requirements of academic ability, usually indicated by an applicant's GPA or ACT/SAT scores. The discussions around whether admission criteria should include such elements as assessment of an applicant's dispositions and interpersonal skills are consistent with the debates about the essential qualities of a successful teacher. Questions are also raised regarding such issues as what positive changes can be made to a teacher education student in the process of teacher preparation, and how. These questions will be addressed later in this chapter.

Multicultural and diversity education. Since 1978, the National Council for the Accreditation of Teacher Education has required programs to include multicultural education as part of the pre-service curriculum (Gollnick, 1995). Research has documented program approaches that address this requirement by changing teachers' beliefs and attitudes, providing teachers with content and curricular knowledge on the histories and experiences of different cultural groups, and supporting them to learn specific practices for working with diverse students (Banks, 1995; Gay, 1994; Grant, 1994; Ladson-Billings, 1995, 2001).

One of the common approaches is to offer a single course in multiculturalism or diversity, or to integrate the content or conception of multiculturalism into an individual course, for example, a literacy course or a course on urban education. Such a course typically engages students in readings related to race, class, and multiculturalism and diversity, class discussions, and personal reflections. In some cases, it may include short-

term community-based activities (Shakespear, Beardsley, & Newton, 2003; Wade & Raba, 2003), cultural simulations, and an action research project as part of the assignments (Lyon, 2006; Martin, 2005). Sometimes, technology is used, in the form of online dialogue with diverse groups of teachers from different countries and different parts of the U.S., or weblogs, to assist the instruction of the course (Lacina & Sowa, 2005; Wassel & Crouch, 2008). In spite of the positive effects reported, it is argued that the effectiveness of one course is significantly limited (Ladson-Billings, 1999). Moreover, many of these efforts did not occur as part of a programmatic commitment to address the preparation of teachers for diversity (Cochran-Smith, Davis, & Fries, 2003). Researchers found that a single course might influence pre-service teachers' attitudes, but not their practices. They suggested that multicultural teacher education had to include, but extend beyond, particular courses to more venues that provide opportunities for collaboration and reflection in action over time (Jennings & Smith, 2002; Weisman & Garza, 2002).

An integrated approach, by contrast, makes multiculturalism or diversity central to teacher preparation rather than addressing it in a particular course. This was done by weaving the conception, knowledge, and skills of multicultural education throughout the curriculum, or by infusing multicultural standards into program standards. Darling-Hammond (2006) examined several teacher education programs, whose courses and fieldwork focused on getting to know students well and modify the classroom program to fit student needs and learning style (Darling-Hammond, 2006). Vavrus (2002) highlighted how teacher education at Evergreen State College infuses multiculturalism into its program standards. Ladson-Billings (2001) provided an example of a program explicitly focused on making diversity and culturally relevant teaching central to teacher

preparation and explored the experiences of prospective teachers. And Villegas (2007) explained how the principle of social justice was integrated to all courses of the program by assessing and enhancing prospective teachers' dispositions and equipping them with the knowledge and skills essential to teaching diverse students. McDonald (2007) studied two teacher education programs that used integrated strategy to address social justice. The results suggested that social justice teacher education relies on more than the efforts of individual teacher educators. Programs aiming to integrate social justice may benefit from implementing structures that enable faculty to work together in both defining and enacting such a vision of teaching and learning.

Diverse field experiences. Many of the programs mentioned above also integrated field experiences as part of their strategies to implement the social justice teacher education. These field placements varied by time, duration, setting, and structure. Short-term field experiences are usually offered at an early stage of the program, with the purpose of providing an opportunity for prospective teachers to understand the reality of teaching and learning in diverse settings and the societal context, to examine their own roles in the inequitable system, and, hopefully, to become aware of the necessity of social change. Such experience includes cultural immersion programs, student teaching abroad, and service learning projects (Bieger, Vold, Song, & Wang, 2003; Bieger & Yu, 2008; Boyle-Baise, 2002; Bradfield-Kreider, 2001; Lakes, 2001, Stachowski & Brantmeier, 2002; Stachowski & Frey, 2003). Long-term field placement usually occurs toward the last stage of the preparation program. Unlike traditional student teaching, social justice teacher education programs have been seeking student teaching placements in schools serving diverse students, for example, in Professional Development School (PDS) model,

where student teachers teach in the classroom for one or two semesters while taking on-site courses (Darling-Hammond, 2005; Leland & Harste, 2005; Tidwell & Thompson, 2008). The topic of field experiences will be discussed in detail in a later section of this chapter.

Despite the strategies used to integrate social justice into teacher education, fragmented or coherent as they might be, almost no empirical research has been done to examine systematically the effectiveness of these strategies. There is little evidence that preparation received from such programs enabled prospective teachers to take teaching positions and to remain teaching in high-need schools. The very limited number of studies available provides mixed results. For example, Leland and Harste (2005) proposed that student teachers went through three dimensions of critical perspective, with understanding system of meaning being the lowest in order, followed by interrogating personal involvement and taking social action. Although half of the students (14 out of 19) in the study committed to social actions by taking jobs in the urban schools, no conclusive relationship was found between the decision and their personal changes since there was no evidence that these individuals were willing to recognize their own complicity in maintaining inequitable power systems and relationships. Another case study (Jones & Enriquez, 2009) examined the experience of two students who attended the same teacher education program with a focus on critical literacy. Interestingly, the student who came to the program with homogeneous cultural experiences and who demonstrated naïve dispositions of social justice produced classroom practices that enabled her own students to engage in similar critiques, while the other who started the program with very diverse experiences and positive dispositions did not. Moreover, both

students chose to teach in an urban school and both were perceived as effective teachers by their colleagues and principal. The authors contended that there were no causal relationships between pedagogy, content, and moral and intellectual dispositions. Rather, they saw pedagogy in a teacher education course "as a point of contact and a point of departure, as something that may prompt a learner's willingness to adjust his or her habitus—and thus his or her trajectory as a person and pedagogue" (p.164).

To summarize, teacher education programs have made innovative efforts to prepare teachers for all students through various strategies in the admission process, course instruction, and fieldwork. While individual studies have reported positive gains of the strategies used, further research is need for a systematic examination on the effect of the preparation practice on prospective teachers' commitment to teaching and to social justice, and, eventually, its contribution to solving the problem of teacher shortages.

Motivation and the Choice of a Teaching Career

As discussed earlier, in order to solve the problem of teacher shortages, various efforts have been made to attract talented individuals to, and retain them in the teaching profession, particularly in high-need schools. However, concerns remain whether these efforts have been targeted at the right factors that contribute to the decision to become a teacher, or choice of school to teach in. While many assume that higher salary and other attractive financial packages will be able to entice "the best and brightest" to teaching, recent findings suggest that teachers' career choices are related to a combination of motivation factors. Despite the fact that most teachers cite intrinsic and altruistic motives as the reasons for entering teaching (Manuel & Huges, 2006; Miller & Endo, 2005; Williams & Forgasz, 2009), intrinsic and extrinsic rewards, when combined with positive

and negative working conditions, influence decisions to enter teaching, stay in teaching, and leave teaching (Harms & Knobloch, 2005; Hanushek, Kain, & Rivkin, 2004; Buckley, Schneider, & Shang, 2005).

The following section offers a closer look at individuals' initial motivations for choosing a teaching career. It starts by discussing the factors influencing the decision to become a teacher. Next, it examines the factors influencing the choice of teaching in urban schools. Finally, it discusses the changes in motivations to teach over time. The section ends with a brief review of methods used in research on motivation and decisions to teach.

Motivation Factors for Entering a Teaching Career

In spite of the differences in wording, research on motivation for teachers' career choices basically follows the dichotomous tradition and has identified a number of intrinsic and extrinsic motivations. Other factors, for example, perceived teaching abilities, social influence, and previous teaching experiences, are also found important to the decision of becoming a teacher.

Intrinsic motivations. Several factors have been found as the major sources of intrinsic motivation, such as love for children, love for subject, and love for teaching or learning. In Reif and Warring's study (2002), 1991-92 and 2000-01 survey respondents rated *love kids* as the number one reason for their decision to become teachers. Love of children is particularly important to the decision for female teacher candidates (McCray, Sindelar, Kilgore, & Neal, 2002) and candidates of elementary education (Book and Freeman, 1986).

Love for subject is another important source of intrinsic motivation, specifically for secondary teacher candidates. Younger, Brindley, Pedder, and Hagger (2004) interviewed a group of secondary education students in England and found 88% cited subject as a major factor in their decision to enter the program. Some of them emphasized the intrinsic value of the subject itself and the opportunity to continue working in the area; other stressed the 'love of the subject' and the desire to share their own enthusiasm and pleasure with others. This subject-oriented motivation was also identified by Serow (1993) among a sample of second-career teachers of history, math, and electronics. This partially explains why in Jarvis and Woodrow's survey (2005), *enjoy the subject and want to pass on love of the subject* ranked as the second most important reason for their choice of teaching.

Another source of intrinsic motivation is love for teaching or learning. In a nationwide study, Farkas, Johnson, and Foleno (2000) surveyed more than 900 new teachers (those who had taught for 5 years or less) in American public and private schools and found that 96% of them said they chose teaching because it is the work they love. In Jarvis and Woodrow's study (2005), *always wanted to teach* and *enjoy teaching* were rated as important as subject matter in the respondents' decision to become teachers. Love of learning is another recurring motive contributing to decisions to teach. Reif and Warring (2002) found a high response rate to the survey items of *love going to school* and *continue personal learning*. Lortie (1975) summarized this attractor to teaching as "the continuation theme" (p.29), reflected by such statements as *love of school*, *desire to work in that setting,* as well as *interest in a subject-matter field.*

Some people are attracted to teaching because it provides the opportunity for satisfying altruistic needs, for example, serving others, making a difference in children's lives, or making a contribution to the society. In almost every study to date in the field of motivation and teachers' career choice, altruistic motivation is one of the most important reasons for decisions to become teachers (See, for example, Brookhart & Freeman, 1992; Reif & Warring, 2002; Sinclair, Dowson, & McInerney, 2006). Lortie found that (1975) *the service theme* was one of the five attractors of teaching. Watt and Richard (2007, 2008) examined the entry motivation of several large cohorts of pre-service teachers and found that altruistic-type of motivations, reflected in the *social utility value* constructs including such factors as interest in teaching, shape future of children, enhance social equity, making social contribution, and working with children were rated significantly important to decisions of teaching. Moreover, these factors were positively correlated with the participants' satisfaction with the choice of teaching and future engagement in the profession at a significantly level.

Extrinsic motivations. Research on the relationship between extrinsic motivation and teachers' career choice has generated mixed results. Some researchers suggest that external rewards, such as job security, time schedule, perceived social status, and salary, play an important role in drawing people into the teaching occupation. Milanowski (2003) examined the factors that attract students with math, science, and technology skills to a career in K-12 teaching and found, in addition to the desire to work with children and to help children, prospective teachers in the focus group study said they were also attracted to teaching by the schedule that would accommodate family demands and provide summer off. Although they recognized that teaching was not highly paid, many cited

good job security and benefits as attractive features. These factors seem particularly important to in-service teachers and non-traditional teacher education students, who are older and experienced. Farkas et al (2000) noticed that allowing enough time to be with family was rated by the new teachers participating in the focus group interview as the second most important factor (81 percent) to their decisions of becoming a teacher, and job security the fifth important (60 percent). Reif and Warring (2002) found that teacher candidates in graduate programs are more likely to cite time schedule as an important motivation factor for teaching than those attending undergraduate programs. Priyadharshini and Robinson-Pant (2003) interviewed 34 career changers and found that the need for secure salary and pension provisions was an important reason for people who changed careers to teach. Similar results were found in other studies on career change students or alternative teacher candidates (Serow, 1993; Simmons, 2005; Williams & Forgasz, 2009).

Other researchers found that external rewards served as barriers to decisions of teaching or important reasons for not entering teaching. Manual and Huges (2006) found that external rewards like salary were not overriding factors in the initial decision to teach, but they suggested they might be an important factor for choosing not to teach. This is supported by Beng Huat (2004) who found that while confirmed teachers were more likely to report being motivated by intrinsic factors, "non-teachers were more likely to value extrinsic factors like salary, promotion opportunities, job status, good working conditions, and intellectual stimulation" (p.219). Gordon (2000, 2002) contended that financial security usually appeared as a factor to overcome rather than a factor which

motivates people to teach. It is noteworthy that lack of social prestige and low salary were major obstacles against minority students' decision to teach (King, 1993; Su, 1996).

Still other researchers found that the evidence was too weak to support any significant relationship between extrinsic motivation and the decision to enter teaching. Often, external rewards including salary, benefits, time compatibility, or job security were found clustered at the bottom of the list of factors and were rated by most participants as unimportant to their choice of becoming a teacher (Reif & Warring, 2002). In Watt and Richardson's study (2007, 2008), extrinsic rewards such as job security, time for family, job transferability, social status, and salary (reflected in their personal utility value constructs) were rated below the midpoint of 4 on a 7-point scale by participants in the study, which indicated that they were less important to the decision to teach. In addition, all of the factors, except social status, were negatively correlated to intention to persist in the profession and satisfaction with the choice of teaching, though none of the correlations was statistically significant.

Lortie (1975) argues that job security was an important recruitment resource for teaching and he suspected that "it exerts more influences than teachers are ready to accord it" (p.37). He suggests that teachers were reluctant to admit explicitly the role of material rewards in their decision to enter teaching due to the emphasis on teaching as a service and a profession of dedication. "Such normative pressures make it probable that material benefits influence teachers' decision more than their answers indicate" (p.30).

Perceived teaching abilities. Apart from the generally recognized intrinsic and extrinsic motivations, there is evidence for other factors which influence the decision to become a teacher. One of these factors is self-efficacy, the perception of or belief in one's

teaching abilities. Watt and Richardson (2007) found perceived teaching ability was rated as very important to the participants' decision of teaching (5.6 on a 7-point scale), and was significantly related to their planned persistence, career development aspirations, and satisfaction with the choice of teaching. Harms and Knobloch (2005) examined a small sample of graduates who were certified to teach agriculture in secondary education and found that pre-service teachers' sense of efficacy was related to career choice. Those who planned to pursue formal education careers (i.e. teaching in school classroom setting) had a higher sense of teaching efficacy than their peers who planned to pursue non-formal education careers or who were undecided about their careers. The authors suggest that the stronger students' efficacy beliefs, the more interest they expressed in a given occupation. The reverse is also true: weaker efficacy beliefs, the less the interest. In Milanowski's study (2003), students in general math, science, and technology majors cited their own abilities and interests as important reasons they were not attracted to a teaching career. Their concerns included doubts about their ability to be good teachers and discomfort with aspects of the job such as being responsible for others or standing in front of a class.

It is interesting to notice the different findings about the relationship between individuals' academic ability and decisions to teach. For example, college graduates with above average academic ability tend not to select into teaching. Moreover, high-ability men and women who do enter public school teaching are more likely to leave than their less talented counterparts (Bacolod, 2007; Podgursky, Monroe, & Watson, 2004). While little is known about the relationship between the efficacy beliefs of these high-ability candidates and their academic aptitudes, future research should aim to address this

question. As teacher efficacy is context-specific (Tschannen-Moran et tal., 1998), and changes over time (Yeung & Watkins, 2000), research efforts should also focus on what elements contribute to the development of pre-service teachers' self-efficacy in the process of teacher preparation so that teacher educators can adjust the instruction strategies accordingly to facilitate the growth of teacher efficacy beliefs.

Social influence. Teachers, family members, and friends can have either a positive or a negative influence on an individual's decision to become a teacher, directly or indirectly (Davis, 1994). Stroud and colleagues (Stroud, Smith, Ealy, and Hurst, 2000) found that although family influence on choosing a teaching career was significant, the influence of teachers, principals, or school counselors upon the decision was the most significant. Teachers who show their love for teaching and passion for their subject, who are encouraging and thoughtful serve as important role models and are more likely to have a positive influence on their students' decision to teach (Miller & Endo, 2005; Santoli, 2009; Yonger, Brindley, Pedder, & Hagger, 2004). Many teacher candidates reported having positive or negative role models and indicated the intention to replicate their positive experiences for other children, or to improve what they saw as a system that had failed some (Priyadharshini & Robinson-Pant, 2003).

Compared to their White peers, minority students are more likely to cite the influence of family members or important adults as significant to their decision becoming teachers. Many reported having an educator in the family, and many cited parental support as a determining factor in their decision to teach (Miller & Endo, 2005; Williams, Graham, McCary-Henderson, & Floyd, 2009). In a study examining African-American women's decision to teach, the influence of biological mothers and other mothers in their

families and communities was repeatedly expressed by the participants as an important reason for choosing to teach (McCray et al., 2002). However, in other cases, minority students met strong resistance and even outright protest from their families and relatives who were disappointed at their decisions to enter teaching because of their expectations for the children to enter more lucrative and prestigious fields (Su, 1996). Lack of role models at school was also found to be an obstacle against minority students' decisions to teach (King, 1993; Nelson, Garmon, & Davis, 2001). This is not a surprise given the disproportionately low number of minority teachers in K-12 school classrooms.

It is noteworthy that research on different cultural backgrounds shows the different roles of social influence on decisions to teach. Sinclair, Dowson and McInerney (2006) conducted a survey among first-year teacher education students in a public university in Australia. Participants reported moderate motivation for teaching related to the influence of others. Another study in Australia (Watt & Richardson, 2007) found that the social influences were rated below the scale midpoint of 4, while social dissuasion was rated slightly above it, indicating that participants perceived both factors as less important influences on their decision to teach.

Based on the above findings about social influence, teachers at all levels can encourage students to consider teaching as a career choice. School counselors and administrators can help students make the decision by providing enrollment information about teacher education and financial support, and by organizing campus visits. Furthermore, it is essential to increase the number of minority teachers at both the K-12 and the university level who will serve as role models to encourage minority students to teach.

Previous teaching experience. Having previous teaching experience is important to the decision of entering teaching (Miller & Endo, 2005; Tamir, 2009). Most of the experiences are informal, including working with children, tutoring, and coaching (Marshall, 2009; Milanowski, 2003). Watt and Richardson (2007) found that previous teaching experience was among the highest rated influences on the choice of a teaching career, with a group mean above 5 on the 7-point scale, slightly lower than the factors of teaching ability, intrinsic career value, and social utility value. It was also positively correlated with participants' development aspirations, planned persistence, leadership aspirations, and satisfaction with their choice of teaching. Hsiou-Huai Wang (2004) noted that many students reported developing an interest in teaching from their informal teaching experiences prior to their entry into the teacher education programs and after attending the course. Some African-Americans' decision to teach is related to transformative transference, a desire to be a life-changing individual in someone's life because of their own experiences with that type of individual (Williams et al., 2009). Having previous teaching experience is also a motivation factor that distinguishes the career choice of teacher education students and non-teacher education majors (Milanowski, 2003).

In summary, people are initially motivated to become a teacher by a combination of intrinsic and extrinsic rewards offered by the teaching profession. Other factors, such as perceived teaching ability, social influences, and previous teaching experience, also contribute significantly to the choice of a teaching career. As there is evidence that entry motivations are not only related to decisions to teach or not to teach, but also to future job satisfaction and retention, one may be interested in knowing how these motivations are

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going to influence individuals' decision to teach in urban schools. Before answering that question, I will provide a brief overview of how entry motivations to teach change over time.

Change in Motivations to Teach over Time

As motivation factors are important to individuals' decisions to enter teaching, it is important for teacher educators to understand whether these factors change over time and what may contribute to the changes so that they can facilitate positive growth. Sinclair et al. (2006) suggest that entry motivations to teach may change substantially over time, particularly in response to the "real life" teaching experiences that constitute pre-service teachers' practicum experiences (p.1135). The authors suggest that changes in motivations, or motivational flexibility, may be associated with pre-service teacher retention.

Sinclair and colleagues compared the pre-service teachers' entry motivations at the beginning of their first semester of teacher education with that at the end, in an Australian public university, using the Modified Orientations to Teach Survey (MOTS). Results indicated that pre-service teachers' entry motivations did change over time and, where changes occur, they typically do so in the negative direction. The authors attributed the negative changes to participants' experiences of teaching during their first practicum, through which pre-service teachers developed a more realistic perception of teaching. It might also be that they encountered negative options about teaching expressed by cooperating teachers or other members of the school community. One interesting finding was about the worth of teaching, in which younger participants reported a greater decline than older participants were. Sinclair et al. suggest that older pre-service teachers' entry

motivations were relatively stable and were less vulnerable to the negative feedback from external sources than were those of younger per-service teachers.

The study demonstrated that pre-service teachers' entry motivations could change across the first semester of a teacher education program. It is worthwhile for future research to track changes in pre-service teachers' motivations throughout the whole process of the teacher preparation what contributes to the changes. It can help us understand how teacher education graduates' motivations to teach are different from their entry motivations and what influences their choices when they enter the job market.

Factors Influencing the Decision to Teach in Urban Schools

In contrast to the extensive research activities on why teachers stay in or leave their teaching positions in urban schools, surprisingly little is done or known about what influences the decision to teach there. As a result, many of the current recruiting strategies, for example, financial incentives, are based on research findings of why teachers leave, instead of why they choose to teach in urban schools. The fact, that a large number of vacancies remain unfilled in urban schools every fall, indicates that those strategies do not target the right problems.

There is only one study to date (Tamir, 2009) that examined graduates of elite colleges who choose teaching in urban schools. It found that the decision to teach was mainly inspired by a sense of mission to change society and make a difference in the lives of poor inner-city children. Participants expressed strong commitment to social change in urban education and an intention to seek leadership positions in urban education. Due to the small sample size (10 participants) and the special characteristics of the participants, it is hard to generalize whether social justice and leadership are the major motivations for

other teacher candidates to choose teaching in urban schools. However, it might be interesting to examine the teacher education program to see if any of its elements has contributed to the intention and motivation of its graduates' decision to pursue teaching in urban settings.

Other related studies offered limited information regarding intention or decision to teach in urban settings. Reif and Warring (2002) compared the experience of two cohorts of teacher education students in 1991-92 and 2000-21. One thing they found was that participants' choice of place to teach changed over the 10 years. There was an increase in wanting to teach in urban settings and a desire to teach anywhere there is job among undergraduate students, but a decrease in interest in urban settings and an increased interest in teaching where ever there was a job among graduate students. However, the study did not focus on what caused the change, or whether such change was related to the change of their motivations to teach.

Farkas et al. (2000) looked at the influence of external rewards on the choice of teaching in urban settings. Working conditions, such as student behavior, parental support and administrative support, were, without exception, rated as significantly more important to the new teachers' choice of school to teach, in comparison to a significantly higher salary. Among new teachers in rural and suburban schools, 29% would seriously consider applying for urban schools if offered significantly higher salary, but only eight percent would very likely to consider it. The authors suggest that money can be effective in attracting teachers only if other critical working conditions are in place. Difficult working conditions were also cited as obstacles against minority candidates' decision to teach. Minority students seem to believe that urban school settings would be the school

settings that they might be most likely to be exposed to and are most likely to consider

when considering a teaching career. They are concerned that urban teachers would be

deterred by student-related problems and by constraints in the structure of the profession

and the school bureaucracies (King, 1993).

Another study (Bacolod, 2007) highlighted the demographics of individuals who

are likely or unlikely to choose teaching in urban settings. It noted that female minority

teachers were more likely to choose urban schools than suburban schools in contrast to

their male minority counterparts. Colleague graduates with high aptitude were

significantly less likely to teach. In addition, those with greater aptitude and potentially

higher teacher quality were least likely to teach in central city schools and most likely to

teach in suburban schools. This is inconsistent with Tamir's (2009) finding about

graduates of elite colleges.

One study that offers a significant contribution to understanding what influences

teachers' choices of where to teach was conducted by Boyd and colleagues (Boyd et al.,

2005), who found that distance and hometown region had powerful effects on

individuals' employment location decisions. Beginning teachers had a strong preference

to locate their first job close to their hometown, or regions similar to that of their

hometowns. For example, a new teacher whose hometown was in an urban area was

three times as likely to locate in that urban area as he/she was to locate in the suburban

portion of the same metropolitan area. However, holding distance constant, a teacher was

just as likely to locate in his or her home region as he/she was to locate in the urban

portion of another metropolitan area. Such was also true for teachers whose hometown

was in a suburban, small town, or rural region. Consequently, 61% of teachers entering

public schools in New York from 1999 to 2002 first taught in schools located within 15 miles of their hometown, and 85% entered teaching within 40 miles of their hometown.

Teachers' preference to teach in a place close to their hometown, or a region with characteristics similar to their hometown may have to do with what Strunk and Robinson (2006) referred to as social identity, defined as "part of the self-concept which derives from their knowledge of their member ship of a social group (or groups) together with the value and emotional significance of that membership" (Tajfel, 1982, as cited in Strunk & Robinson, 2006, p.65). Teachers may prefer to teach in schools where the student and/teaching staff reflects their own identity in order to seek racial similarity and comfort. Although Strunk and Robinson's study supported this hypothesis, it was about the behavior of quitting rather than choosing teaching.

In general, why individuals choose teaching in urban schools has been largely unexamined. Questions such as what influences the choice of teaching in urban schools, and to what extent initial motivation for entering teaching contributes to the choice of teaching in urban schools remain to be explored in future studies.

This section discussed initial motivations for choosing a teaching career. While intrinsic motivations appeared to be a dominant determinant to individuals' decision to teach, the influence of extrinsic rewards may be understated. Although one of the significant motivations, teachers' self-efficacy, has been found to change over time, little is known about the change in entry motivations to teach across the whole of teacher preparation. The same was true about what influences the choice to teach in urban schools, an issue which requires further attention. As current literature suggests that field experience is a factor influencing the change of motivations to teach (Sinclair el al.,

2006), the next section will provide an overview of field experience in the context of teacher education.

Field Experience and Pre-service Teachers' Professional Growth

Field experiences are considered significant components of teacher education and are required for national and state teaching preparation program accreditation and teaching licensure (National Association for Sport and Physical Education, 2002; California Commission on Teacher Credentialing, 2001). They offer pre-service teachers the opportunity to apply what they have learned in their college- and university-based courses to real-world classroom situations (Darling-Hammond, Chung, & Frelow, 2002; Prater & Sileo, 2002), gain more experience with students and more of an appreciation for student differences (Aiken & Day, 1999; McLoughlin & Maslak, 2003), and to interact, collaborate with, and learn from experienced teachers in their chosen field(Feiman-Nemser, 2001; Prater & Sileo. 2002; Whitney, Gole, Nagel, & Nieto, 2002). They can also help pre-service teachers to determine if teaching is the appropriate career choice for them (Aikcn & Day, 1999; Mclntyre, Byrd, & Foxx, 1996; McLoughlin & Maslak, 2003).

In spite of the recognized benefits, a number of issues related to field experiences remain inconclusive. Due to the purpose of the current study, the following section will focus on the types of field experiences in the context of teacher education, the purposes of field experiences, and the impact of field experiences on pre-service teachers.

Types of Field Experience

Generally, terms such as "fieldwork", "field experience", "practicum", "internship", and "student teaching" have been used interchangeably to identify a

teaching experience in schools or communities prior to student teaching (Parkison, 2008, p.264). In this study, the term field experience refers to a student teaching experience occurring in any settings other than their college or university classroom in the course of a teacher education program.

Different types of field experience have been identified in the literature. An early review of field experience in the UK and Australia (Ryan, Toohey, & Hughes, 1996) described three models of field experiences based on the formats commonly in use. The *extended single placement* referred to the field experience situated toward the end of the teacher training courses (commonly called the thick sandwich model in the UK). *Multiple, shorter block placements* were usually distributed throughout the training courses (called the thin sandwich in the UK). *Part-time placement* of one to three days per week, the third type of field experience, extended over a semester or a year. It was sometimes called the *concurrent model*.

Teacher education programs in the United States usually offer a combination of several field experiences to meet their goals and standards. These field experiences may include an extended placement in school classroom at the end of a program, multiple, short block placements as part of the requirement of method courses, and/or short-term cross-cultural field experience in school classroom or community settings.

Student teaching. The most common field experience in a teacher education program is student teaching. Traditional student teaching is usually situated in the last semester of a teacher education program, at either undergraduate or graduate level. Student teachers are placed in a school, paired with a cooperating teacher in the school, and supervised by a university supervisor (Borko & Mayfield, 1995; Dullough & Drpaer,

2004; Valencia, Martin, Place, & Grossman, 2009). An innovative form of student

teaching places student teachers in Professional Development Schools (PDS) (Darling-

Hammond, 1994). The PDS model of student teaching ranges from an integrated model,

which included teaching part-time in a partner school and taking method courses back on

university campus for a semester to an academic year, to a full model (Capraro, Capraro,

& Helfeldt, 2010; Valencia et al., 2009), in which students teachers were placed to teach

in a partner school full time for a whole academic year and, at the same time, take on-site

method courses (Tidwell & Thompson, 2008).

Multiple, short-term field experiences. Teacher education programs usually

require pre-service teachers to complete several blocks of short field experiences before

formal student teaching, as part of the method courses. Typically, pre-service teachers are

placed at a school for a number of hours per week throughout a semester. Early field

experience of the kind engages pre-service teachers in observing and assisting classroom

teaching, as well as tutoring students (O'Brian, Stoner, Appel, & House, 2007; Sau Hou,

2009). The blocks of experience occurring later in a program often involve teaching

lessons (Parkison, 2008). Although pre-service teachers in early field experiences are

paired with cooperating teachers and supervised by university faculty, very little is

known about the responsibility of cooperating teachers and supervisors, or the effect of

their work (Anderson, Barksdale, & Hite, 2005; O'Brain et al., 2007).

Multicultural field experience. Multicultural field experiences were created to

meet the need of an increasingly diverse student population and the shortage of teachers

that serve that population. These experiences vary greatly in duration and structure across

programs. Some are a partial requirement of a multicultural education course, including

one-time activities such as community walks, visits to community agencies, and attending cultural celebrations (Cruz, 1997; Shakespear, Beardsley, & Newton, 2003; Wade & Raba, 2003; Wiest, 1998). Others take the form of community-based multicultural service learning (Boyle-Baise, 2002; Bradfield-Kreider, 2001; Sposet, 2009), and cultural immersion programs in urban schools and communities, which offer more in-depth cross-cultural learning opportunities (Bieger, Vold, Song, & Wang, 2003; Bieger & Yu, 2008; Stachowski & Frey, 2003).

Purpose of Field Experiences

Traditionally, a field experience is perceived as an opportunity to apply theoretical knowledge previously gained in campus-based activities. As Price (1987) states, the major purpose of field experiences is "to link theory with practice by providing regular structured and supervised opportunities for student teachers to apply and test knowledge, skills and attitudes, developed largely in campus-based studies, to the real world of the school and school community" (p. 109). However, Schön (1990) argues that the role of the field experience is to raise problems and issues that are used to trigger the investigation of related theory and knowledge, rather than serving as an occasion of application. He suggests that professional practice should be made the core organizer of the curriculum.

Research indicates that field experiences are not only times for teacher candidates to demonstrate or apply things previously learned, but rather, important occasions for teacher learning (Zeichner, 1996). Taken-for-granted assumptions about the purposes of field experiences in teacher education limit their value as teacher learning experiences and offer ideas for rethinking field experiences as more productive learning environments

(Rosaen & Florio-Ruane, 2008). To enhance the learning of prospective teachers, Zeichner (2010) calls for a paradigm shift for thinking about the role of field experiences in educating teachers. For example, apart from opportunity for application, occasion for reflection, a field experience may also be used as a site for inquiry (Cochran-Smith & Lytle, 2009).

Under the general purpose of teacher learning, a field experience can have several specific objectives. In a recent study (Goodnough, Osmond, Dibbon, Glassman, & Stevens, 2009), the purpose of a 13-week field experience, completed in the 5th semester of an elementary education program in Canada, is stated as follows: (a) integrate theory and practice, (b) refine skills in utilizing various instructional strategies and resources to meet the individual needs of all students, (c) develop and practice effective classroom management skills, (d) develop and practice the skills of a reflective practitioner, (e) develop an individual teaching style, (f) develop critical knowledge of curriculum outcomes and effective teaching techniques within various grade levels and content areas for implementation of outcomes, (g) develop a philosophy of education and recognize its relationship to educational principles in professional practice, and (f) experience the working relationship that exists between teachers and administrators as colleagues and their relationship with the broader school community.

In brief, the general purpose of field experiences is to offer significant occasion for pre-service teacher learning. In this sense, providing opportunity for application of knowledge learned, reflective practice, and critical inquiry are the means instead of the ends. In addition, different field experiences may be developed under specific objectives and, as a result, may have different impacts on pre-service teachers.

Impact of Field Experiences

Many studies have been conducted on the field experience in teacher education to test its effects on pre-service teachers, but with different foci. The following discussion first examines studies exploring the impact of field experiences on pre-service teachers' dispositions of teaching. It then examines how field experiences influence the motivation to teach. Finally, it reviews research that investigates the influence of urban field experience on pre-service teachers' willingness to teach in urban settings.

Field experiences and dispositions of teaching. Field experiences are found to have influence on pre-service teachers' dispositions, generally understood as "Professional attitudes, values, and beliefs demonstrated through both verbal and nonverbal behaviors" (NCATE, 2008, pp. 89-90), or "a tendency to act in a certain way" (Richert, 2007, p. 413).

Goodnough and colleagues (Goodnough et al., 2009) explored a triad model of field experience, in which two pre-service teachers are paired with a single cooperating teacher. Analysis of the data indicated that working with another pre-service teacher helped pre-service teachers develop more confidence in their teaching and allowed them to be more comfortable in presenting their ideas to their cooperating teacher. Pence and Macgillivray (2008) studied a group of teacher education students who completed a 4-week international field experience. They found both professional and personal changes, such as increased confidence about teaching, a better appreciation and respect for differences of others and other cultures, and an awareness of the importance that feedback and reflection play in professional and personal growth. Another study (Kim Chuan, Wong, Choy, & Tan, 2009) examined pre-service teachers' confidence level after

practicum experience I and II and found that their confidence in teaching increased significantly after the two experiences.

McDonnough and Matkins's study (2010), on the other hand, led to a very different conclusion. The authors compared the effect of two field experiences; one was connected to the science methods course and instructor, while the other was not. Results indicated that the practicum not connected to the science methods course led to a decrease in pre-service teachers' confidence in ability to teach science effectively. The field experience connected with the methods class, on the contrary, positively influenced teacher self-efficacy.

Capraro et al. (2010) compared the influence of different field experiences on the perceived level of competence among three groups of senior level elementary education majors, labeled as the control group (teacher candidates involved in field experience of 28 full days during the semester), the PDS group (teacher candidates participating in 56 full-day field experience during the semester while engaged in additional professional development activities and taking on-site methods courses co-taught by university faculty and mentor teachers), and inquiry treatment group (teacher candidates completing the same 56 full-day days of elementary school field experience as the PDS group while planning and initiating an action research inquiry project). Results indicated that teacher candidates in the inquiry group perceived themselves to be more competent at teaching than the PDS group and the non-PDS group, but no significant difference was found between PDS and control groups. The authors attributed the difference to student teachers heightened focus on reflection and inquiry into their classroom practice in combination with the additional training each of their mentors received to enhance their abilities to

facilitate and guide inquiry into professional practice. The researchers suggest, "It might not be the amount of time so much as how the time is spent during the field experience, which seems to determine their effectiveness" (p.145).

Kyles and Olafson (2008) examined the impact of a semester-long field experience on pre-service teachers' belief of teaching. The authors found that guided reflection about diverse learners along with experience in a diverse classroom setting did not lead to significant change in participants' beliefs. The authors suggest that a single semester of critical reflection on beliefs about diversity while experiencing a diverse practicum setting is not a sufficient condition for meaningful change during the course of a semester. Nonetheless, the personal reflection that occurred within the reflective response letters demonstrated that participants were able to articulate in varying degrees their beliefs about diversity and the majority of the participants were unable to make substantial and salient connections among lived experiences, beliefs, and committing themselves to valuing cultural diversity.

Gomez, Strage, Knutson-Miller, and Garcia-Nevarez (2009) suggest that change of pre-service teachers' attitude toward teaching and students of diverse cultural backgrounds was related to different settings of placement. They studied 335 students who enrolled in child development course and who completed an early field experience of minimum 20 hours in K-8 classrooms. Though students can choose their schools of placement, 795 of them were placed in Title I schools. The authors found that students placed in title I schools were nearly twice as likely to report an increase in appreciation for and knowledge about diversity as those placed in non-Title I settings (42% vs. 26%). By contrary, those placed in non-title I settings were nearly twice as likely to report that

their attitude about working with learners whose cultural, ethnic and/or economic background was different from their own were unchanged as were those placed in Title I schools (31% vs. 18%). Nonetheless, the authors did not examine or explain what elements of a specific placement, or how interaction between individual factors (e.g. previous experience with diversity, motivations to become a teacher) and the contextual elements of the field experiences contributed to the positive or negative influence.

Field experiences and motivations to teach. In spite of the studies conducted on the above influences, few studies to date examined the impact of field experiences on pre-service teachers' motivation to teach. As discussed earlier, there is evidence that pre-service teachers' initial motivation to become a teacher could change over the period of teacher education. And when changes occurred, they were usually negative (Sinclair et al., 2006). Yet findings of other studies were inconsistent. Doppen (2007) noted that many participants in the early field experience indicated that the most important motivator to enter the teacher preparation program was being able to serve society and give back to the community, but the experience did not seem to have significant influence on this initial motivation. Likewise, Kyles and Olafson (2008) compared pre-service teachers' motivation to teach before and after a field experience in diverse classroom settings and found no significant change in the course of the semester.

Some researchers suggest that early field experiences may be something of a reality check because participants appear to be less committed to teaching or less enthusiastic about working in some settings then they were at the beginning (Gomez, Garcia Nevarez, Knutson Miller, & Strage, 2006; Malone, Jones, & Stalling, 2002). However, Gomez et al. (2009) found context of field experiences had different influence

on pre-service teachers' interest in teaching as a career choice. Pre- and post-field experience survey indicate that participants placed in Title I schools were disproportionately likely to have lost interest in teaching as a career, while participants in non-Title I schools were disproportionately likely to have become interested in teaching. In addition, participants in Title I classrooms were also more likely to become uncertain about teaching as career goal than those placed in non-title I classroom. Based on the different responses of the participants, Gomez et al. identified four subgroups:

1. a retention group: Participants who identified teaching as their career goal on both the pre- and post-field experiences

2. an attrition group: Participants who indicated interest in the pre-field experience survey but indicated there were unsure, or wanted to pursue a different career on the post-field experience survey

3. a recruitment group: participants who expressed an interest in the post-field experience survey but not in the pre-field experience survey

4. a not-interested-in-teaching group: students who did not express an interest in a teaching career on either version of the survey

Although majority participants (83.1% out of 265 participants who indicated their career goal to be a teacher in the pre-field-experience survey) were identified as the retention group, about 40% of them reported becoming uncertain in the post-field-experience survey. The recruitment group accounted for a very small portion of the total sample (12 out of 68 participants who indicated no interest in a teaching career in the pre-field-experience survey). Given the authors' findings about the participants' attitude toward teaching students with diverse cultural backgrounds, it looks like that positive

change of participants' attitudes does not necessarily lead to positive change in their motivation to teach.

Urban field experiences and willingness to teach in urban schools. Like the studies about self-efficacy and motivation, research on the impact of urban field experiences on candidates' willingness to teach in urban schools is mixed. Some studies demonstrated a positive influence of urban field experience on pre-service teachers' willingness to teach in urban schools. For example, Mason (1997) reported that most candidates expressed a desire to teach in an urban school even though the candidates in urban settings perceived their schools as generally more problematic than suburban schools. Ross and Smith (1992) found that despite vast differences, some pre-service candidates were willing to work with students from cultural groups other than their own.

Feldman and Kent (2006) followed 20 teacher candidates placed in low socio-economic schools for a yearlong experience. They worked in school classrooms five days per week full day and reported to the university after school to attended method classes. When they completed the program, the teacher candidates actively sought teaching positions in these inner-city schools, and the school district actively sought to employ them. Qualitative interviews with both candidates and mentor (cooperating) teachers indicated that the candidates' disposition toward teaching were highly positive. Candidates performed better on job interviews, were able to offer substantive strategies for differentiated instruction, and expressed a strong sense of self-efficacy toward their teaching skills. The program was characterized by the following features:

- Partnering with local school districts to provide increased field experiences with a focus on the most academically challenging P-12 students.

- Placing teacher education candidates with true master, mentor teachers while in the field. Mentor teachers provided orientation, modeled highly effective teaching, and played the role of a *coach* instead of a *judge* through observation and conferencing.

- Partnering with university liaisons (master teachers employed by the school district) and university faculty.

- Ensuring that per-service candidates develop the dispositions as well as the academic standards to become the highest quality teachers.

The researchers suggest that it was a collaborative effort, or "team approach", that offered teacher candidates a family of supporting professionals in the course of field experience and bridged theory and practice in pre-service teacher preparation (Feldman & Kent, 2006, p.283).

Other research suggests that urban field experiences may have little or negative effects on teacher candidates. Wiggins and Follo (1999) found that although candidates in their study were placed in urban field experiences early in their teacher preparation program, the urban field experience did not seem to have helped them feel comfortable in cultural settings other than their own, nor did it contribute to a greater understanding of the cultural norms and expectations of a community with which they were previously unfamiliar. Urban field experiences increased candidates' abilities and skills, but they did not simultaneously increase willingness to work in the urban settings. In fact, experiences in the field may give candidates an ''inflated view of their potential for success as teachers in culturally diverse classrooms'' (p. 102).

A more recent study (Grande, Burns, Schmidt, & Marable, 2009) examined 73 teacher candidates participating in a voluntary, paid 6-week experience in a high-need urban school district. Results demonstrate that the experience had no significant impact on participants' willingness to teach in urban schools. The authors suggest that "a field experience in the absence of an affiliated course has no positive impact on promoting a positive perspective toward working in urban settings" (p.201).

Other research suggests that urban field experiences are more likely to be effective when they are accompanied by rich discussions of the realities of urban schools and their students so that stereotypes and prejudices do not fester (Delpit, 2006; Duarte & Reed, 2004; Ladson-Billings, 2000). Cross (2003) argues that the goal of urban field experiences should not be to increase candidates' comfort levels; it should be to assist teacher candidates in developing competence in working with these students. If negative attitudes toward diversity are not addressed in teacher programs and experiences with diverse students are not provided, high-quality candidates may not apply to urban schools or be sufficiently prepared for them. Furthermore, in their study of an urban teacher preparation program, Tidwell and Thompson (2008) contend,

> Teachers can make a significant contribution to the academic achievement of
> children in under-served communities even if the children's' cultural backgrounds
> are dissimilar to theirs – **IF** their (teachers') preparation is firmly grounded in the
> principles and approaches of multiculturalism and **IF** they have developed a
> framework for interpreting their students' realities that will not permit them to
> lower expectations. With this model, they are less likely to experience "burn out."

Meeting these two goals requires a sequential combination of specialized

coursework and structured field experiences. (P.86)

The mixed research evidence suggests that it is probably not the field experience

per se, but its elements that contribute to its effectiveness. An effective field experience

may include such elements as a connection between field experience and campus courses

(Zeichner, 2010), collaboration among a cooperating teacher, a university/school system

liaison, and university supervisor (Feldman & Kent, 2006), training of cooperating

teachers (O'Brian et al., 2007), coherent university supervisor team (Zeichner, 2010),

explicitly defined roles and responsibilities for cooperating teachers and university

supervisors (Feldman & Kent, 2006), quantity of time spent participating in field

experiences and interactions within the school environment with teachers and students

(Parkison, 2008), and tasks and strategies integrated in the field experience (Capraro et

al., 2010; Downey & Cobbs, 2007; Grande et al., 2009; Parkison, 2008).

Future research needs to explore what other elements contribute to the success of

a field experience, and what effect different elements of field experience have on

different aspects of pre-service teachers' professional growth.

Summary

The review of the literature in this chapter indicated that teacher shortages

continue to challenge American schools, particularly urban schools serving large number

of students who are poor, minority, English Language Learners, and low academic

achievers. While the debate on teacher shortages has moved away from whether it was a

supply or a demand issue to teacher attrition, research disproportionally focused on what

caused teachers to stay or to leave their teaching positions. Given the evidence that

significant numbers of schools had trouble with recruiting teachers, surprisingly little is done or known about what attracted or impeded teacher candidates to teach in the high-need schools in the first place. Therefore, the need has been established for further examination of the factors, which emerged from other research as key elements with regard to pre-service teachers' motivation to choose teaching career and their intention to teach in urban schools. The next chapter provides an overview of the methodology that was used to implement this study.

CHAPTER 3

METHODOLOGY

As stated in Chapter 1, the major purpose of this study was to explore what factors contribute to the decision of pre-service teachers to teach, and to what extent these factors are related to their intention to teach or not to teach in urban schools. The study also examined whether a short-term urban field experience in a teacher education program can cause any change in the participants' initial motivations for the choice of a teaching career and their intention to teach in urban settings. The study employs both quantitative and qualitative research methods. The quantitative method focused on a pre-test and post-test design, which involves an experimental group and a control group. The qualitative method relied on follow-up interviews for in-depth information related to the participants' motivation for becoming teachers, their intention to teach in urban schools, and the changes, if any, they experienced in the above two aspects throughout the short-term urban field experience.

Setting

The study was conducted during the Philadelphia Urban Seminar, a two-week immersion experience in inner city Philadelphia. Pre-service teachers participating in the Urban Seminar lived in university dormitories located in an inner-city area and worked in local schools all day during the two weeks, paired with a cooperating teacher. The Urban Seminar offered several professional development activities, in which participants interacted with school teachers, parents, and district administrators. It also comprised three small group learning activities each week, where pre-service teachers discussed their reading assignments and their experiences with peers and a university coordinator

who supervised students in the group. The pre-service teachers also participated in a number of community services, such as cleaning the neighborhood gardens and organizing and running a children's festival.

Quantitative Design

The quantitative design of the study used an experimental group and a control group, with the two-week Urban Seminar as the treatment received by the experimental group. Convenience sampling was used in selecting both groups of participants, based on voluntary participation. The Factors Influencing Teaching (FIT) – Choice scale (See Appendix A) was used in the pre-survey and post-survey administered to the experimental group to collect data regarding the contribution of several motivational factors to the pre-service teachers' decision to teach. A researcher-developed questionnaire (See Appendix C) was also used in the pre-test and post-test surveys to measure pre-service teachers' intention to teach in urban or non-urban settings. The control group received the pre-test only, in which they were asked to respond to the same survey taken by the experimental group during the period when the urban field experience was implemented. Statistical analyses were conducted at multiple levels to test the hypotheses and answer the research questions.

Participants

The target population in this study was comprised of pre-service teachers in virtually all teacher education programs of elementary and secondary areas in Pennsylvania. The sampling frame of the experimental group included 14 state universities and five private universities in Pennsylvania, all of which were participating in the Philadelphia Urban Seminar. The experimental group was selected from the Urban

Seminar participants, who were pre-service teachers of different ethnicities and genders, from different subject areas, at different stages of study, and with a mixture of residential and community backgrounds. Of the total 490 students participating in the Urban Seminar, 258 responded to the pre-test survey and 336 to the post-test survey. As 203 respondents' pre- and post-survey responses were matched, they were the actual participants of the experimental group.

Participants in the control group were selected from pre-service teachers in teacher education programs at the research's home university, a state university in western Pennsylvania which had the largest number of students participating in the urban field experience. Unlike the experimental group, the control group received the pre-survey only, though the same instrument was used. Prior to the Philadelphia Urban Seminar, an online survey was sent to 1,678 students enrolled in all teacher education programs at the university, of whom 262 responded. Among the respondents, 32 indicated that they had participated in previous years' urban seminar and, therefore, their data were excluded from the study. That made the sample size of the control group 230.

Instruments

Two instruments, the FIT-Choice Scale and a researcher-developed questionnaire were used in the collection of quantitative data. The FIT-Choice Scale is used to measure the participants' motivation for choosing a teaching career. With the data collected using FIT-Choice scale, the researcher tested Hypothesis 1 (including Hypotheses 1a through 1e) and answered the question whether there are any empirically identifiable types of teacher education candidates based on their motivation of teaching career choice.

Analysis of the pre- and post-test data also enabled the researcher to test Hypothesis 5 and answer the corresponding research question.

The FIT-Choice Scale was developed and empirically validated by Watt and Richardson in a series of studies conducted in Australia (Richardson & Watt, 2006; Watt & Richardson, 2007, 2008). It consists of three parts that test different factors related to the motivations for career a choice of teaching. The first part is *Influential Factors*, which assesses influential factors influencing respondents' choice of a teaching career. This part is comprised of 12 first-order factors. Among them, three (job security, time for family, and job transferability) are verified as sub-factors of a higher-order factor, personal utility value; four (shape future of children/adolescents, enhance social equity, make social contribution, and work with children/adolescents) belong to the higher-order factor of social utility value; and five (self perceptions of teaching ability, intrinsic career value, fallback career, prior teaching and learning experiences, and social influences) are non-higher-order factors. Each of these 12 first-order factors consists of several specific items. Respondents are asked to rate how each item influences their choice of a teaching career on a Likert scale of 1-7 (1 means "not at all important", and 7 means "extremely important").

The second part of the FIT-Choice Scale is *Beliefs about Teaching.* It has two higher-order factors, task demand and task return, which contain several first-order constructs. Task demand comprises expertise and difficulty, and task return consists of social status, teacher morale, and salary. Fourteen items are included in the second part. Respondents are asked to indicate their strength of agreement from 1(not at all) to 7 (extremely).

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The third part of the FIT-Choice Scale is *Your Decision to Become a Teacher*. This part assesses experiences of social dissuasion along with satisfaction with the choice of a teaching career. It contains six items to which participants are asked to respond on a 1-7 scale. Table 3 shows the FIT-Choice subscales and factors (See Appendix A for the formatted FIT-Choice scale).

Table 3

FIT-Choice Scale and Subscales

	First-order Factor	Higher-order factor	Items
Part A: Influential factors			
1	Ability	N/A	3
2	Intrinsic career value	N/A	3
3	Fallback career	N/A	3
		Personal utility value	
4	Job security		3
5	Time for family		5
6	Job transferability		3
		Social utility value	
7	Shape future of children/adolescents		3
8	Enhance social equity		3
9	Make social contribution		3
10	Work with children		3
11	Prior teaching and learning experiences	N/A	3
12	Social influences	N/A	3
Part B: Beliefs about teaching			
		Task demand	
13	Expertise		3
14	Difficulty		3
		Task return	
15	Social status		6
16	Salary		2
Part C: Your decision to become a teacher			
17	Social dissuasion	N/A	3
18	Satisfaction with choice	N/A	3

Note. Adapted from "Who Chooses Teaching and Why? Profiling Characteristics and Motivation across There Australian Universities." By P. W. Richardson and H. M. G. Watt, 2006, *Asia-Pacific Journal of Teacher Education, 34*(1), pp. 34-36.

In order to validate the FIT-Choice Scale, Watt and Richardson (2007) conducted a study across two independent large-scale samples in Australia. The authors performed the combined Confirmatory Factor Analysis (CFA) across the full set of items to assess divergent and convergent construct validity across the entire set of constructs. Results

indicated high construct validity, with factor loadings ranging from .54 to .91 at first-order level, and .49 to .95 at higher-order level. The scale also displayed acceptable internal consistency, with Cronbach's alpha reliabilities ranging between .62 and .89. For detailed discussion of the validation of the scale, please refer to Watt and Richardson's article (2007).

The research-designed questionnaire aimed to measure participants' motivation for participating in the short-term urban field experience and their intention to teach or not to teach in urban settings. Data collected through the questionnaire helped the researcher test Hypothesis 3 and find an answer to the question of whether there are any identifiable types of teacher education candidates based on their motivation for participating in a short-term urban field experience. The pre-and post-test data analysis enabled testing of Hypothesis 6 and examined whether the short-term urban field experience had any influence on participants' intention to teach in urban schools. Finally, through analyzing data collected through the FIT-Choice Scale and the researcher-designed questionnaire, the researcher was able to test Hypotheses 2 and 4 to explore whether participants initial motivations for becoming a teacher are correlated with their motivation for participating in a short-term urban field experience, as well as their intention to teach in urban areas.

The questionnaire was developed from three resources: the expectancy-value theory (Eccles, et al., 1983; Wigfield & Eccles, 2000; Watt & Richardson, 2007), the FIT-Choice Scale, and the longitudinal qualitative data collected from the previous studies on the urban field experience. Based on previous research (Vold & Yu, 2008), the researcher included in the questionnaires 70 statements regarding reasons why pre-service teachers

participated in the urban field experience. The questionnaire was then sent to five university coordinators for content validity. These coordinators were from different state universities and had supervised pre-service teachers in the urban field experience for years. They were asked to rate the relevance of the statements to their students' motivation to participate in the experience on a 1-5 scale.

Two criteria were used to determine which items were included in the questionnaire: (a) item means above 4.0, and (b) statements that fit into the 18 first-order factors of the FIT-Choice Scale. For example, the item, "I could get 3 credits in a relatively short time", was rated low by the university coordinators, below the midpoint of 2.5. However, it fit into the higher-order factor of personal utility value, and therefore, was included in the questionnaire. The final draft of the questionnaire comprised of two parts. Part one is named *Factors Influencing Participation in the Urban Seminar.* It contains 26 items, fitting into all of the 12 first-order factors in the first part of the FIT-Choice Scale, except for job transferability, which was not reported by the participants. Part two of the questionnaire is *Beliefs of Teaching in Urban Schools*. It has 12 items under five first-order factors: expertise, difficulty, social status, salary, and social dissuasion. The question, "How likely are you going to choose to teach in the following areas?", was added to the very end of the questionnaire to assess participants' intention to teach in different settings, that is, urban, suburban, small town, and rural areas. A Likert scale of 1-7 was kept in the questionnaire to order to keep consistency of measurement within the overall survey (See Appendix C for the questionnaire).

The researcher developed a number of open-ended questions regarding the demographic background of the participants, including gender, age, major, and grade

level (See Appendix D). After receiving permission for using the FIT-Choice Scale from the authors, the researcher combined the demographic information, the FIT-Choice Scale, and the researcher-designed questionnaire into one instrument to be used in the study (See Appendix B for the permission letter from the FIT-Choice Scale authors).

Procedure

The researcher contacted the program coordinator of the urban field experience and obtained permission to recruit participants for the experimental group. An email was sent to all pre-service teachers who registered to participate in the Philadelphia Urban Seminar to inform them about the purpose of the study and to invite voluntary participation. At the orientation meeting on the first day of the urban field experience, the researcher spoke to the students and invited them to participate in the study. The pre-test survey was then administered to all participants ($N = 490$) by the researcher. The survey took approximately 20 minutes. Two hundred and fifty-eight (258) responses were received from the pre-test. The post-test was administered by the researcher at a large group meeting at the end of the urban field experience, on the day before the participants left Philadelphia. Three hundred and thirty-six participants responded to the post-test, among whom 203 took the pre-survey as well.

To recruit the participants for the control group, the researcher first contacted the Associate Dean of the College of Education and Education Technology at the university for permission to contact the teacher education students for the purpose of the conducting the study. A recruiting email was then sent to all teacher education students ($N = 1,678$) to invite them to participate in the study. Meanwhile, the online survey for the control group was developed using the Qualtrics Survey Software (Qualtrics Labs Inc., 2009). The

same instrument was used in the survey of the control group as in the experimental group survey. The online survey was administered, prior to the urban field experience started, by emailing the survey link to the potential participants. By choosing to respond to the survey, participants agreed to participate in the study voluntarily. Altogether 262 responses were received from the control group. As mentioned earlier, 32 of the respondents had participated in the previous years' urban field experience, and therefore, their responses were not included in the study.

Data collected from both the experimental and the control groups were entered into SPSS data files for later analysis.

Qualitative Design

In parallel with the quantitative data collection tools discussed earlier, a semi-structured interview was used to collect qualitative data. By semi-structured, it was meant that, although the researcher came to the interview with guiding questions, she was "open to following the leads of informants and probing into areas that arise during interview interactions" (Hatch, 2002, p. 94).

The interview has been used extensively in motivation research and it allows for an in-depth, qualitative exploration of the factors contributing to the decisions to teach (Andrews & Hatch, 2002; Farkas, et al., 2000; Marshall, 2009; McCray et al., 2002; Younger, et al., 2004). According to Hatch (2002), the purpose of using an interview is:

…to uncover the meaning structures that participants use to organize their experiences and make sense of their worlds. These meaning structures are often hidden from direct observation and taken for granted by participants and

qualitative interview techniques offer tools for bringing these meanings to the surface. (Hatch, 2002, p.91)

One of the common techniques used in interviews in studies of motivation to teach is the life history interview, which elicits structured autobiographies, or detailed studies of the lives of individuals, to explore the experiences of the participants – their schooling experiences, and their interactions with past teachers (McCray et al., 2002). It facilitates understanding of the ways in which motives and practices inform, and are informed by, the intersection of the institution and the individual (Dhunpath, 2000).

The follow-up interview used in the qualitative design had two major strengths. One was to explore more deeply the influence of the motivation factors where quantitative methods failed to generate consistent evidence. For example, people may feel reluctant to admit explicitly in the questionnaire that material rewards play a significant role in their decision to enter teaching (Lortie, 1975). This may be particularly true for pre-service teachers who hope to leave a positive impression on faculty members, staff, or cooperating teachers during their teacher education. An interview, however, would allow the researcher to capture more in-depth information from the participants' life story, and/or from the non-verbal clues during the conversation. The other benefit of using interviews was to offer the researcher opportunity to compare different types of data, to look for patterns that were consistent or inconsistent with the results of quantitative data analyses.

Participants

From a pool of 203 respondents in the experimental group, purposeful sampling was used to choose a subset of 11 respondents to participate in the interview. Efforts

were made to include per-service teachers who (1) indicated a willingness to be interviewed in the pre-test; (2) attended a state university; and (3) represented diverse gender, race/ethnicity, college, major, grade level, and home community types and location. Based on these criteria, the researcher narrowed the number of potential participants from 108 (who indicated willingness to participate in the interview on the pre-test questionnaire) to 56, 4 from each state university. She then presented the names of these participants and the sampling criteria to the respective coordinators to identify two students they believe best represented the pre-service teachers in their program. The sampling process resulted in the selection of 11 pre-service teachers. To protect the participants' identities, their names have been changed, as have the identities of their former schools, teachers, and the universities they were attending.

Instrument

The interview protocol was developed for the purposes of understanding participants' motivation to enter teaching, as well as the relationship between their entering motivation and their intention to teach in urban schools. It was also informed by the research literature in the area. Ten guiding questions were initially developed. These questions focused on three major topics: (1) personal experience, for example, the participant's previous learning and teaching experience, when and how the decision of becoming a teacher was made; (2) expectation for the teaching profession and the value attached to it; and (3) expectation for the Urban Seminar and perception of urban education. The protocol was then screened by experts in the field for content validity. Several prompts were added to the protocol based on suggestions of the experts. A copy of the complete protocol is attached in Appendix E.

Procedure

On the pre-test questionnaire, an invitation to participate in the follow-up interview was included. Students who were willing to be interviewed were asked to leave their name, email address, and phone number. Among 108 participants who volunteered, the researcher chose 11 to participate in the life history interview. The researcher contacted them through phone and scheduled the time and place of the interview. All interviews were conducted in a lounge of a dormitory in which the participants stayed during the two-week Urban Seminar. Before starting each interview, the researcher explained the purpose of the interview to the participant, who then signed the letter of consent. Guided by the protocol, the participants were asked to talk about experiences such as learning and/or teaching experiences, the decision-making process of becoming a teacher, and the attitude of their family and friends toward their choice of teaching career. Follow-up questions were asked when necessary, either to clarify a response or elicit further illustration about a response. Each interview lasted 45 minutes on average. All interviews were audio taped with participants' approval and were transcribed for data analysis.

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Summary

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This chapter described the participants, instruments, and data collection procedures of the quantitative and qualitative designs. The following chapter will present the results from the study.

CHAPTER 4

RESULTS

This study has two major purposes. One is to explore whether pre-service teachers' initial motivations for choosing a teaching career were related to their intention to teach or not to teach in urban school settings. The other is to examine whether a short-term urban field experience influenced the entry motivations for teaching and intention to teach in urban schools. Eight questions related to the purposes were expected to be answered by data collected through quantitative as well as qualitative designs. The quantitative part of the study consisted of pre-and-post-experience surveys among the experimental group and a snapshot survey on the control group. The qualitative design was based on semi-structured interviews, conducted among participants selected from the experimental group in order to collect information-rich data.

This chapter presents the results of the study in two sections. Section 1 describes the results of the quantitative data analysis. Section 2 reports the findings of the qualitative data. The chapter ends with a general summary of the overall research findings.

Results of Quantitative Data Analysis

The quantitative data in the current study were collected from two groups of participants, the experimental group and the control group. This section first provides demographic information of the participants. It then presents the results of quantitative data analysis pertaining to each of the research questions.

Participants in the Experimental Group

Included in the experimental group were the pre-service teachers who participated in the Philadelphia Urban Seminar and who responded to both the pre-seminar and post-seminar surveys. As indicated in Table 1, 87% of the experimental group participants were females and 12.6% were males. Approximately 80% were between age 18 and 22, while 20% were above age 23. The majority of the participants (94%) were European Americans. There were 12 pre-service teachers from minority ethnic backgrounds (African American, Asian American, Latino American, and Native American), who counted for less than six percent of the entire experimental group. About 37% of the participants in the experimental group just finished their junior-year of study before participating in the urban seminar. Almost equal numbers of students (22%) finished their sophomore and senior years respectively. There were fewer pre-service teachers who just finished their freshmen year. A very small percentage of the participants (less than six percent) were graduate students.

There were more participants majoring in elementary education than secondary education (61% vs. 25%). Fourteen percent of the participants were studying for a dual-level certification (K-12).

As for home residence areas, a large majority of the experimental group participants were from suburban and small-town areas (77%). Participants with urban residence accounted for less than seven percent, forming the smallest proportion of all participants in the experimental group.

Table 4

Demographic Information for the Experimental and Control Groups

Characteristics	Experimental Group[a] Number (%)	Control Group[b] Number (%)
Gender		
Male	26(12.6)	48(21.6)
Female	181(87.4)	174(78.4)
Age		
18-22	163(79.1)	195(87.8)
23-30	29 (14.1)	13(5.9)
Above 30	14(6.8)	14(6.3)
Hometown		
Urban area	14(6.8)	14(6.3)
Suburban area	86 (41.55)	89(40.1)
Small town	74 (35.75)	62(27.9)
Rural area	33 (15.9)	57(25.7)
Ethnicity		
African American	4 (2.0)	11(4.95)
Asian American	6 (2.9)	1(.45)
European American	193 (94.1)	202(91)
Latino American	1 (.5)	5(2.25)
Native American	1 (.5)	3(1.35)
Student status		
Freshman	28 (13.53)	83(37.4)
Sophomore	46 (22.22)	58(26.1)
Junior	77 (37.2)	41(18.5)
Senior	45 (21.74)	38(17.1)
Graduate Student	11 (5.31)	2(.9)
Certification area		
Elementary	125 (60.7)	65(29.3)
Secondary	52 (25.2)	84(37.8)
K-12	29 (14.1)	73(32.9)
First-choice major		
Yes	172 (83.1)	206(92.8)
No	35 (16.9)	16(7.2)
First - career seeker		
Yes	166 (80.2)	201(90.5)
No	41 (19.8)	21(9.5)

Note. [a] n = 207 [b] n = 222

A majority of participants in the group (83%) reported teacher education as their

first-choice major. Similar numbers of participants (80%) were first-career seekers.

Approximately, seven out of ten participants had student loans. A little over half of the

participants in the experimental group (58%) had taken a course dealing with

multicultural education or diversity.

Participants in the Control Group

The participants in the control group were a bit different from those in the

experimental group (See Table 4.1). There were more male and fewer female pre-service

teachers in the control group than those in the experimental group (nine percent). There

were also more traditional prospective teachers who were between 18 and 22 (88%)

compared to the experimental group. Nine percent of the participants in the control group

were not European-Americans, which was three percent more than those in the

experimental group. Among the larger number of participants with minority backgrounds,

there were more African Americans, Latino Americans, and Native Americans, but fewer

Asian Americans, compared to the experimental group.

Unlike the experimental group, participants who had just finished their freshman

year comprised the largest group (37%), followed by those who just finished their

sophomore-year (26%), junior-year (19%), and senior-year studies (17%). Only two

participants were graduate students in the control group, accounting for 0.5% of the total

participants in the group.

Compared to the experimental group, the control group had more participants who

were majoring in secondary education (38% vs. 25%) and dual-level (K-12) teacher

certification areas (33% vs. 14%). By contrast, there were approximately half as many

participants in elementary education in the control group as in the experimental group.

While the percentage of participants with urban and suburban home residence in

the control group was almost the same as in the experimental group, this was not the case

for those from small town and rural areas. There were eight percent fewer participants from small towns, and 10% more participants from rural areas in the control group.

For 93% of the participants in the control group, teaching was their first-choice major. This is 10% higher than in the experimental group. Similarly, about 10% more participants in the control group were first-career seekers. About 10% fewer participants in the control group were career switchers.

This part of the section summarized the demographic characteristics of the experimental and control group participants involved in the quantitative design of the study. The following part will present the results of quantitative data analysis.

Research Question #1

The first research question is "What are pre-service teachers' motivations for choosing a teaching career?" While the researcher is open to what factors may be perceived as important influences on participants' choice of a teaching career, it is hypothesized that there are significant differences in the motivations for choosing a teaching career between the experimental group and control group.

Quantitative data were collected from both the experimental and control groups, using FIT-Choice Scale, which consisted of18 first-order factors and four higher-order factors. The means for the first-order and higher-order factors were calculated according to the scale and subscales in Watt and Richardson's FIT-Choice model (2007) (See Table 3).

Table 5 summarizes the means and ranking of the 18 first-order motivation factors, as well as the means of 4 higher-order factors for the entire sample. Results show that among the first-order factors, six were rated above 6 on a 7-point scale, including

satisfaction with the choice (M = 6.32, SD = 0.86), *shape future of the children* (M = 6.25, SD = 0.87), *make social contribution* (M = 6.13, SD = 0.93), *difficulty of teaching* (M = 6.12, SD = 0.80), *work with children* (M = 6.08, SD = 1.13), *and teaching ability* (M = 6.05, SD = 0.86), indicating that these factors were perceived as very important influences on the decision of becoming a teacher. Five other first-order factors, such as *prior teaching and learning experiences* (M = 5.99, SD = 1.13), *Intrinsic career*

Table 5

Summary of Means of Motivation Factors for the Entire Sample

	First-order factor	Ranking	Higher-order factor	Minimum	Maximum	Mean	Std. Deviation	N
1	Teaching ability	6	N/A	1.67	7.00	**6.05**	0.86	399
2	Intrinsic career value	8	N/A	1.67	7.00	**5.87**	0.99	404
3	Fallback career	18	N/A	1.00	7.00	**1.66**	0.89	398
			Personal utility value	1.00	7.00	4.35	1.13	443
4	Job security	11		1.00	7.00	**5.24**	1.33	400
5	Time for family	16		1.00	7.00	3.89	1.32	394
6	Job transferability	14		1.00	7.00	4.11	1.38	403
			Social utility value	1.67	7.00	**6.00**	0.88	443
7	Shape future of children/adolescents	2		1.00	7.00	**6.25**	0.87	400
8	Enhance social equity	10		1.00	7.00	**5.53**	1.25	402
9	Make social contribution	3		2.00	7.00	**6.13**	0.93	453
10	Work with children	5		1.67	7.00	**6.08**	1.13	454
11	Prior teaching and learning experiences	7	N/A	1.00	7.00	**5.99**	1.13	457
12	Social influences	13	N/A	1.00	7.00	4.36	1.87	454
			Task demand	3.00	7.00	**5.86**	0.75	447
13	Expertise of teaching	9		2.33	7.00	**5.57**	0.97	449
14	Difficulty of teaching	4		3.00	7.00	**6.12**	0.80	453
			Task return	1.63	7.00	4.60	0.97	449
15	Social status	12		1.67	7.00	4.85	1.07	449
16	Salary	17		1.00	7.00	3.85	1.30	454
17	Social dissuasion	15	N/A	1.00	7.00	4.10	1.36	454
18	Satisfaction with the choice	1	N/A	1.00	7.00	**6.32**	0.86	453

value (M = 5.87, SD = 0.99), *Expertise of teaching* (M = 5.57, SD = 0.97), *Enhance social equity* (M = 5.53, SD = 1.25), and *Job Security* (M = 5.24, SD = 1.33), were rated above 5, meaning that they are considered as relatively less important influences on the choice of a teaching career. Consistent with Watt and Richardson's study (2007), *fallback career* was perceived as the least important influences (M = 1.66, SD = 0.89) by the participants in the current study.

As for the higher-order factors, *social utility value* was rated highest (M = 6.00, SD = 0.88), followed by *task demand* (M = 5.86, SD = 0.75), indicating that both factors were considered as having important influences on the choice of a teaching career. *Task return* (M = 4.60, SD = 0.97) and *personal utility value* (M = 4.35, SD = 1.13) were rated above 4 but below 5, indicating they were considered as having less important influences on the decision to teach.

In order to test Hypothesis 1, "there are significant differences between the two groups in pre-service teachers' motivations for choosing a teaching career," an independent samples *t*-test was conducted for the 18 motivation factors and the higher-order factors. Results presented in Table 6 indicate that there were significant differences between the two groups in a number of motivation factors. On average, compared to participants in the experimental group, those in the control group rated such factors as *intrinsic career values* (6.21 vs. 5.68), *job security* (5.53 vs. 5.08), *time with family* (4.06 vs. 3.79), *previous teaching experience* (6.11 vs. 5.9), *status of teachers* (5.02 vs. 4.73), and *salary* (4.17 vs. 3.61) significantly higher ($p < .05$). In other words, participants in the control group view these factors as having more important influences on their

Table 6

Independent Samples t-Test for the First-Order Motivation Factors between the

Experimental Group and Control Group

Motivation factors	Group	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Ability of teaching	1[a]	256	6.06	.0.80	0.33	397	.74
	2[b]	143	6.03	0.96			
Intrinsic career values	1	258	5.68	0.96	**-5.33**	402	**< .001**
	2	146	6.21	0.94			
Fallback career	1	254	1.74	0.94	**2.46**	350	**.01**
	2	144	1.53	0.76			
Job security	1	254	5.08	1.34	**-3.29**	398	**.001**
	2	146	5.53	1.26			
Time with family	1	254	3.79	1.31	**-1.94**	392	**.05**
	2	140	4.06	1.33			
Job transferability	1	257	4.10	1.40	-0.30	401	.76
	2	146	4.14	1.34			
Shape the future of children	1	257	6.29	0.76	1.35	228	.18
	2	143	6.16	1.04			
Enhance social equity	1	256	5.58	1.15	1.22	252	.22
	2	146	5.42	1.42			
Make social contribution	1	257	6.13	0.91	0.16	451	0.87
	2	196	6.12	0.96			
Work with children	1	255	6.25	0.98	**3.56**	363	**< .001**
	2	199	5.86	1.27			
Previous teaching experience	1	257	5.90	1.15	**-1.98**	455	**.05**
	2	200	6.11	1.11			
Social influence	1	256	4.39	1.90	0.47	452	.64
	2	198	4.31	1.84			
Expertise of teaching	1	257	5.59	0.94	-0.22	447	.83
	2	192	5.61	1.01			
Difficulty of teaching	1	258	6.22	0.74	**3.21**	451	**.001**
	2	195	5.98	0.85			
Status of teachers	1	255	4.73	1.07	**-2.87**	447	**.004**
	2	194	5.02	1.05			
Salary	1	258	3.61	1.30	**-4.67**	452	**<.001**
	2	196	4.17	1.24			
Social dissuasion	1	258	4.55	0.93	**8.23**	295	**<.001**
	2	196	3.50	1.59			
Satisfaction with choice	1	258	6.28	0.94	-1.30	450	.20
	2	195	6.38	0.74			

Note. [a] 1= Experimental Group   [b] 2 = Control Group

decision to teach than participants in the experimental group. The participants in the

experimental group, on the other hand, rated factors including *fallback career* (1.74 vs.

1.53), *work with children* (6.25 vs. 5.86), *difficulty of teaching* (6.22 vs. 5.98), and *social

dissuasion* (4.55 vs. 3.50) significantly higher than did their peers in the control group.

The statistical evidence indicated that participants perceived these four factors as having

more important influences on their choice of a teaching career. The hypothesis predicting

differences between the experimental and control groups was, therefore, supported.

To further test the hypothesis, an independent samples t-test was also conducted for the

higher-order factors. According to the results displayed in Table 7, there are significant

differences between the two groups in three out of the four higher-order factors. When

making the choice of a teaching career, the participants of the experimental group

experienced a stronger influence from *social utility values* (M = 6.08, SD = 0.75)

Table 7

Independent Samples t-Test for the Higher-Order Factors

Motivation							Sig.
	Group	N	Mean	Std. Deviation	*t*	*df*	(2-tailed)
Personal utility values	1	251	4.23	1.14	**-2.58**	441	**.01**
	2	192	4.50	1.10			
Social utility values	1	253	6.08	0.75	**2.00**	334	**.05**
	2	190	5.90	1.02			
Task demand	1	257	5.91	0.70	1.52	445	.13
	2	190	5.80	0.80			
Task return	1	255	4.45	0.95	**-3.91**	447	**< .001**
	2	194	4.81	0.95			

than the control group (M = 5.90, SD = 1.02) at a statistically significant level (*t* = 2.00,

p < .05). The participants in the control group perceived getting significantly more

important influences on their decision to choose a teaching career from *personal utility*

values (4.50 vs. 4.23) and *task return* (4.81 vs. 4.45) (*p* < .01). No statistically

significant differences were found in participants' responses to *task return* between the two groups. Hypothesis1 was, therefore, also supported at the level of higher-order factors.

To summarize, the satisfaction with the choice of a teaching career was rated as the most factors that influenced pre-service teachers' choice of a teaching career. It is followed by other factors including *shape future of the children, make social contribution, difficulty of teaching, work with children,* and *teaching ability*. In addition, among the higher-order factors, *social utility value* was rated as the most important motivation for the choice of a teaching career, while *personal utility value* was rated as the least important. Further analysis indicated that there existed statistically significant differences in motivations to teach between the experimental and control groups, and thus supported Hypothesis1.

Research Question #2

The second research question is "Are there any identifiable groups of pre-service teachers, based on their motivations for choosing a teaching career and their intention to teach in urban settings?" The hypothesis for the research question is several groups will be identified based on selective initial motivations for becoming a teacher (Hypothesis 2). It was expected that one group would score relatively high on *intrinsic career value* and *social utility value*, but low on *personal utility value*; while another group would score relatively low on *intrinsic career value* and *social utility value*, but high on *personal utility value* (Hypothesis 2a). It was also hypothesized that the groups identified would vary significantly in their intention to teach in urban settings (Hypothesis 2b).

In order to test the hypotheses, a Chi-Square goodness of fit test was conducted. Generally, a chi-square test is used to determine whether or not a normal distribution provides a good fit to the observed data. In the current study, it was intended to examine how far away the observed data were from those which would be expected under the fitted model. Eight possible groups were formed by combining the three variables involved in the hypothesis, namely, *social utility value*, *intrinsic career value*, and *personal utility value*, according to the patterns shown in Table 8.

Table 8

Possible Groups of Pre-Service Teachers Based on Selected Factors Influencing the Choice of a Teaching Career

Group	Factors Selected		
	Social utility value	Intrinsic career value	Personal utility value
1	Low	Low	High
2	High	Low	High
3	Low	High	High
4	High	High	High
5	Low	Low	Low
6	High	Low	Low
7	Low	High	Low
8	High	High	Low

The Chi-Square analysis was run for the entire sample, including the experimental and control group. The significance level was set at .05. As indicated in Table 9, two groups were clearly identified from the results of the Chi-Square test. Group 8 was composed of participants who scored relatively high in *social utility value* and *intrinsic career value*, but low in *personal utility value* (hence labeled as Group HHL). It had 193 participants, 3.5 times as many as the expected number of participants 55. Group 4 had

participants scoring relatively high in *social utility value, intrinsic career value,* and *personal utility value* (hence labeled as Group HHH). As the significant level of .05 was set for the test, the hypothesis can be supported when $\chi^2 \geq 14.07$, the value corresponding to the .05 significance level for the χ^2 (7) distribution. Since the Chi-Square value of this test 698.58 is clearly much greater than 14.07 and $p < .001$, the hypothesis, that there are identifiable groups of pre-service teachers based on their initial motivations for choosing a teaching career, was therefore supported.

Table 9

Chi-Square Goodness of Fit Test for Groups of Pre-service Teachers Based on Selected Factors Influencing the Choice of a Teaching Career (N = 443)

	Group	Observed Number	Expected Number	Residual
1	LLH	7	55.4	-48.4
2	HLH	8	55.4	-47.4
3	LHH	15	55.4	-40.4
4	**HHH**	**193**	55.4	137.6
5	LLL	15	55.4	-40.4
6	HLL	33	55.4	-22.4
7	LHL	17	55.4	-38.4
8	**HHL**	**155**	55.4	99.6

Note. Chi-Square = 698.58   df = 7 $p < .001$

While the results of the Chi-Square test confirmed the existence of one hypothesized group, Group HHL, the other hypothesized group, which was expected to have participants who scored relatively low in social utility value of teaching and intrinsic career value, but high in personal value of teaching, was not big enough for a confident conclusion. Therefore, Hypothesis 2a was not supported.

In order to test Hypothesis 2b, "there is significant difference between the identified groups in their intention to teach or not to teach in urban schools," an

independent samples *t*-test was conducted. The participants' intention to teach in urban

schools was measured by two items in the researcher-developed questionnaire: item 18,

"I am interested in working with urban children some day," and item 39, *"How likely*

are you going to choose to teach in urban areas?" As shown in Table 10, participants in

Group HHH expressed slightly higher intention to choose urban schools to teach than

those in Group HHL (4.81 vs. 4.75). However, the difference did not reach a statistically

significant level ($p > .05$). The hypothesis was, therefore, not supported. In other words,

the participants in the two groups did not vary significantly in terms of their intention to

teach in urban schools.

Table 10

Independent Samples t-Test for Intention to Teach in Urban Settings between the Two

Groups Identified: The Overall Sample

	Group	N	Mean	Std. Deviation	Std. Error Mean	*t*	*df*	Sig. (2-tailed)
Intention to teach in urban settings	HHH	187	4.81	1.67	0.12			
	HHL	151	4.75	1.73	0.14	0.31	336	**.75**

Note. F = 0.06 *p* = .81

Further independent samples t-test was conducted to see if there are significant

differences in intention to teach in urban settings between the participants in Group HHH

and Group HHL within the experimental group and control group respectively. The t-test

results for the experimental group reflected the trend found in the overall sample (See

Table 11). The mean of intention for Group HHH was higher than that for Group HHL

(4.87 vs. 4.65); however, the difference did not reach a statistically significant level

(p > .05). The results for the control group showed the opposite trend. The mean of

intention to teach in urban settings for Group HHH was lower than that for Group HHL (4.58 vs. 4.68). Nonetheless, the difference was not statistically significant (p > .05).

Table 11

Independent Samples t-Test for Intention to Teach in Urban Settings between the Two Groups Identified: Experimental Group vs. Control Group

		Group	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Intention to teach in urban settings	1 [a]	HHH	102	4.87	1.58	0.16	0.96	186	**.34**
		HHL	91	4.65	1.66	0.17			
	2 [b]	HHH	77	4.58	1.76	0.20	-0.29	100	**.77**
		HHL	50	4.68	1.88	0.27			

Note. [a] Experimental Group: F = 0.05, *p* = .81   [b] Control Group: F = 0.30, *p* = .59

In summary, although two groups were clearly identified regarding participants' response to intrinsic value, social utility value, and personal utility value, participants in the two groups did not show statistically significant difference in their intention to teach in urban schools.

Research Question #3

The third research question is "How, if at all, are pre-service teachers' motivations to teach related to their intention to teach in urban settings?" The hypothesis for this research question is that at least some of the motivations that influence pre-service teachers' choice of a teaching career are significantly correlated with their intention to teach or not to teach in urban settings.

In order to answer the question as well as testing the hypothesis, Bivariate Correlation analyses were conducted. Table 12 summarizes the results of the correlation test for the 18 first-order factors. Seven factors were found significantly correlated with the intention to teach in urban settings. Among them, *enhance social equity* displayed

Table 12

Correlations between Pre-service Teachers' Initial Motivations for Choosing a Teaching

Career and the Intention to Teach in Urban Settings

	Factor	1	2	3	4	5	6	7
1	Teaching ability	—						
2	Intrinsic career value	.47**	—					
3	Fallback career	-.19**	-.25**	—				
4	Job security	.24**	.35**	.15**	—			
5	Time for family	.14**	.31**	.32**	.55**	—		
6	Job transferability	.21**	.16**	.28**	.53**	.59**	—	
7	Shape future of children	.51**	.44**	-.18**	.18**	.10	.14**	—
8	Enhance social equity	.44**	.35**	-.14**	.13**	.04	.10*	.62**
9	Make social contribution	.51**	.46**	-.14**	.21**	.10	.13**	.68**
10	Work with children	.52**	.41**	-.23**	.14**	.01	.08	.59**
11	Prior teaching and learning experiences	.35**	.39**	-.15**	.24**	.13**	.11*	.30**
12	Social influences	.32**	.25**	.21**	.34**	.39**	.47**	.19**
13	Expert career	.25**	.15**	-.01	.13**	-.02	.11*	.33**
14	Difficulty of teaching	.32**	.20**	-.13*	.07	-.11*	-.04	.39**
15	Social status	.22**	.25**	-.02	.24**	.12*	.16**	.24**
16	Salary	.02	.17**	.09	.28**	.25**	.13*	.07
17	Social dissuasion	.02	-.13*	.01	-.08	-.13*	-.08	-.02
18	Satisfaction with choice	.44**	.49**	-.41**	.06	-.15**	-.10*	.38**
19	Intention to teach in urban settings	**.17****	.05	-.01	-.05	.01	.06	**.15***

Note. ** Correlation is significant at 0.01 level (2-tailed). * Correlation is significant at 0.05 level (2-tailed).

weak correlation with the intention ($r = .33$, $p < .01$), followed by *satisfaction with the*

choice ($r = .19$, $p < .01$), *make social contribution* ($r = .18$, $p < .01$), *work with children*

($r = .18$, $p < .01$), *teaching ability* ($r = .17$, $p < .01$), *difficulty of teaching* ($r = .17$, p

$< .01$), and *shape the future of children* ($r = .15$, $p < .05$). Although none of the

correlations was strong, all of them are statistically significant ($p < .05$). Hypothesis 3,

that at least some of the motivation factors are correlated with pre-service teachers'

intention to teach in urban settings, was supported.

Table 12 *(Continued)*

	8	9	10	11	12	13	14	15	16	17	18	19
1												
2												
3												
4												
5												
6												
7												
8	—											
9	.60**	—										
10	.52**	.53**	—									
11	.20**	.33**	.24**	—								
12	.17**	.18**	.26**	.18**	—							
13	.32**	.33**	.20**	.21**	.12*	—						
14	.29**	.31**	.35**	.19**	.04	.41**	—					
15	.25**	.24**	.22**	.21**	.23**	.30**	.14**	—				
16	.07	.02	.02	.09	.06	-.01	-.04	.37**	—			
17	-.04	-.02	.04	-.02	-.02	.05	.03	-.08	-.15**	—		
18	.31**	.35**	.47**	.28**	.06	.23**	.29**	.20**	.05	-.01	—	
19	**.33****	**.18****	**.18****	-.01	.03	.10	**.17****	.05	-.03	-.09	**.19****	—

Bivariate correlation tests were also conducted to examine the correlations between the higher-order motivation factors and the intention to teach in urban settings. Results in Table 13 indicate that there were very weak correlations between *social utility value* and the intention to teach in urban schools ($r = .27$, $p < .01$), as well as *task demand* and the intention ($r = .16$, $p < .05$). There is no correlation between *personal utility values* or *task return* and the intention at statistically significant level ($r = .02$, $p > .05$).

As revealed by the results, there were statistically significant correlations between pre-service teachers' intention to teach in urban schools and several motivation factors

that influenced their choice of a teaching career. Nevertheless, all correlations were

relatively weak.

Table 13

Correlations between Higher-Order Motivation Factors and the Intention to Teach in

Urban Settings

	Higher-order factors	1	2	3	4	5
1	Personal utility value	__				
2	Social utility value	.15**	__			
3	Task demand	.02	.43**	__		
4	Task return	.24**	.25**	.22**	__	
5	Intention to teach in urban settings	.02	**.27****	**.16***	.04	__

Note. ** correlation is significant at .01 level (2-tailed)   * correlation is significant at .05 level (2-tailed)

Research Question #4

The fourth research question is "What are pre-service teachers' motivations to

participate in a short-term urban field experience?"

The quantitative data used to answer this research question were collected from

the pre-experience survey administered among the participants in the experimental group,

using the researcher-designed questionnaire. The questionnaire consists of 39 questions.

Its purpose was to measure factors that influenced pre-service teachers' decision to

participate in the short-term urban field experience (See Appendix C for the details of the

questionnaire).

In order to test whether or not the questionnaire could serve as a reliable and valid

measurement, several statistical analyses were conducted. First of all, a principal

component analysis was conducted for the 39 items with orthogonal rotation (varimax) to

examine whether the items included in the questionnaire could be reduced into

identifiable clusters of variables, The Kaiser-Meyer-Olkin measure verified the sampling

adequacy for the analysis, KMO = .81, which is well above the acceptable limit of .50

(Kaiser, 1974). However, KMO values for item 4, "It was recommended by the faculty."

was .49. After this item was excluded, the overall KMO value increased to .82, and all

KMO values for individual items were greater than .59, reflecting a great level of

adequacy of the sample size. Bartlett's test of sphericity X^2 (703) = 4181.94, $p < .01$,

indicating that correlations between items were sufficiently large for principal component

analysis. An initial analysis was run to obtain eigenvalues for each component in the data.

Eleven components had eigenvalues over Kaiser's criterion of 1 and in combination

explained 68.14% of the variance. The scree plot displayed similar patterns.

Consequently, the eleven components were retained in the final analysis. Table 14 shows

the factor loadings after rotation. Table 15 summarizes the 11 factors extracted from the

factor analysis and the themes represented.

Table 14

Summary of Exploratory Factor Analysis for the Motivations to Participate in the Urban

Field Experience (n =247)

Item		Component										
		1	2	3	4	5	6	7	8	9	10	11
7.	Have the ability to be a good urban teacher	.81										
18.	I am interested in working with urban children some day.	.77										
39.	How likely are you going to choose to teach in urban areas?	.73										
11.	I want to make difference in the life of urban children.	.73										
3.	Teaching in urban schools allows me to provide service to children who need it more than those in anywhere else.	.68										
1.	I can have more impact on children in urban settings.	.67										
10.	Children in urban settings need teachers who care about them.	.66										
20.	It can help me develop teaching skills in multicultural classrooms.		.82									
23.	It would test my personal ability of handling different teaching situations.		.78									
21.	It will improve my cultural competence.		.71									
19.	I will be able to help children with diverse cultural background.	.57	.62									
24.	I want to put myself out of my comfort zone.		.43									
26.	It was highly recommended by students who participated in the past.			.85								
13.	People I have talked to			.81								

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	said it was a great experience.			
36.	Did others encourage you to participate in the urban field experience?	.74		
12.	It may be easier to get a job in urban schools.	.76		
9.	I could get 3 credits in a relatively short time.	.73		
16.	The experience looks good on resume.	.63		
6.	Teaching in urban settings will be a secure job.	.62		
32.	Do you think teaching in urban areas is emotionally more demanding than teaching in other areas?		.76	
33.	Do you think the school conditions in urban schools are barriers to teaching?		.68	
30.	Do you think teachers in urban schools have a heavier workload?		.56	
38.	Do you think urban teachers are underpaid?		.49	-.42
28.	Do you think teaching in urban schools requires particular personality traits?		.43	
29.	Do you think teaching in urban schools requires high levels of technical knowledge?		.83	
27.	Do you think teaching in urban settings requires high levels of expert knowledge?		.82	
2.	I had urban teaching experience before and thoroughly enjoyed it.		.81	
14.	I had positive learning experiences in urban schools.		.80	
22.	It would help me to make the decision		.74	

#	Item	1	2	3	4	5	6	7	8	9	10	11
	whether or not to teach in a city upon graduation.											
15.	I want to see what it is like to teach in an urban setting for future job purpose.							.72				
5.	I was unsure where I want to teach.							.58				
25.	I enjoy the abundant resources a city offers.								.71			
8.	I like cities.	.53							.60			
17.	It's close to my home.						.49		.49			
37.	Did others tell you teaching in urban settings is not a good career choice?									.86		
35.	Did others influence you to consider teaching in somewhere else other than urban areas?									.86		
34.	Do you think teachers in urban schools get good salary and benefits?											.78
31.	Do you think urban teachers have high morale?								.45			.62
	Eigenvalues	5.11	3.36	2.34	2.27	2.20	1.92	1.89	1.83	1.73	1.72	1.53
	% of variance	13.44	8.84	6.16	5.97	5.80	5.05	4.97	4.82	4.54	4.53	4.02
	Cronbach's α	**.89**	.79	.78	.69	.64	.74	.73	**.63**	.66	.74	**.47**

Note. KMO = .82   Chi-Square = 4181.94   df = 703 $p < .01$

Following the factor analysis, a reliability analysis was run for all 38 items in the questionnaire and its 11 subscales in order to examine the reliability of the questionnaire (See table 14). The Cronbach's α indicated the overall reliability of the questionnaire was high (α = .87). The subscales 1 to 10 all had relatively high reliability, with the lowest Cronbach's α value .63. However, subscale 11, teacher salary and social status, had relatively low reliability (Cronbach's α = .47).

Table 15

Summary of the Factors Influencing the Decision to Participate in the Urban Seminar

Component	Theme
1	a. Ability to teach in urban schools
	b. Intention to teach in urban schools
	c. Social utility value
2	Improve multicultural competencies
3	Social influences
4	Personal utility values
5	Difficulty of teaching in urban settings
6	Expertise of teaching in urban settings
7	Prior learning and teaching experiences
8	Test the possibility to teach in urban settings
9	Like city
10	Social dissuasion
11	Teacher salary and social status

As shown in Table 15, although the 11 components were extracted through factor analysis and validated by the reliability test, the items loading high on component 1 represented three distinctive themes. Therefore, in the subsequent analysis of this section, component 1 was further divided into three factors labeled as factor 1, *ability to teach in*

Table 16

Motivations for Participating in the Urban Seminar (n = 256)

	Factor	Mean	Std. Deviation
2	Improve multicultural competence	**6.09**	0.89
5	Difficulty of teaching in urban settings	**5.75**	0.82
13	Social utility value	**5.64**	1.15
3	Social influence	**5.57**	1.45
8	Test the possibility to teach in urban settings	**5.36**	1.26
6	Expertise of teaching in urban settings	**5.35**	1.10
1	Ability to teach in urban schools	**5.13**	1.53
12	Intention to teach in urban settings	4.87	1.50
11	Teacher salary and social status	4.41	1.22
4	Personal utility values	4.26	1.39
10	Social dissuasion	3.93	1.84
9	Like cities	3.61	1.46
7	Prior urban teaching and learning experiences	3.04	1.95

urban settings; factor 12, *intention to teach in urban settings*; and factor 13, *social utility value*. The means of the 13 factors are shown in table 16, in an order of high to low.

Based on the results, the most important factor that influenced pre-service teachers' decision to participate in the urban field experience was *improve multicultural competencies* (M = 6.09, SD = 0.89). Other factors that were ranked as having relatively important influences on participation of the urban field experience included: *difficulty of teaching in urban settings* (M = 5.75, SD = 0.82), *social utility value* (M = 5.64, SD = 1.15), *social influence* (M = 5.57, SD = 1.45), *test the possibility to teach in urban settings* (M = 5.36, SD = 1.26), *expertise of teaching in urban settings* (M = 5.35, SD = 1.10), and *ability to teach in urban settings* (M = 5.13, SD = 1.53). Compared to the above listed factors, *intention to teach in urban settings* was considered as less important influences on the decision to participate in the Urban Seminar (M = 4.87, SD = 1.5). *Prior teaching and learning experience in urban settings* was rated as the least important influences the decision of participation in the urban field experiences (M = 3.04, SD =1.95).

Research Question #5

The fifth research question is "Are there any identifiable types of pre-service teachers, based on their motivations for participating in a short-term urban field experience and intention to teach in urban settings?" It is hypothesized that there are identifiable groups of pre-service teachers who differ in their motivation to participate in the urban field experience (Hypothesis 5). At least one group of participants would score relatively high on social utility value and their perceived ability to teach in urban settings, but relatively low on personal utility values (Hypothesis 5a), while another group would

score low on social utility values and perceived ability to teach in urban settings, but relatively high on personal utility values(Hypothesis 5b). The former group would also have stronger intention to teach in urban setting than the latter (Hypothesis 5c).

Quantitative data used to answer this research question were collected from the experimental group using the researcher-developed questionnaire. As was done in the previous section of this chapter in testing Hypothesis 2, Chi-Square goodness of fit test was conducted to test Hypothesis 5. The participants in the experimental group were combined into eight possible subgroups according to their responses to three variables selected, namely, *social utility value*, *perceived ability to teach in urban settings*, and *personal utility value* (See Table 17).

Table 17

Possible Groups of Pre-Service Teachers Based on the Motivations for Participating in the Urban Seminar

Group	Factors selected		
	Social utility value	Ability to teach in urban settings	Personal utility value
1	Low	Low	High
2	High	Low	High
3	Low	High	High
4	High	High	High
5	Low	Low	Low
6	High	Low	Low
7	Low	High	Low
8	High	High	Low

Chi-Square analysis was conducted for the experimental group. According to the results in Table 18, four groups were identified: Group 1, Group 4, Group 5, and Group 8 (Chi-Square $_{(7)}$ =133.94, $p < .001$). Hypothesis 5, that there are distinguishable groups of pre-service teachers based on their motivations for participating in the urban field experience, was therefore, supported.

The results confirmed the existence of the two hypothetical groups. Group 1 had 43 participants, who scored relatively low on *social utility value* and *perceived ability to teach in urban settings*, but relatively high on *personal utility value* (Hence labeled as Group LLH hereafter). Group 8 had 44 participants, who scored relatively high on *social utility value* and *perceived ability to teach in urban settings*, but relatively low on *personal utility value* (Hence labeled as Group HHL). Accordingly, Hypothesis 5a, predicting the existence of a group scoring high on *social utility value* and *perceived ability to teach in urban settings* but relatively low on *personal utility value* (HHL), and Hypothesis5b, predicting the existence of a group scoring relatively low on *social utility values* and *perceived ability to teach in urban settings*, but relatively high on *personal utility values* (LLH), were supported.

Table 18

Chi-Square Goodness of Fit Test for the Possible Groups of Participants (n = 253)

	Group	Observed Number	Expected Number	Residual
1	**LLH**	**43**	31.6	11.4
2	HLH	22	31.6	-9.6
3	LHH	6	31.6	-25.6
4	**HHH**	**70**	31.6	38.4
5	**LLL**	**54**	31.6	22.4
6	HLL	10	31.6	-21.6
7	LHL	4	31.6	-27.6
8	**HHL**	**44**	31.6	12.4

Chi-Square = 133.94   df = 7 $p < .001$

Two other groups identified through the analysis were not anticipated. Group 4 was the largest group among the four groups identified, with 70 participants, more than twice as many as the expected number (31.6). It consisted of participants scoring

relatively high on all three variables, and was therefore, labeled as Group HHH. Group 5 had the second largest number of participants (54), who scored relatively low on all three variables and was labeled as Group LLL.

Table 19

One-Way ANOVA Test for the Intention to Teach in Urban Settings among the 8 Possible Groups

	Sum of Squares	df	Mean Square	F	Sig. (2-tailed)
Between Groups	295.362	7	42.195	38.511	**<.001**
Within Groups	268.431	245	1.096		
Total	563.792	252			

In order to understand how the four groups identified differ in their intention to teach in urban settings, a one-way ANOVA test was conducted for all eight groups and the factor intention to teach in urban settings. Results in Table 19 indicate that there was significant difference between the groups ($F_{(7, 245)} = 38.51, p < .001$).

Table 20

Descriptive Statistics for Intention to Teach in Urban Settings for the 8 Groups (n = 253)

	Group	Mean	Std. Deviation	Std. Error
1	**LLH**	**3.49**	1.23	0.19
2	HLH	4.00	0.87	0.19
3	LHH	6.33	0.41	0.17
4	**HHH**	**5.82**	0.93	0.11
5	**LLL**	**4.03**	1.31	0.18
6	HLL	3.60	0.81	0.26
7	LHL	6.25	0.87	0.43
8	**HHL**	**6.02**	0.82	0.12

Descriptive data in table 20 showed that among the four groups identified, participants in Group HHL were most likely to choose to teach in urban settings (M=

6.02, SD= 0.82), while their peers in Group LLH were least likely to do so (M=3.49, SD

= 1.23). Group HHH and Group LLL resided in the middle (See Table 19).

A Post Hoc test was conducted for multiple comparisons of specific pair of

groups. For the sake of clarity, the results in Table 21 retained the results related to the

four groups identified only. As can be seen from the table, significance difference existed

between Group LLH and Group HHL (MD = -2.53, $p < .01$). Participants in Group LLH

were much less likely to choose to teach in urban settings than those in Group HHL who

scored the opposite. Hypothesis 5c, that pre-service teachers who chose to participate in

the urban field experience due to high *social utility value* and *perceived ability to teach in*

urban settings have stronger intention to teach in urban settings than those who scored

conversely, was therefore, supported.

Table 21

Post Hoc Test for the Means of Intention to Teach in Urban Settings among the Groups

Identified

	LLH	HHH	LLL	HHL
		MD* (sig.)	MD (sig.)	MD (sig.)
Group 1 LLH	____	**-2.33(<.001)**	-0.54 (.50)	**-2.53(<.001)**
Group 4 HHH		____	**1.79 (<.001)**	-0.20 (0.99)
Group 5 LLL			____	**-1.99 (<.001)**
Group 8 HHL				____

Note. MD = Mean Difference

Apart from these differences, Post Hoc test results also showed that participants in

Group LLH had significantly weaker intentions to teach in urban settings than those in

Group HHH (MD = -2.33, $p < .01$). Meanwhile, participants in Group HHH had

significantly stronger intentions than those in Group LLL (MD = 1.79, *p* <.01). Finally, participants in Group LLL had relatively weaker intentions than those in Group HHL (MD = -1.99, *p* < .01). No significant difference in intention was found between Group LLH and Group LLL, or Group HHH and Group HHL.

To answer the research question briefly, there were identifiable groups of pre-service teacher in the study based on their motivations for participating in the short-term urban field experience. Apart from the two hypothetical groups, two other groups were identified, in one of which participants rated all three variables relatively high, and in the other, all relatively low. Significant difference was found in the intention to teach in urban settings between the four groups identified, particularly between the two groups which scored relatively high on *social utility value* and *perceived ability of teaching in urban settings* and two groups which scored relatively low on the same two variables.

Research Question #6

The sixth research question is "How, if at all, are pre-service teachers' motivations for participating in a short-term urban field experience related to their intention to teach in urban settings?" The hypothesis for the question is that at least some motivational factors that influenced pre-service teachers' participation in the urban field experience would be related to their intention to teach in urban settings.

In order to test the hypothesis, Bivariate Correlations were conducted for the 13 motivation factors that influenced pre-service teachers' decision to participate in the

Table 22

Correlations between the Motivation Factors Influencing the Participation in the Urban

Field Experience and the Intention to Teach in Urban Settings

	Factor	1	2	3	4	5	6	7	8	9	10	11	13
1	Ability to teach in urban schools	—											
2	Improve multicultural competence	.56**	—										
3	Social influence	.13*	.32**	—									
4	Personal utility value	.17**	.19**	.16*	—								
5	Difficulty of teaching in urban settings	.29**	.34**	.24**	.21**	—							
6	Expertise of teaching in urban settings	.23**	.28**	.18**	.21**	.31**	—						
7	Prior urban teaching and learning experiences	.38**	.07	.06	.10	.00	.02	—					
8	Test the possibility to teach in urban settings	.32**	.44**	.30**	.24**	.25**	.18**	-.01	—				
9	Like cities	.50**	.26**	.05	.30**	.13*	.06	.34**	.27**	—			
10	Social dissuasion	.14*	.19**	.17**	.08	.18**	.04	.11	.16*	.07	—		
11	Teacher salary and social status	.21**	.18**	.13*	.23**	.02	.16**	.12*	.10	.30**	.06	—	
13	Social utility value	.91**	.60**	.18**	.20**	.35**	.25**	.30**	.28**	.38**	.18**	.23**	—
12	Intention to teach in urban settings	**.85****	**.37****	.03	.07	**.16***	.10	**.39****	**.30****	**.55****	.08	**.13***	**.59****

Note. **.Correlation is significant at the .01 level (2-tailed). *. Correlation is significant at the .05 level (2-tailed).

short-term urban field experience. Quantitative data used in the analyses of this section were collected from the experimental group using the FIT-Choice Scale and the researcher-developed questionnaire.

As shown in Table 22, significant relationships were identified between majorities of the motivation factors for participating in the urban field experience and participants' intention to teach in urban settings. The factor *ability to teach in urban settings* was strongly related to the intention ($r = .85$, $p < .01$), while *social utility value* ($r = .59$), and *like cities* ($r = .55$) had moderate relationship with the intention ($p < .01$). Other factors that had relatively weak relationships included *prior urban teaching and learning experience* ($r = .39$, $p < .01$), *improve multicultural competence* ($r = .37$, $p < .01$), and *test the possibility to teach in urban settings* ($r = .30$, $p < .01$). Also weakly related to the intention were difficulty of teaching in urban settings ($r = .16$, $p < .05$), and *teacher salary and social status* ($r = .13$, $p < .05$). No significant correlation was found between *social dissuasion*, *expertise of teaching in urban settings,* or *personal utility value* and the intention. The hypothesis, that at least some motivation factors influencing pre-service teachers' participation in the short-term urban field experience are correlated with their intention to teach in urban settings, was therefore supported.

To put it briefly, a number of motivation factors influencing pre-service teachers' participation in a short-term field experience were found correlated with their intention to teach in urban settings. Among these factors, *perceived ability to teach in urban settings* had the strongest relationship with intention to teach in urban settings, while *social utility value* and *like cities* had moderate correlation. Weak yet highly significant correlations were found between intention to teach in urban settings and other factors such as *prior*

urban teaching and learning experience, *improve multicultural competences*, and *test the possibility to teach in urban settings*. No significant relationship was found between *personal utility value*, or *social influence*, and per-service teachers' intention to teach in urban settings.

Research Question #7

The seventh research question is "To what extent does a short-term urban field experience impact the factors which influence pre-service teachers' choice of a teaching career?" The hypothesis for the question is that the short-term urban field experience has significant influence on at least some of pre-service teachers' motivations for choosing a teaching career.

The quantitative data used to answer the research question were collected from the experimental group using the FIT-Choice Scale. In order to test the hypothesis, a paired samples *t*-test was conducted. As is shown in Table 23, a number of factors were found to have had significant changes after participants completed the urban field experience. However, Field (2009) argues that just because a test statistic is significant does not mean that the effect it measures is meaningful or important. He suggests that researchers measure the size of the effect that they are testing in a standardized way. The *effect size* in a population is linked to three other statistical properties: the sample size on which the effect size is based, the probability level at which we will accept an effect as being statistically significant, and the statistical power of the test, that is, the ability of the test to detect an effect of that size.

In statistically analysis, a number of measures of effect size have been proposed, among which Cohen's *d*, Pearson's correlation coefficient *r*, and the odds ratio are the

most common. In this study, the effect size of paired samples t-test was measured by Cohen's d according to the following equation (Cohen, 1988):

$$Cohen's\ d = \frac{Mean\ difference\ between\ the\ pairs}{Standard\ deviation\ of\ the\ differences}$$

Cohen (1988) made some widely accepted suggestions about how to interpret large and small effect size:

$d = .20$ (small effect size)

$d = .50$ (medium effect size)

$d = .80$ (large effect size)

The results in Table 23 indicate that, on average, participants reported significantly stronger motivation from eight factors after the urban field experience than prior to it. These factors included *ability of teaching*, *intrinsic career value*, *time with family*, *job transferability*, *enhance social equity*, *social influence*, *difficulty of teaching*, and *satisfaction with the choice of teaching*. Although the statistics for all eight factors were statistically significant, the effect size of these statistics varied. Pre-service teachers reported getting stronger motivation from *intrinsic career value* after the urban field experience (M = 6.22, SD = 5.68), $t_{(205)} = 9.53$, $p < .01$. $d = .66$, representing medium to large effect. In addition, participants also reported drawing stronger motivation from *social influence* after the experience (M = 4.94, SD = 1.75) than prior to it (M = 4.38,

Table 23

Paired Samples t-Test for Impact of the Urban Seminar on First-order Motivation

Factors

		Mean	Std. Deviation	t	df	Sig. (2-tailed)	d
Ability of teaching	Post	6.14	0.80	2.04	202	**.04**	**.14**
	Pre	6.04	0.78				
Intrinsic career value	Post	6.22	0.90	9.52	205	**<.001**	**.66**
	Pre	5.68	0.98				
Fallback choice	Post	1.81	1.12	1.26	201	.21	
	Pre	1.72	0.91				
Job security	Post	5.12	1.38	0.67	201	.50	
	Pre	5.07	1.32				
Time with family	Post	3.92	1.38	2.03	200	**.04**	**.14**
	Pre	3.78	1.36				
Job transferability	Post	4.35	1.49	3.34	202	**<.001**	**.24**
	Pre	4.07	1.41				
Shape the future of children	Post	6.30	0.82	0.32	204	.75	0.32
	Pre	6.28	0.79				
Enhance social equity	Post	5.74	1.17	2.86	202	**.01**	**.20**
	Pre	5.53	1.17				
Make social contribution	Post	6.14	.91	-0.37	204	.71	
	Pre	6.16	.87				
Work with children	Post	6.29	1.01	0.86	201	.39	
	Pre	6.25	1.01				
Previous teaching experience	Post	5.98	1.41	1.41	204	.16	
	Pre	5.86	1.17				
Social influence	Post	4.94	1.75	6.99	204	**<.001**	**.49**
	Pre	4.38	1.88				
Expertise of teaching	Post	5.66	1.09	1.78	203	.08	
	Pre	5.55	0.96				
Difficulty of teaching	Post	6.36	0.67	3.21	204	**.002**	**.22**
	Pre	6.22	0.75				
Social status	Post	4.71	1.12	0.02	202	.99	
	Pre	4.71	1.07				
Salary	Post	3.49	1.33	-1.44	205	.15	
	Pre	3.59	1.29				
Social dissuasion	Post	3.55	1.59	-7.04	204	**<.001**	**-.49**
	Pre	4.58	0.94				
Satisfaction with the choice	Post	6.44	0.82	3.59	204	**<.001**	**.25**
	Pre	6.29	0.95				

SD = 1.88), $t_{(204)} = 6.99$, $p < .01$. $d = .49$, representing near medium effect size. The

change in factors such as *job transferability* ($d = .24$), *enhance social equity* ($d = .20$),

difficulty of teaching ($d = .22$), and *satisfaction with the choice* ($d = .25$) represented

small effect size.

The results also show that *social dissuasion* decreased significantly after the urban field experience (M = 3.55, SD = 1.59) compared to before the experience (M = 4.58, SD = 0.94), $t_{(204)}$ = -7.04, $p < .001$. $d = -.49$, indicating medium effect size. Hypothesis 7, that the short-term urban field experience has significant influence on at least some of pre-service teachers' motivations for choosing a teaching career, was therefore, supported.

A paired samples *t*-test was also conducted for the higher-order factors to further test the effect of the urban field experience. Results in Table 24 display two higher-order factors that changed significantly. Participants reported experiencing more important influences from *personal utility value* after the urban field experience (M = 4.35, SD = 1.24) than prior to it (M = 4.22, SD = 1.54), $t_{(195)}$ = 2.47, $p < .05$. Cohen's $d = .18$, which

Table 24

Paired Samples t-Test for Impact of the Urban Seminar on Higher-Order Motivation Factors

		Mean	Std. Deviation	t	df	Sig. (2-tailed)	d
Personal utility values	Post	4.35	1.24	2.47	195	**.01**	**.18**
	Pre	4.22	1.17				
Social utility values	Post	6.13	0.79	1.54	198	.12	
	Pre	6.06	0.76				
Task demand	Post	6.01	0.71	3.04	202	**.003**	**.22**
	Pre	5.88	0.71				
Task return	Post	4.41	1.04	-0.53	202	.594	
	Pre	4.43	0.96				

represented very small effect size. They also reported having stronger motivation from *difficulty of teaching* after the experience (M = 6.01, SD = 0.71) than prior to it (M = 5.88, SD = 0.71), $t_{(202)}$ = 3.04, $p < .01$. Cohen's $d = .22$, representing small effect size. *Social utility value* increased slightly after the experience; however, the difference did not reach

statistically significant level ($p > .05$). Participants' perception of teaching in terms of its return dropped slightly after the experience. Likewise, the difference was not statistically significant ($p > .05$)

In short, the short-term urban field experience small to medium effect on several motivation factors. The participants of the urban field experience reported experiencing significantly more important influences from such factors as *ability of teaching*, *intrinsic career value*, *time with family*, *job transferability*, *enhance social equity*, *social influence*, *difficulty of teaching*, and *satisfaction with the choice of teaching*. They also reported getting significantly weaker motivation from *social dissuasion*. The effect of the urban field experience on *intrinsic career value*, *social influence*, and *social dissuasion* was both statistically significant and practically meaningful.

Research Question #8

The last research question in this study is "To what extent does a short-term urban field experience influence pre-service teachers' intention to teach in urban settings?" The hypothesis for this research question is that the short-term urban field experience would have significant influence on pre-service teachers' intention to teach in urban settings.

Quantitative data used to answer this research question were collected from the experimental group using the researcher-developed questionnaire. A paired samples *t*-test was conducted to examine whether the urban field experience had a significant influence on its participants' intention to teach in urban settings. Two items in the researcher-developed questionnaire, items 18 and 39, were used to measure participants' intention to teach in urban settings.

Table 25

Paired Samples t-Test for the Intention to Teach in Urban Settings

		Mean	Std. Deviation	t	df	Sig. (2-tailed)	d
Intention to teach in urban settings	Post	5.35	1.47	6.73	205	**<.001**	**.46**
	pre	4.85	1.53				

Results in Table 25 show that generally the participants in the short-term urban field experience had significantly stronger intention to teach in urban settings after the experience (M = 5.35, SD = 1.47) than prior to it (M = 4.85, SD = 1.53), $t_{(205)}$ = 6.73, p < .01. Cohen's d = .46, representing approximately medium effect size. Hypothesis 8, that the urban field experience has a significant influence on pre-service teachers' intention to teach in urban settings, was therefore, supported.

To summarize, the short-term urban field experience influenced pre-service teachers' intentions to teach in urban settings to a medium extent. The effect was not only statistically significant but also practically meaningful.

Results of Qualitative Data Analysis

Qualitative data were collected from 11 participants in the urban field experience, who volunteered to participate in the interview in the pre-experience survey. In order to have a better understanding of the findings of the qualitative data, this section will begin with a brief demographic description for each of the interview participants. Pseudonyms were used to protect the identity of the participants.

Participants

Jack is 21 years old. He just finished his junior year in the Elementary Education Program at a state university in southern Pennsylvania. He identified himself as biracial,

with his father being African American and his mother, Caucasian. Because his father was in the army, Jack has lived in a number of places and had learning experiences in a variety of educational settings. Jack started college by majoring in Sports Management. He switched to Teacher Education in his sophomore year.

Kevin is a 26-year-old, White, graduate student in a masters program leading to a reading specialist at a state university in northwest Pennsylvania. Kevin has a degree in accounting and was an accountant before he decided to switch careers to teaching. Kevin was born and raised in a small town in Pennsylvania. He did not experience much diversity before he attended college.

Jenna is 21 years old. She was born and raised as the only child of the family in a fairly rural area. Jenna just finished her junior year in the Elementary Education Program at a state university in Eastern Pennsylvania. Teacher education was Jenna's first-choice major, and teaching is going to be her first career. Jenna identified herself as White and middle class. She did not have much experience in diversity in her K-12 school years.

Katlyn is 19 years old. She just finished her freshman year in Math Education at a state university in Western Pennsylvania. Katlyn identified herself as White. She is attending a university in the small town where she was born and raised. Due to the existence of the university, Katlyn had experienced some diversity her K-12 school years, though not much.

Stephanie is 21 years old. Born and raised in a very rural area, she started school in a small private school where her father was a teacher, and transferred to a small local public high school. Stephanie just finished her junior year in elementary education at a state university in Southern Pennsylvania. Stephanie identified herself as White. She had

limited experience in diversity in her elementary and secondary schools, where the students were primarily white, and teachers were all Caucasians.

Dana is 20 years old. She came from a suburban area in Southern New Jersey. Dana just finished her sophomore year in English education at a private university in Eastern Pennsylvania. She identified herself as Asian American. Dana attended small suburban elementary and secondary schools, where most teachers and students were White.

Lindsey is 20 years old. Like Dana, she is also from a suburban area in New Jersey. Lindsey was a sophomore in the Elementary Education program at a state university in central Pennsylvania. She identified herself as White. Although there was no diversity in her elementary and secondary schools, Lindsey has had much experience in different cultural environments encouraged by her parents.

Vickie is 21 years old. She was born in a big city in Western Pennsylvania, but was raised in a small town where she had her school education. Before switching her major to the Elementary Education program at a state university in Western Pennsylvania, Vickie was in a Theater and Dancing program at a college in Massachusetts for three years. She identified herself as White.

Sarah is 21 years old. She is going to be a senior in the English Education program at a state university in northwest Pennsylvania. Sarah was born and raised in a very rural area. She went to small schools for her K-12 education, where there were almost no students or teachers of color. Sarah identified herself as White.

Delena is 21 years old. She just finished her junior year majoring in special education at a state university in Eastern Pennsylvania. Delena came from a small town

in New Jersey. Delena identified herself as African American. She experienced some diversity before she came to college, although there were more White students than students of color in the schools she attended. Delena said that, in all her school years, she probably had about five teachers who were African American.

Tory is 21 years old. He started college majoring in Business Administration at a public university in eastern Pennsylvania. Before switching to his current program in English Education, Tory also enrolled, for a short time, in the program in psychology at the same university. Tory identified himself as African American. Born and raised in Philadelphia, Tory is the only college student of the ten siblings in his family.

All of the eleven interviews were conducted in the lounges of the college dormitory where students stayed during the two-week urban field experience, in the evening or during the weekend when they did not work in the schools. Each interview lasted about 45 minutes and was recorded using a digital recorder. All recorded interviews were later transcribed for data analysis. The results are reported as below.

Techniques of Data Analysis

The major technique used in qualitative data analysis was adapted from Hatch's (2002) inductive analysis model. For the sake of better organization of the data, NVivo 9 (QSR International Pty Ltd., 2010) was used. The transcribed data were, first of all, imported into a project created in NVivo. The researcher then began data analysis with free coding, by reading through the data and creating nodes, containers that let the researcher gather related material in one place in order to look for emerging patterns and ideas. The next step was to look for domains based on the relationship between and among the nodes coded. This step resulted in four major domains, namely; motivation for

choosing a teaching career, intention to teach in urban settings, motivation for participating in the urban field experience, and impact of the urban field experience. The researcher then searched for themes within and across the four domains. Finally, the researcher looked for excerpts to support the themes identified.

The results of qualitative data analysis addressed research questions #1, #3, #4, #7, and #8, out of the eight research questions in this study. The following section presents the findings of qualitative data analysis pertaining to each of these five research questions.

Research Question #1

The first research question is "What are pre-service teachers' motivations for choosing a teaching career?" In the process of data analysis, eight themes emerged relating to this research question. The following section will describe the themes one by one and support each theme with quotations from the participants.

Social influence and social dissuasion. *Social influence* was a construct in Watt and Richardson's FIT-Choice Scale, which refers to the positive influences of significant others such as family members, friends, and colleagues (Watt & Richardson, 2007). In the current analyses, it also includes *social dissuasion*, influence discourages individuals from a teaching career.

In Watt and Richardson's study, *social influence* was rated below the midpoint; while *social dissuasion* was rated above the midpoint, indicating that participants did not perceive *social influence*, positive or negative, as important influences on their decision of being a teacher. Results of the quantitative data analysis in the current study showed that participants rated *social influence* and *social dissuasion* relatively low. Although

both were above the midpoint, neither was considered as important influences by the participants on their choice of a teaching career.

Slightly different from the quantitative data, when the participants were asked what motivated them to become a teacher, the most salient theme that emerged in the interview was *social influence*. All eleven pre-service teachers interviewed mentioned the influence of positive role models they had, such as teachers, parents, siblings, and other people in education settings. Jack recalled the teachers and coaches who supported him greatly in his school years.

> My dad is in the army, so we moved a lot, every two or three years until now. The biggest supporters and motivators I have had are my teachers and coaches. Each time I moved, they helped me out to communicate. They had big impact on me. It was hard to be able to move that much. So the great teachers and great coaches really helped me to get a good start in my new life there. They made a big difference.

To some participants, the influence from their teachers extended beyond their school years and had great impact on the informants' career choice. Kevin described how his favorite high school teacher influenced him even after he graduated.

> My favorite teacher ever was my high school accounting teacher. I'm still friends with her now. She's now retired. But I still go to her, have dinner with her family and stuff. I mean, we've become friends, which is kind of weird. She's always encouraged me to go into teaching and tells me I'd be good at it but every time I ask her, she keeps reminding me about the demands teaching has.

Teachers also influenced the subject area in which some pre-service teachers chose to be certified. Dana recounted how her seventh grade English teacher made her realize that she liked English and wanted to teach English.

> My seventh grade English teacher not only worked hard as a teacher, but she identified herself with the students and she made it through on her personal basis as well. She really made it fun. Before seventh and eighth grade, I did not like English. She made it so fun that everybody enjoyed it, not "oh, I have to read it." In my middle school, there were two English teachers, a difficult one and an easy one. She was the difficult one. In her year, she made us work. I worked a lot. She made me realize I want to do that to change someone's life as she changed my life. She makes me realize that I like English. And that's something I want to do when I grew up.

Some teachers recognized the potential qualities of a good teacher demonstrated by the participants when they were still in elementary or secondary schools, and encouraged them to pursue a teaching career. Stephanie spoke of her elementary school teachers who influenced her choice of a teaching career.

> I remember even in elementary school my teachers always commented on my willingness to help people, and my willingness to serve different areas. They always said, "You could be a good teacher, or a doctor, or something you are serving people." They said, "I cannot wait to see your classroom someday; I cannot wait to see how you would be like as a teacher."

Apart from teachers, family members also have had significant influence on the interview participants' decision to be a teacher. When talking about her choice of teaching, Stephanie said her parents had huge impact. She stated,

My dad has been a teacher for 23 years. He actually just became a principal in this past year. I was always influenced by him in teaching. He always had me in his classroom, doing bulletin boards. And he was always in my school, I went to school there. So he had huge impact on my choice of teaching. My mother is very open with children. She was very loving for them. She works in a bank. She is a very active person, interacting with customers all the time. I think I was very much influenced by them because they are both people-oriented. And that allows me to be like that as well. My dad influenced me a lot on my decision of becoming a teacher.

For other participants, the influence came from other family figures such as grandparents and older siblings. Vickie said she was always surrounded by teacher figures. Her grandmother was an English teacher, and her mother was a piano teacher for 14 years. Sarah's older sister went through English Education program at the same university. She obtained a teaching position in Mexico, and had been trying to get Sarah teaching there.

Tory said his brother had huge influence on his decision of becoming a teacher. He recalled,

I guess when my brother said he'd be a teacher, I was about 6 years old. I had the idea from like, in seventh grade. I eventually picked that up that I want to be a

teacher too, but I'd never admit that I want to be a teacher. That was my greatest influence. It was my brother, and then I'm very lucky to have the teachers I had.

Although *social influence* seemed to be a critical factor regarding the participants' choice of teaching career, not all influence was positive. Some of the pre-service teachers mentioned how their family and friends were concerned about their choice. Kevin said his parents were "fine" with his switching from accounting to teaching, but worried whether he would be able to pay back his student loan, and whether he would be happy with the choice.

> My parents worried because I had a lot of school debt from my undergrad. Though I have assistantship for this study, I can only work like 18 hours so I have to take out the extra student loans to live off, and make my car payment. So they're worried about that a lot, but I just do what I can do. But other than that, they're fine. They think I'll never be happy, which may be true.

Lindsey had a similar experience. Her parents did not support her, but they were not against her decision either. She told the researcher, "I kind of don't worry about my parents, because they are OK with my choice either way, whether I chose to be a teacher. But some people encourage me going to something other than teaching because of the salary."

Compared to their peers from white families, African American participants seemed to have encountered stronger resistance against their choice of a teaching career. When describing the process of her decision to become a teacher, Delena said, "People always asked me, like my dad, 'You are so intelligent. You can do anything. Why did

you choose to be a teacher?'" She also encountered negative reactions from her friends. She remembered,

> My best friend just graduated from Temple. She wants to become a doctor. None of my friends wants to teach. They say, "Why do you want to become a teacher? You are not going to benefit a lot from it."

Like Delena, Tory encountered strong social dissuasion. When his friends knew he wanted to be a teacher, they reacted in surprise, "What? Why would you do that? The pay wasn't so good…" Facing the discouragement, both Delena and Tory expressed strong desire and love toward teaching, an indicator of *intrinsic value*, which is another important theme discussed next.

Intrinsic value. According to Watt and Richardson (2007), *intrinsic value* includes such traits as interest in and desire for a teaching career. In their study, *intrinsic value* was rated as one of the most important influences on participants' decision of teaching. Quantitative data from this study displayed similar results. *Intrinsic value* was rated as the fourth important influence on participants' choice of a teaching career (M=5.87), next to *perceived teaching ability*, *social utility value*, and *prior learning and teaching experience.*

Consistent with the quantitative data, *intrinsic value* had great influence on the interview participants' choice of a teaching career. During the interviews, all pre-service teachers expressed that they loved school, and that they enjoy teaching. Some had always wanted to be a teacher and were never attracted by any other careers. Katelyn, Lindsey, and Delena spoke of wanting to become a teacher when they were young because that was something they love doing. Stephanie told the researcher how much she enjoyed

staying in the classroom and helping teachers even when she was in elementary school. She recalled that the idea of becoming a teacher came to her when she was in third grade.

I would say third grade. After school, I would go to my dad's classroom and asked him "what can I do?" If he did not have anything for me, other teachers would use me. That was where I would go after school—bulletin board, students' paper, I really liked that. I never thought of doing anything else. This is the one thing that I always had in my mind. Nothing else was attractive to me besides teaching, or some other stuff like coaching that would go with teaching. Teaching is always my number one priority.

Jenna had similar experiences, though she was once attracted by becoming a lawyer when she was in middle school. She said,

I always wanted to teach when I was little, like in elementary school, kind of cliché. I always like going to school. I liked the teachers. And I wanted to be a teacher. When I came around middle school, I wanted to be a lawyer. But once I started to work on that and started to take the legal courses in high school, I didn't like that at all. So I went back. I like to work with kids a lot. I think I really enjoy the profession. So I took child development course in my high school, I really enjoyed learning about the teaching strategies, children.

Intrinsic value is also an important motivational factor that influenced several interview participants' switch of career or major. Those participants indicated that they always loved teaching. However, for some reason, they chose to study in the field other than teacher education. It took the participants some time to realize that it was teaching,

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rather than their prior major or career that they loved. Jack began college as a sports management major. However, he soon found out he did not like it at all.

> Many people thought it was perfect for me since I was involved in athletics. But within that very first semester, I found out I really didn't like business at all. At the time, I was working at the daycare center, and I coached a middle school track team. I really liked that. So I decided to switch major at the semester.

Kevin worked as an accountant for two and one-half years. He thought accounting was just fine. "I did not love it or hate it. But I don't want to do something for forty years that I don't want to do. I wanted something I loved. I always liked teaching, so I went to teaching."

For Tory, becoming a teacher education student meant coming a long way. He said he really wanted to be a teacher when he was in seventh grade. Raised by his grandmother in a big city, Tory said his family was always broken. The idea that teachers were paid poorly stopped him from choosing teacher education when he started college. He said, "I had an issue that teachers are poor, and I had the opportunity to do so much more. The passion was there, but I was kind of ignoring it." He went to the program of business administration instead, hoping to make much money. Soon he found he did not like it. He realized that "I would have the kind of corporate job that I didn't like, and I would have made a lot of money. But I didn't want to waste my life for something I didn't like to do." After staying in the business program for a year, Tory decided to transfer to English Education.

Social utility value. *Social utility value* in the current study refers to the belief of how teaching is socially useful. It is composed of such component constructs as *making a*

social contribution, enhancing social equity, shaping the future of children, and *working with children.* In their study, Watt and Richardson (2007) found *social utility value* was rated as important influences on participants' decision of teaching. Consistent with prior research, quantitative data from this study indicated that *social utility value* was rated as the second important influence on the choice of a teaching career.

The findings of the qualitative data analysis in this study supported the results of quantitative data. *Social utility value* was an important motivation factor that emerged from the interviews. Several pre-service teachers explained that they were attracted to the career of teaching because they wanted to work with children. Jenna, Delena, and Vickie told the researcher that they loved to work with children, and they always wanted to help people. Katlyn said, "I love working with kids. I really enjoy the fun with people around you and doing something valuable." Lindsey stated that working with children is something she always loved to do, something that can always make her smile.

Another *social utility value* factor emerged in the interview was making a difference. When asked why she wanted to become a teacher, Dana answered,

> I want to touch the life of students, and have some impact on them. We saw that teacher (the author of I Chose to Stay), I forgot his name, but his high school teacher helped his life and he wrote about her. My teacher, she had impact on me. I think my goal is to make students want to continue education after high school because people need college experience to get a good job. So I guess touch the life of students, make them want to learn, make them enjoy it, and enjoy life.

Like Dana, to make a difference in students' lives was also a goal Lindsey wanted to reach through teaching. She had great teachers who had an impact on her life in her middle and high schools. She wanted to do the same to others. She explained,

> To me the most important thing is to make difference in a child's life and being a mentor to them. So that's my goal. I would love to help them learn, obviously. But even more so, I think a lot of kids coming to school to learn to become responsible citizens. I think if they have a mentor, they would have a role model in their life. They will not only become a responsible citizen, but they will learn. In my middle school and high school, the teachers really had an impact on my life. They were always there for me. They made a difference in my life. So I want to do the same to others.

To Tory, teaching in high school and helping kids like him, kids who were born and raised in a challenging family and who did not know what to do in high school, was his calling. He said,

> I can have the kind of influence on teenagers, like you can go to college. I am not only a person who goes to college, but my family is very broken. I want to be an example to kids and tell them "we can do this" and your family is not all you have, and we can fight toward something better.

In her interview, Jenna spoke of how she would like to help shape the future of children and how teaching can benefit those who were socially disadvantaged. She stated,

> I am hoping to have an impact on kids in my classroom. If I cannot reach all my students, I want to be able to reach at least a handful. If they have no support from the family at home, I want them to know that there is support out there; they are

not alone, and not everyone is going to discourage them. I want the kids to feel comfortable in my classroom. I want them to understand that education could better them, and they could benefit from it a lot.

One factor that was not included in the survey, but was mentioned in the interviews was the love of a subject as a motivation for choosing a teaching career among secondary education majors. Due to the influence of the teachers they had, these participants developed a love for a subject when they were in secondary school, and wanted to help others enjoy the subject as they did. Dana was one of those participants. She told the researcher,

> She (her seventh grade English teacher) makes me realize that I like English, and that's something I want to do when I grew up. I want to do that to change someone's life like she changed my life. Then it was my eleventh grade English teacher. She confirmed that I wanted to be an English teacher. She just broadened my horizon in the subject of English as a whole. She made the experience enjoyable to me. Now I want to do that to someone else again.

Love of subject was also one of the major social utility value factors that influenced Katlyn's decision to become a teacher. She wanted to help children understand math. She would also like to help break the gender stereotype that girls cannot do math. Katlyn recounted,

> I'm interested in math and I am good at it. A lot of people, particularly girls, have fear toward math. To me, it is really fun. I love to help my students understand math. You take something difficult and break it out, and that's one of the

rewarding things that you can do. I don't want to hear people say that girls cannot do math. That's not true.

As indicated in the above excerpt, the decision of becoming a teacher is a joint product of social influence, intrinsic value, and social utility value among the interview participants in the study. For example, participants who have had a positive role model wanted to have an impact on children's lives. Likewise, participants who said they loved children also indicated that they enjoy teaching and working with children.

Previous experience with children. *Prior learning and teaching experiences* was one of the highest rated influences in Watt and Richardson's (2007) study, with the mean above 5 on the 7-point scale. Quantitative data in the current study showed similar results. Prior learning and teaching experiences was rated as the third most important factor (M = 5.99), indicating that the interview participants perceived it as an important influence on their choice of a teaching career.

A theme related to prior learning and teaching experiences that emerged from the qualitative data was prior experience with children. The participants mentioned that experiences of working with children in different settings helped them make the decision to teach. One type of experience that contributed to their choice of a teaching career was the experience of working with children in the classrooms. After talking about the influence of her teachers on her decision to become a teacher, Dana told the researcher that her first teaching experience in an urban school was another reason. In spite of the short duration, she experienced the psychological reward of helping students as well as strong attachment to them, which reassured her choice of a teaching career. She stated,

In my first teaching experience in my sophomore semester, I was placed in an urban school. I helped the students in every tenth period. I would take five students from the classroom and tutor them, for example, on a piece of reading, preparation for the PSSA, or their class tests. I taught at the beginning of the first semester, and in the end, their scores showed catch-up. They got better. When I left, a girl in eighth grade cried. Seeing her crying made me feel like I cannot leave them.

In addition to teaching in the classroom, the experience of working with children outside the classroom also contributed greatly to the choice of a teaching career. As mentioned earlier, Lindsey's parents respected her choice of becoming a teacher. However, she got much discouragement from other people who believe that teachers were not very well paid. Then she had the opportunity of working as a camp counselor. She recalled,

In my freshman year in high school, my mom was working for a community organization. She suggested that I could do community service during the summer. So I volunteered in the camp through the summer, 7:30 to 5:30 every day, 5 days a week, and I loved it. People I worked with were great and said that once I was old enough I should become a counselor. I was 16. I have been doing that every summer. That assured me that I want to be a teacher because I enjoyed it so much. Even though teaching is so different from being a camp counselor, it definitely confirmed to me what I want to do.

The experience offered Lindsey the opportunity to undergo much positive social influence, such as her mom's support and camp staff's encouragement. It also provided

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the chance for Lindsey to taste the satisfaction of working with children, which assured her of the decision to be a teacher.

When speaking of his dissatisfaction with his first choice-major, Sports Management, Jack said that at that time he was volunteering in a daycare center, and coaching a middle school track team. Jack felt it was "not so much was classroom experience, but experience of working with children really pushed me to education."

Another type of experience helping the participants clarify what career they wanted to pursue was experience with children in poverty through mission trips. Like other types of experience with children, mission trips provided the participants the opportunity to experience social influence, or see more clearly the values and expectancies behind their own career choice. On a mission trip to Mexico, Lindsey worked with children in poor rural areas. She said the experience strengthened her determination to be a teacher. She reflected passionately, "I saw the life of disadvantaged children. I want to help them."

While the experience with children in poverty confirmed Lindsey's choice of being a teacher, it helped Vickie decide what she wanted to do when she was totally at a loss at college. She narrated,

> Then I was involved in a public mission trip. I went to the Dominican Republic, and I got to work with children. I taught them. That just like completely changed me. I got to see such poverty. Working with children that had nothing just got really firing and rewarding. I came home, spending a few days just thinking about what is going on. I talked to my mom. She said, "What do you want to do? Do

you want to be a teacher?" I said, "You know what? I think that's what I want to do."

The mission trip apparently helped Vickie experience the kind of reward she failed to gain from Theater and Dancing. Motivated by strong social utility value, with the help of her mother, she realized that teaching was what she wanted to do. She transferred to the program of Elementary Education afterwards, and "had been happy ever since*."*

Personal utility value.   According to the expectancy-value theory, *personal utility value* relates to the extent to which individuals selected teaching because of such personal goals as more family time, flexible teaching hours and school vacation, and job security (Watt & Richardson, 2007). In Watt and Richardson's study, *personal utility value* was not perceived as important influences on the decision of teaching. Based on the literature, this researcher expected it to be rated low. This is supported by the quantitative data, with its mean a little over 4, ranked only ahead of *social dissuasion*. It indicated that participants considered *personal utility value* as a less important influence on their choice of the teaching career.

Though not shared commonly by all participants, *personal utility value* was indeed an important factor that influenced Kevin's career choice. Kevin chose accounting, his first career, due to the desire to make more money. However, he found that he did not like the hours. He decided to switch to teaching and believed that teaching did not have to be time-consuming as it was for many teachers. He explained,

I think people are on each extreme. I know teachers who don't do very much at all, like my co-op, and I think it's sad. But I know people who are workaholics, who

work almost a whole school day and after the school day. I think that's too much, especially when you're close to retirement. I think there's a happy medium. I think when you start it's extremely demanding. But as you go on, it doesn't have to be and shouldn't be. I mean, other than just basic prep, a lot of your ideas should be formulated. As you get new ones, it should be easy to tie them into ideas and lessons you've done previously. Other than the prep for those, I don't think it's as bad as when you start you have to think and be creative.

Kevin repeatedly emphasized that the longer one teaches, the easier teaching becomes. He said,

It gets easier. And once you get older, you kind of cut back. Not in a bad way, it just becomes easier. I mean you've done it thirty five times and (teaching is) not as time-consuming as it once was. I think that's the way it should be. It's like that with any career, not just teaching. I don't think it makes you a bad teacher to not spend 8 hours every night working on stuff.

Although time is an important concern of Kevin's career change, what really got him to switch to teaching was that it allowed him to choose where he wanted to live and it provided him a secure public retirement. He told the researcher,

(Retirement is) One of the biggest reasons I went into teaching. And this was before the stock market crashed, it scared me to death to save for my retirement. My first job out of college was with the federal government. So I had all the federal benefits, I had the pension and all that. But it was in Chicago and I wanted to move back to Erie, or the Erie area, to stay close to the friends and family. So when I moved back, I took a private job, which paid a bit more but all I had was

40 thousand. It scared me to death to think that was my only retirement, and I really, really wanted a public pension. So when I was weighing my options, that was honestly one of the biggest things that I considered. It reaffirmed my decision. And actually, I'm such an accounting dork, that I've been researching pensions in all the states slowly that I would want to live in, potentially, to teach versus the salary and all that, and just to see like where I want to live. Evidently, it's a big deal to me.

Teaching, therefore, satisfies Kevin's personal goals of being able to live close to his family and friends, get a public retirement, and enjoy good working hours. Even when Kevin selected the area of certification, personal goals were still his major concerns. He accounted for why he chose the master's program in reading rather than math or science, the subjects he was good at.

I do love math and I'm good at it. The reason I didn't go into math was I didn't want to take the higher level math courses. I took Calculus in high school and college. I did well in it and I liked it. But I didn't want to take anything higher than that. So my plan actually is to be certified in elementary education and to get a job. The reading I chose (was) mostly to help me get a job. I'm more of a math and science person than reading and language arts. It's one of those things that I like it, but I love math and science and social studies.

Interestingly, unlike the majority interview participants, Kevin chose to enroll in the teacher education program for the sake of being certified as a teacher and getting a job instead of love to work with children, or love of the subject. His final goal is to get certified in high school business. He further explained,

So my goal is to be certified in those two (math and social study), get a job, finish

my reading program, and get certified in reading specialist. And since I have a

background in accounting, I think I only need to study a little bit and take the

practice to get certified in high school business. My high school principal told me

that there are not a lot of openings in the field. But when there is, it's very hard

for them to find somebody. It doesn't happen often at all. But when there is,

there's a shortage in it.

For other interview participants, personal utility value was not a primary reason

for the choice of a teaching career. However, concerns about such factors as job security

and salary were mentioned by several participants as factors mediating the demand of

teaching. This will be discussed later under the theme of task return.

Perceived teaching ability. Perceived teaching ability assessed participants'

perceptions of their teaching abilities. In Watt and Richardson's study (2007), it was

rated as a highly important influence on the decision of teaching. Consistent with Watt

and Richardson's finding, quantitative data in this study indicated that perceived teaching

ability was rated by the entire sample as the most important influence on the decision of

teaching.

However, none of the interview participants mentioned the role of teaching ability

when they described the process of their career decision. When asked, they expressed

different levels of perceived teaching ability ranging from being "very confident" to

"need improvement".

Several participants conveyed a very high level of confidence about their teaching

ability. Vickie said she is very confident of her teaching ability due to her animated

personality, experience of working with children, and very positive comments from others. She explained,

> I had a lot of compliments from the teachers and coops. I think I just work really well with children. I had great recommendations. So I am confident. I don't mind being in front of the classroom. I just remember don't be nervous. Like today I had to do the song of alphabet. I was worried that I was going to mispronounce letters in the alphabet. But I got up there, and I was fine. And kids will support you. They'd say, "well, Miss Filler is fun." My co-op gave me a lot of responsibility. I'm confident, definitely.

Like Vickie, Dana was highly confident of her teaching ability. She attributed such confidence to good communication skills and strong personality. She stated,

> I'm confident of my teaching ability because I don't feel threatened by the students. Whether it is non-urban or urban setting, I feel comfortable in the classroom. I can communicate with parents, inner city girls, boys. Doesn't matter. I always feel comfortable with them. If there is a problem like a student is feeling upset, I can talk to them. If they have difficulty in writing, reading, comprehension, I feel like I can help them. Overall, I feel comfortable and I can help them with all areas of the subject.

She later added that she had very confident characteristics. She said, "My mom is a very strong woman. She taught me everything that I know, like to be independent. That makes me strong as a person and an individual."

Personality and communication skills also contributed to Stephanie's perception of her teaching ability. She told the researcher that she was very confident of her ability to be an effective teacher.

I think I'm able to be a good teacher. I feel confident in the classroom. I think I am such an out-going person. I go to anyone to talk to them, like even here I start talking to people who I have never seen in my life. So when I got in front of the classroom, I just feel like that's where I'm supposed to be. As far as being an effective teacher, I think I am.

However, Stephanie felt that her ability in teaching needed to be improved. She explained,

I haven't had my method courses yet, so I'm really looking forward to getting to them because I am feeling where I'm teaching now, it's just things I've been taught through, not really how to teach them. I think once I have that, I'll definitely be an effective teacher.

The need to improve teaching ability was shared by several other interview participants. Jack said he would like to think he is capable of teaching based on his experience in coaching a middle school track team and in a daycare. However, he believed more experience would help. He said,

I'd like to have more experience. I am teaching a lesson this week. I am expecting to get more classroom experience time like that. But for now, a lot of observations and things like that are good enough. When I get back to my university, it will help me deal with the stuff in the classroom more and pick up experience.

Katlyn mentioned the same thing when she was asked about her teaching ability. She was confident about her ability of teaching content knowledge based on her strong academic background in math. Nonetheless, she was not so sure of her overall ability of managing the classroom, particularly in urban settings. She emphasized, "I think I need more confidence, especially here. I need more confidence and experiences of standing in front of the class teaching." Classroom management was also Delena's concern. As a special education major, she believed she was going to be a good teacher. Meanwhile, she realized the classroom in which she was placed was challenging, and yelling was a common strategy teachers used to manage teaching. Delena conveyed some uncertainty about how she was going to approach the classroom. She stated,

> I haven't got to yell at the students yet. I think that may be my biggest issue. I am really worried about it. The classroom I am working in has full inclusion. There students who are normal, but others need lots of help.

Tory was the one who felt not so confident of his teaching ability compared to other interview participants. When asked, he said his voice projection was very loud. If he spoke, he could be heard half of the campus away. However, he had to enhance his creativity and ability of developing lesson plans. He complained,

> One thing I have to work on is creativity. For example, if you have to create a class project, you have to do artwork. I have never been good at things like that. I have got bad grades in Art. I have once failed art. Anyhow, when I need to create a lesson plan, I don't know where I should start. It is almost overwhelming. The way my university requires is like you have put the facts there. But I don't know the facts. I have hard time focusing. Mine is running everywhere. My teacher

would suggest, what about this, what about that, I was like, I don't know. What about it? The teacher asked to do a lot, but never told me how to do it. Sometimes, I was dumbfounded. If I need to teach in the classroom, I actually can do it. But this lesson plan stuff really drives me crazy.

Overall, the interview participants were moderately confident of their teaching ability. Almost all of them knew what strengths they could make use of in teaching, including personality and communication skills. Some noticed that they need more experiences in order to improve their classroom management and other skills of teaching. Nevertheless, no participants mentioned explicitly whether the perception of their own teaching ability was an important influence on the choice of a teaching career.

Task demand. Together with *task return*, *task demand* was used to assess individuals' perception of teaching. It refers to perceptions of teaching, including the professional knowledge and skills required, as well as the difficulty of teaching. Watt and Richardson (2007) suggest that perception of high task demand could be moderated by perceptions of high task return. The discrepancy between the two is related conceptually to the *cost value* component in Eccles et al.'s model (Eccles et al., 1983; Wigfield & Eccles, 2000). In Watt and Richardson's study, perception of *task demand* was high, while perception of *task return* was considerably low, indicating that They consider teaching as a high demanding career with very low return.

Quantitative data in this study showed that *task demand* was rated moderately high, ranked as the fifth important factor, next to *teaching ability*, *social utility value*, *prior teaching experience*, and *intrinsic value*. This indicates that participants perceived *task demand* as moderately important influences on their decision of teaching.

Task demand was an important theme that emerged in the process of the interview data analysis. Participants generally expressed very clear perceptions of teaching as a highly demanding profession. They believed that teaching required, but was not only restricted to, professional knowledge and skills. Jack commented,

You have to have knowledge as the foundation. But being a teacher requires other things to support it, to make it work. You should be very knowledgeable, smart, but you cannot always have the kind of impact on another human being just because you know what you are doing. Being a teacher needs a lot of knowledge from extra fields. You cannot really just transmit information or make it understandable. You have to comprehend what you are trying to say. I think it takes a whole person to be a teacher, personality wise, character wise. You know you have to be sociable, and come energetic.

Consistent with Jack's perception that "it takes a whole person to be a teacher," Delena said that to be a teacher means to play a "whole packet" of roles. She explained,

To me, a teacher is not someone who just tells you, "This is how to do this." I think there is something more to the role of teacher, a whole packet – of a mother, a friend, and a positive role model.

As a product of urban education, Tory shared his understanding of being a teacher, specifically an urban teacher. He asserted,

In suburban area, you can get away just being an instructor. In urban setting, you will have to engage students and at the same time still maintain a safe environment for students to learn. You need to instruct, lead, police, encourage, and so much more. Can you do all that, and in the meanwhile have students leave

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the classroom with more than what they came in? It is extremely challenging. It is such a job and it is not for everybody. Sometimes people come in to be an instructor. "I am an instructor. I cannot do all that." That's understandable. But you are getting yourself into something that is so much more than "I am going to be a teacher. As a teacher, you are going to teach them classroom skills; you are going to teach them conduct; you are going to teach them to respect and encourage themselves; and you are going to teach them to fight the struggles. To be a teacher, you will have to be willing to wear more than one hat. You will have to be willing to work as more than a teacher. Your teaching goes past the classroom so often. You are going to have to do more.

Several other interview participants' narratives supported the perception that teaching is time and emotionally demanding, and it requires hard work. Lindsey believed that teaching was difficult and demanding. She said, "Even if you have the best kids in the world, I think teaching is hard work. It needs aspiration; it needs confidence; and it needs classroom management…" Jenna told the researcher how she perceived teaching:

I think it is definitely a challenging job. It's time demanding. A school day is definitely more than a school day. If you want to be an excellent teacher you need to have that time before the classroom to get into all your planning: you need your class set up, you need to plan until you getting there. So I think is it definitely before and after school. It is also emotionally demanding because sometimes you can reach all the kids; sometimes you cannot. Even though you want to so bad, you cannot get them all. It can be very frustrating.

Speaking from a recent classroom experience, Vickie exclaimed how emotionally demanding teaching could be. She recounted,

It is emotionally demanding. And I got emotionally involved because the other day I had a situation with a student. He is in special need—he is not declared yet. This is his second year in kindergarten. I had to be strict with him. It is very stressful on me. I am emotionally drained. At the end of the day, I am still thinking, "You know what, you cannot always do that. It is just like burns me off balance." But the next day, he is fine. He said he loved me. It is just fine.

Vickie continued to suggest that the challenge of teaching was also related to the difficulty of drawing a clear line between work and home. She commented, "Some teachers left school and finished their work. But is it really practical to draw the line? When you get home, you are still in that time and that mind. I think it is easy to feel stressed."

It is interesting to notice that, unlike his peers in the interview group, Kevin did not perceive teaching as demanding. He believed that, as one first started teaching, it could be difficult because "you have to think and be creative." However, the longer one stays in teaching, the easier it became. He suggested,

It gets easier. Once you get older, you kind of cut back. Not in a bad way, it just becomes easier. I mean you've done it thirty five times and not as time-consuming as it once was. I think that's the way it should be.

In general, the interview participants in the study chose teaching with a clear understanding that teaching is a highly demanding career. In other words, high perception

of the requirement and difficulty of teaching did not seem to have had very strong negative influence on participants' choice of a teaching career.

Task return. The perception of teaching is also assessed by *task return*, which is concerned about the extent to which teaching is perceived as respected, valued, and well paid. It is composed of such factors as social status of teachers and salary. In Watt and Richardson's study (2007), *task return* was rated lower than the midpoint of the 7-point scale, indicating that participants perceived it as a less important influence on the decision to teach.

Quantitative data in this study showed that *task return* was rated above the midpoint, ranked as more important influences on the choice of a teaching career than *social influence*, *personal value*, and *social dissuasion*.

Qualitative data analysis from the study found that majority participants thought teaching offered relatively low task return. It was not a highly respected, appreciated, or well-paid job. Jack commented,

I think teachers are not paid well enough to deal with their everyday work.

Particularly, teachers in urban schools do not have sufficient resources. Teachers

are underpaid. I think it is an under-appreciated profession. Although you have

the summer off, but teachers really don't make much as they should have been.

Delena had similar perceptions about teaching. She said,

I don't think it is very low paid. But I think teachers should be paid more because

they do a lot of basic work. They help mold teachers, lawyers, and doctors. I don't

think they get enough respect as they should.

Unlike the majority participants, Kevin thought a teacher's salary was modest, and he could live a fine life on it. He suggested that teaching was a costly job at the beginning. However, as a teachers got older, the costs would do down while the salary would go up. Therefore, "over the course of a lifetime, I think it outweighs it (cost)."

An interesting finding was with Tory. He had always thought teaching was poorly paid. When Tory found out how much a teacher is paid, he felt relieved. He said,

What I found is about 40 (thousand). When I first asked some people, they told me 30, and then I heard 40, and then I was like oh lord, then I heard 45. It's more than anybody in my family ever made. Now I could follow my passion and do not have to worry about money.

Regardless of the different perceptions of task return, interview participants generally did not consider it as an important influence on their decision to teach. In fact, some said that it was not even a concern. Jenna told the researcher,

I understand they are not the best paid out there. But I really didn't ever take that into consideration. I just knew I like the profession. I would get my salary. I don't have to have the biggest house in the block. I can live on the salary. It's really not a concern for me.

Like Jenna, Vickie never thought salary was an important reason for her choice of a teaching career. She asserted,

That never came to me when I changed major because theater major is pretty well paid job. If you get regular, the pay is pretty decent. But money wise, I don't look at it like that. To me, meaning is more valuable than the money aspect. Money was my reason first.

To several other participants, *task return* was somewhat important, but not as important as the *intrinsic value* and/or *social utility value*. A very common patter related to this aspect is that they would rather be paid less and make a difference in someone's life, or enjoy teaching, than are paid more and live life for themselves, or do something they did not like at all. Lindsey was one of those participants. She stated,

To me, I would rather do something I like and get paid a little less than doing something I don't like and get paid more. I came to the classroom, I love working with kids. I know it's what I want to do. As far as money goes, when I am single, and starting my life, I 'm going to have to be thrifty. If that is the salary I have, I am just going to spend accordingly.

Stephanie was another participant who perceived money as a less important influence on her choice of a teaching career. She said,

Public education does not pay a lot compared to other careers. But I think about this: doctors and lawyers who are paid more, where do they learn from? Teachers! So if we are not there to teach students, then our world would collapse because everyone gains their knowledge from teachers. So I'm looking at it like I'm willing to make less than other career if I'm going to help people and help students. So when I look at my life in the future, I'd rather get paid less and make difference in someone's life, than get paid more and live the life for myself.

While to participants like Lindsey and Stephanie, the balance between high demand and low task return was mediated by strong social utility value and intrinsic value of teaching, others found a combination of other benefits teaching could afford.

Kevin and Katlyn mentioned good benefits. Dana added having the summer off and other internal rewards. She explained,

> I think teachers are underpaid. But you get good benefits. You get the time off during the summer. You get the chance to interact with kids and see their growth over the period of a year. You can also share the work of teaching and your love of the subject if they don't like it; or if they do like it, you could see their gaining through your teaching. So it is definitely worth it to put in the time and effort.

In summary, teaching was perceived as a career that offered low *task return* by the interview participants. However, perceptions of low return did not seem to have influenced their decision of being a teaching significantly. Participants mentioned other factors, such as *social utility value*, *intrinsic value*, and *personal utility value*, which helped them make the decision to be a teacher in spite of its low return.

Research Question #3

The third research question in the study is "How, if at all, are pre-service teachers' motivations to teach related to their intention to teach in urban settings?" Quantitative data analysis of the study found relatively weak, but statistically significant correlations between the intention to teach in urban settings and social utility value, teaching ability, perceived task demand of teaching, and satisfaction of the choice (See table 12).

Within the domain of intention to teach in urban settings, three themes emerged regarding how likely the participants were going to teach or not to teach in urban schools, namely, undecided where to teach, possible to teach in urban settings, and definitely wanting to teach in urban settings. Analyses were completed within and across the themes in order to search for any patterns and relations between three different intentions

and the initial influences on participants' decision to teach. The findings are presented below pertaining to the research questions.

Undecided about where to teach. Three interview participants said that they were undecided about the settings in which they wanted to teach. Jack told the researcher that he had not made up his mind whether he wanted to teach in urban settings. He explained,

> I thought there is a while before I graduate. But I think even if I don't teach in an urban setting, summer is free. I can even volunteer to teach and tutor during summer. So I can teacher around. I can have my rural or suburban job, then I could travel to or live in a major city in summer and work with the kids. So even if I don't get a job in urban settings, I think I can still make a difference and impact.

Jack decided to switch major when he found he did not like Sport Management, his first-choice major, at college. He decided to pursue a teaching career due to the positive influences from the teachers and coaches he had in schools, and his mother, who always wanted to be a teacher herself. Experience of working with children also had important factor that pushed him to teacher education. Jack believed he was a capable motivator and leader. He wanted to teach, and at the same time, coach track team. Eventually he wanted to become an administrator.

Jack perceived teaching as an under-paid, under-appreciated, but demanding profession. He noticed that urban schools did not have sufficient resources, and urban children may bring to school challenging experiences. However, he expressed that "at the end of the day, and when getting up in the morning, wanting to go to work and do

something influencing, can make you really happy." Jack believed that teaching in urban schools required different kinds of personality and coping ability. "Not everyone can stand the horror story that some of the neighborhood where kids staying experience." Jack thought he was a very capable teacher, but he would like to have more experience to improve his teaching ability. Although Jack was undecided about where he wanted to teach, he did mention that family was important to him. It probably would be an influence on the location of his future teaching position.

When Kevin was asked how likely he would teach in urban schools, he said he did not know. "I came here, not wanting at all. I have to have urban student teaching somewhere. That was the reason why I did this (the urban field experience)." After several days' urban field experience, Kevin still had a couple of concerns. He told the researcher,

I want to come in to make difference. But the working condition may not be enough. I also don't know at least Philly in particular. I think Erie is fine. But here, I don't think I will be able to make enough to support myself.

Kevin went through a career change from accounting to teaching, when he found he hated the working hours of accounting. He chose teaching because it would enable him to find a job close to his family and friends; it offered good benefits, particularly public retirement pension; and it was something he always wanted to do. Kevin experienced relatively positive social influence from his high school accounting teacher. His parents, however, were not so sure of his decision to teach.

Kevin perceived teaching as a moderately paid profession with good benefits. He believed it should be extremely demanding. He suggested that as one got older and

experienced, teaching just became easier. "I mean you've done it thirty five times and not as time-consuming as it once was." When considering where he wanted to teach, Kevin's top concern was salary and living experiences. He was also concerned about benefits, as well as the school and community culture. Kevin found the working condition in urban schools was "kind of sad". The technology was old and out of date. Teachers yelled at students on a daily basis; they were sore at other teachers, and they were sometimes bitter at the principal. Kevin is relatively confident of his teaching ability due to his capability of explaining things from different perspective. Although Kevin said he loved to go to cities, he did not want to live there. He found cities exhausting.

Of the interview participants, Katlyn was the youngest and had just finished her freshman year. She was not sure what kind of settings she wanted to teach. However, she did not want to teach in rural areas, or in a school close to her home. She said,

I'm not sure what I want. I think I don't want rural. I'm not sure if I can earn respect. I don't want it to be close to my home. I am going to leave the little town. It could be a few hours away. But I don't want to be close to my home at all. I'm not sure about urban. I'm still undecided.

Katlyn's decision to be a teacher was influenced by the math teachers she had in secondary school, her love for math, and her love to work with children. She wanted to help children understand math. She also wanted to be a role model, especially to girls.

Katlyn perceived teaching as a challenging profession with very moderate salary, but good benefits. She noticed the difference between the urban classroom and small town classroom with which she was familiar. In urban schools, "Kids are not just coming and sitting at the table and wanting to learn. You have to add the aspect to make them

want to learn." She observed the same group of students behave totally differently in the classes of two different teachers and summarized that teaching in urban schools required strong and confident personality. As for teaching ability, Katlyn was confident of her ability of teaching math knowledge and skills, but she was not so confident of her ability of classroom management. She mentioned that she was somewhat shy, and was not a very outgoing person.

Three factors seemed to have some influences on the three participants' intention to teach in urban settings. The first one was desire to stay close to family. Both Jack and Kevin mentioned this is important, though Katlyn felt almost the opposite. The second factor was perception of the working conditions in urban schools, including physical condition and school culture. The third factor was perception of not possessing the personality required to teach in urban schools. This factor was particularly salient in the case of Katlyn. All of these three factors appeared to have negative influences on the decision to teach in urban settings.

Possibility to teach in urban settings. Four interview participants expressed that teaching in urban schools was a possibility they would consider. When the researcher asked whether she would teach in urban schools, Jenna first hesitated. When the researcher asked if it could be a possibility, she responded, "It is definitely a possibility I would consider."

Jenna's decision of being a teacher was significantly influenced by her intrinsic career value such as love of school and teachers, and always wanting to teach. She conveyed social utility value including interest in working with children and desire to

help children. Jenna was also motivated by social influence, for example, comments of the staff in a child development center that she would be a good teacher.

Jenna perceived teaching as a career that is time and emotionally demanding. She was aware that teaching was not the best-paid job. However, salary was not a concern for her. When it came to where she wanted to teach, she was more concerned about the involvement of the principal and staff within the school district, the neighborhood where she could find a suitable place within a reasonable price to stay, and the resources that the school had. Jenna recognized the cultural differences in urban classrooms and suggested teachers should make use of the different cultural experience as learning resources.

Jenna was confident of her ability of becoming a good classroom teacher. Nonetheless, she was not very confident of her ability to live in a city. She liked the city because of the abundant resources available. Yet she was not comfortable with the living environment. Jenna asserted, "I don't think every teacher can work in urban setting at all. They could be great teachers in the rural. But if you put them in urban, they would fall on their face. I think it is a personality thing."

Stephanie was still deciding when asked where she intended to teach. She said there was a point to consider if teaching in urban settings was something she would like to do after the experience of the previous week. She explained,

> I'd like to look at different communities in New York, or California. But I want to live in a city out of Pennsylvania. I grew up in the country and small town. When I go to visit cities, I am attracted to them. I feel very comfortable in the city. At the same time, I think it is new, so it's very intriguing to me. It's like, "Oh, I can live there."

Stephanie chose the teaching profession due to strong influences of her dad, who was a teacher and principal, as well as her teachers. She enjoyed helping teachers in the classroom even when she was elementary school. Having been a struggling student on learning support since she was young, Stephanie wanted to help other students. She said she felt like "a representative of the students" because she had been there.

Stephanie perceived teaching as a very demanding job, which was a lot less paid compared to other careers. However, she was willing to make less if she could help people and students, and make difference in someone's life. Even with that in mind, Stephanie was concerned about such issues as lack of support from parents in urban schools, poor physical school condition, and safety. Teaching in such setting, she believed, requires a strong personality. She commented,

> I think teaching in general, whether in urban settings or any other settings, takes a special person. I don't think anyone can go and teach. To teach in urban settings, you definitely need to have a strong personality. If pre-service teachers want to work in urban settings, they really need to value themselves just because if I am a very timid and shy person, I would be terrified.

Stephanie was confident of her teaching ability, even though she had not had methods courses. She said she was an out-going person. She felt confident in the classroom and felt like that was where she was supposed to be.

Dana was another participant who thought there was great possibility to teach in urban settings. She told the researcher if she could find a job where she could teach and coach, and a place where she could live, she would rather be away from her family in

suburbia. Dana said her top considerations for a job search would be given to location, neighborhood, school conditions, and what grade to teach. She stated,

> I definitely won't work in rural area. I don't know (why). It just does not grab my attention at all. Suburbs, I feel like I can work there. I can work in urban, just depending on how healthy the neighborhood is. I am not looking for a rich neighborhood. Nowhere is perfect. There is going to be fight; and there is going to be crime. But I don't want to be in a neighborhood where there is fight every five minutes.

Dana's decision to be a teacher was influenced by a combination of several factors, including positive influence of her English teachers and her parents, love of English, desire to make learning experience enjoyable to others, and touch the life of student and make impact.

Dana perceived teaching as an underpaid job. But she thought teachers had good benefits; they got the summer off; and they enjoy the satisfaction of witnessing children's success. Dana thought teaching in an urban setting was very demanding. In addition to the safety issue, urban education was facing such problems as poverty and lack of parent involvement. Overall, Dana believed there was more work in urban schools, and in order to teach in urban settings, one needed a different personality.

Dana was very confident of her teaching ability. She felt comfortable in the classroom. She could communicate well with parents and students in non-urban or urban settings. She had a confident personality. Dana said she felt like she could live in a city, though she preferred New York to Philadelphia.

Like the other three participants, Sarah was not sure where she wanted to teach at the time when she was interviewed. She used to be concerned about the location. After her experience in the urban field experience, Sarah expressed that that was no longer a concern to her, and she could teach anywhere as long as she got a job. She said her top three considerations in a job search would be whether the school needed her, strong administration and supportive teachers, as well as benefits.

Social influence from her sister and teachers was a very important factor for Sarah's decision to teach. Other factors such as love of English, desire to help people see their potential and prepare children for future also had important influences on Sarah's choice of a teaching career.

Sarah perceived teaching as demanding but rewarding. She exclaimed that nothing could be better than seeing people succeed, and knowing that your help had impact on them. Compared to external reward, Sarah asserted she would rather enjoy teaching every day while making less money than making a lot of money but having a job she hated. Although she had some experience working with ELLs, Sarah felt the need to improve her teaching ability.

When asked about her attitude toward city, Sarah said a city offers more opportunities and she really liked it. However, she felt it was scary to drive in Philadelphia. She thought that it could be problem for her to find a place to live if she got a job there. She later commented that if one wanted to be a good teacher in urban schools, they would have to want to live there.

Common to these four participants' decision of teaching were the influences of social influence, intrinsic career value, and social utility value. However, there is no clear

indication that these motivation factors were related to their intention to teach in urban settings. The participants expressed several concerns when they considered where they want to teach, including safe neighborhood, strong administrative support, and good benefits. Another interesting pattern was the participants' attitude toward cities. On the one hand, they were positive about the opportunity and resources in a city; on the other hand, they were unsure about whether they could find a comfortable place with reasonable price to live there.

Strong intention to teach in urban settings. The remaining four interview participants showed very strong intention to teach in urban settings. When asked about where she wanted to teach after she finished the current program, Lindsey answered that she wanted to start from urban schools, though she was not interested in Philadelphia. She said, "I'd like to do the program called Teach for America. It can be for two years. You live and teach in a city." However, later in the interview, when the researcher asked whether she liked city, Lindsey hesitated and said, "Um… I don't want to live in the city. But I will live in the outskirt and work in city."

Lindsey always wanted to be a teacher and started to consider it as a career in high school after she had some experience working with children in a summer camp. She expected to make difference in children's lives, particularly children in disadvantages, and be a mentor to them. Lindsey was very confident of her teaching ability, particularly after having the current experience in urban schools.

Lindsey perceived teaching as very difficult and demanding, but underpaid profession. She noticed her students probably did not have quality bedding or hygiene at home; and some might not even have parents. She was aware of the responsibility of

teachers in school, which was a safe place for children to stay, given the violence in the communities. However, she expressed that she would rather do something she loved and got paid a little less than doing something she did not like and got paid more.

Vickie was very certain of where she wanted to teach. She asserted,

I definitely want to teach in urban settings. Every morning, I like to get up and meet my students, even when I have only been with them for several days. I see they need me. I got different reward. You have different responsibility in an urban setting.

When asked about what she would consider when she searched for a job, she listed such factors as administration of the building, community in the school, and resources at the school. She was also concerned about her family, who, she was afraid, would not be happy with her choice.

Although Vickie was always influenced by teachers and family members who were teachers, and she always liked teaching, she did not make up her mind to be a teacher until her mission trip to the Dominican Republic. The experience of working with children in poverty offered the opportunity for her to help people and to taste the reward that she was not able to get from theater and dancing. Vickie was very confident of her teaching ability. Vickie saw herself as a strong leader, and eventually she wanted to be a principal. When asked whether teaching in urban schools required different knowledge and skills, she stated,

I think you need different approaches when you deal with different cultures. You should want to be there, more than anything else. You cannot teach in an urban school, not want to be there. That's the problem. Some of the teachers teach there

just because they were hired for the job. It is not (only) a job. Children need you. I don't think different knowledge would help.

Like Lindsey, Vickie perceived teaching as a profession that demanded investment of time, effort, and emotion. She understood that, as a teacher, she would never be able to make much money. However, Vickie indicated that she was happy to be a teacher and to help people. To her, that is more important than making money. As for the attitude toward city, Vickie showed passion to both country and city. She explained,

I like the country because I am a family person. But I don't like people knowing. You know what I mean? Everyone knows what's happened. I always wanted to move to be New York city to be an actress. And I am always a city person.

Delena was another participant who always wanted to be in a city. She grew up in a very small town area. When she was young, She always wanted to live in a city, to explore, and to try different things. Delena described her intention to teach in urban schools.

Last summer, I was watching a program on HBO. It was a high school in Baltimore, an urban school district. It touched me. I felt so bad for the children. So I said I want to teach in an urban district. My parents got so nervous and said, "But it is so dangerous." But that's where I want to teach.

Delena's intention to teach in urban schools was assured through the current urban field experience. She decided she was going to student teach in Philadelphia. She said location would be one of her concerns. She would like to teach in a good school, but was open to where teachers were most needed. School leadership and community were

two other considerations for Delena regarding where she wanted to teach. Eventually, she wanted to be a principal.

Delena decided to pursue a teaching career due to the influence of the teachers she had, her love of school and interest in teaching, as well as desire to have impact on someone's life. She perceived teaching as a challenging job that required certain personality. She believed urban teachers play "a whole packet" of roles, including the role of teacher, mother, and friend. Delena was a bit worried about her teaching ability. She saw teachers yelling at students. She did not want to do that, but did not know many strategies of approaching students other than "talking" to them. Luckily, Delena found it was easy for her to connect with the children in the school she was currently placed. She told the researcher that the students "see me as coming from them."

Tory was the only male participant who showed intention to teach in urban schools. He told the researcher that he definitely wanted to teach in Philadelphia. As described in the previously, Tory experienced a long struggle before he finally decided to switch his major from business administration to teacher education. Although he wanted to be a teacher under the influence of his brother and his teachers, the idea that teachers were poorly paid, together with her personal goal of "getting much from the opportunity (of education)" deterred him from pursuing a teaching career. Tory was very happy when he got to know how much teachers were generally paid since he could follow his calling of helping kids who were like him, while at the same time, fulfilling his personal attainment.

Tory perceived teaching as an extremely challenging and demanding career, particularly in urban settings. Speaking from his own education experience in urban

schools, Tory repeatedly emphasized that teaching in urban schools was not for everyone. He asserted,

> I believe it takes a special kind of person to teach in urban setting. Number 1, you have to feel comfortable to teach urban students. A lot of times in other areas, kids are raised with the notion, Ok, respect others, respect my teacher. So it is a little easier to manage. If you come to a classroom, get ready for class, students are waiting for you to present. You present, and it was wonderful. But urban classrooms are not like that. Urban school is not for everyone. It is not, it is not, it is not. People have to be willing to wear more than one hat. You will have to be willing to work as more than a teacher. Your teaching goes past the classroom so often. You are going to have to do more.

Overall, helping children in disadvantages was a salient factor related to all of the four participants who indicated strong intention to teach in urban settings. Other factors such as school leadership, neighborhood or communities, school resources, and strong personality remained as concerns at different levels to different participants. Wanting to be in the city and willing to work more than a teacher are two other factors mentioned by Vickie and Tory, who expressed the firmest intention to teach in urban settings.

In summary, consistent with the results of the quantitative data analysis, social utility value seemed to be positively related to the intention to teach in urban schools, whereas personal utility value was negatively related. Other factors that seemed to be related to the intention, but were not mentioned in the quantitative data, included school leadership, working conditions, and living environment.

Research Question #4

The fourth research question is "What are pre-service teachers' motivations to participate in a short-term urban field experience?"

The results of the quantitative data analysis showed that seven factors were rated as important influences on decision to participate in the short-term urban field experience. They were desire to improve multicultural competencies, challenge of urban education, social utility values of teaching, positive social influence, testing the possibility of working in urban areas, expertise of teaching in urban schools, and ability of teaching in urban settings. All of these seven factors scored above 5 on the 7-point scale. Five other factors were rated above the midpoint, indicating less important influences on the decision of participation. Those five factors included intention to teach in urban settings, salary and social status, personal utility values, negative social influence, and love of cities. Prior urban learning and teaching experiences was the only factor that was rated below the midpoint, perceived as the least important influences on the decision to participate.

Five themes emerged relating to the motivation for participating in the urban field experience. Each of the themes will be presented and explained pertaining to the research question.

Check the possibility to teach in urban settings. Consistent with the results of quantitative data analysis, checking the possibility to teach in urban settings was perceived as an important influence on the interview participants' decision to come to the urban field experience. Jenna recalled her reaction after attending a recruitment meeting.

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I don't know if I can handle that. So I thought, "You know what, I need to take a risk. Maybe that's where I want to teach if I like urban schools. I always wanted to work in a rural or suburban school, and never considered urban schools. I wanted to check that out. I wanted to know what they were like, whether they were different, or something like that. I wanted to have another option.

Finding out whether teaching in urban settings is a possibility was also the motivation for Stephanie to come to the urban field experience. She told the researcher,

I came here basically to find out whether I wanted to teach in urban settings or not. I had a lot of experiences with my dad's school. It's a very rural school. I feel like that I could get a job there if I wanted to. But at the same time, I want to be challenged. So I just wanted to take the chance to work in this setting, and to see if I could make a career out of this.

Sara participated in the field experience for the same reason. She explained,

I wanted to come and find out if this is the place I would like to teach. I did not want to think that I could only teach in a small area. But I have to see what it is like to teach in urban area, and what the kids are like, and how it is like to live in different types of places.

All three participants also conveyed other factors that influenced their decision to participate in the urban field experience. However, desire to find out whether they could teach in urban settings was the primary reason for their participation.

Get more teaching experience. Another theme was to get more experience. Unlike the participants who wanted to check our whether they could teach in urban settings, those who came for experience because they need more teaching experience, or

they are required to have some teaching experience in urban schools by the program they attended. Tory came simply for more teaching experience. He said, "Coming to the urban seminar is not because I don't know where I want to teach. It is more about getting more experience." Kevin emphasized that he came to the field experience with no interest in teaching in urban settings. "I have to have urban student teaching somewhere. That was the reason why I did this." Jack was another participant who participated in the urban field experience for the experience. He stated,

I had coached and worked in suburban areas. I lived in rural Pennsylvania and I went to school in an urban setting a few times. But I was lacking the teaching experience in urban settings. So basically I came to get the experience.

Similar to Jack, Lindsey was also interested in getting teaching experience in different cultural settings. She commented,

I feel like urban schools have more of a variety of students. And they have all kinds education problems to experience, not necessarily racial or behavior problems. I know what's going on in the rural; I don't know what's going on in the city which is only 40 minutes away from me!

Lindsey, however, was more specific about what she expected to achieve through the two-week experience. She told the researcher that she wanted to improve classroom management. She also wanted to see "what it is like to deal with children whose cultural backgrounds are different," and "how different home cultural values are related with school because you cannot simply assume there is a connection between home and school."

Social influence. Social influence emerged as an important factor contributing to the decision of participating in the urban field experience. One sources of social influence was encouragement from family members. Sarah related, "My sister has done it. She said it was amazing. She said it was a one-chance experience. If you do not take it, you probably would be regretful."

Social influence was also demonstrated through recommendation of the university faculty members. Delena said that was why she decided to participate. She recalled, "I went to my student teacher advisor about my schedule in summer and fall. He gave me some information about the Philly program and told me it was an experience that was worth getting."

Recruiting meetings organized at the participating universities also had positive influence on the decision of participation. Kevin described,

I went to the first meeting at the very last minute. Someone I had a class with in the fall was planning to go almost all school year. I bumped into her a day or two before the meeting and went to the meeting with her. There was a meeting in the fall about it, but this was the first serious meeting in January or early February. I went just to hear them out and it sounded like a great time. When I looked at the itinerary, it looked like it would be a lot of fun.

Other forms of recruitment also had positive influence on the participants' decision to come to the urban seminar. Jenna said she "listened to a presentation, in one of my classes about it. I thought trying that would be cool." Katlyn recalled,

I got an email in January (about the urban seminar) and I was very interested. Susana, my roommate who also came, we looked at it and found it pretty

interesting. We went to Indiana and it is very small school. So we thought, "Let's

try it."

It is worth noting that participants experienced some social dissuasion, though

they did not perceive it as important to their decision. Katlyn said when she called her

parents she was participating in a field experience in inner city Philadelphia, she gave

them a "heart attack". She depicted, "They said, 'No way.' But we showed them the

pamphlet. They researched the program, talked to the professors and students who had

been to the program. Finally, I got approval from my parents."

Help children in disadvantage. Even though several interview participants

mentioned that they wanted to teach in urban settings because they wanted to help the

children, Lindsey was the only one who said this was a reason for her decision to

participate in the urban field experience. She told the researcher,

A second reason is I wanted to help the children who live in disadvantage. I got to

know the lives of children in poor areas in rural Mexico on a mission trip. I am

drawn to them. They liked me, and I was able to connect to them, even though I

am a white girl from suburbia. I wanted to help them.

Lindsey's decision to participate was, therefore, the result of several factors

interacting with each other. She wanted to get experience in urban settings, learning more

about urban schools, students, and parents and being "cultured". She wanted to improve

classroom management. Most importantly, she wanted to help urban children who were

socially disadvantaged.

Get three credits in a relatively short time. Although not shared by other participants in the interviews, to get credits within a relatively short time was a personal goal that influenced the decision to come to the urban field experience. Kevin confessed,

Honestly, to start, it was selfish. It was to get three credits out of the way in two weeks. I thought even if it was awful, it was only two weeks. I could suck it up and get my three credits and that would be the worst that would happen.

This reason for participating echoed Kevin's initial motivation for pursuing a teacher career, pivoting around his goal of finding a job in a location close to family and friends, as well as securing benefits of public retirement.

Generally, the findings of qualitative data were consistent with the results of quantitative data. Factors such as checking out the possibility to teach in urban settings and getting more teaching experience were perceived as important influences on the decision to participate in the urban field experience. Likewise, social utility value (help children in disadvantage) and personal utility value (get the credits within short time duration) were considered as less important to the decision of participation. However, unlike the quantitative data, the interview data indicated that social influence was an important factor influencing the decision to participate in the urban field experience.

Research Question #7

The seventh research question is "To what extent does a short-term urban field experience influence pre-service teachers' motivations for choosing a teaching career?"

Results of the quantitative data analysis showed the short-term urban field experience did have significant effect on several factors influencing the choice of a teaching career. After the experience, participants perceived such factors as ability of teaching, intrinsic career values, time with family, job transferability, enhance social equity, social influence, difficulty of

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teaching, and satisfaction with the choice of teaching as more important influences on their choice. They also saw social dissuasion as having less important influence after the urban field experience. Analysis of the higher-order factors found a slight increase in the perception of importance regarding the influence of personal utility value and task demand on the decision to teach.

In order to answer the research question, qualitative data were also analyzed, through which themes were searched within the domain of Impact of the urban field experience. Three themes emerged from the qualitative data and will be presented pertaining to research question 7.

Stronger beliefs in teaching ability. Quantitative data analysis results indicated that after the urban field experience, participants in the current study perceived teaching ability as more important to their choice of a teaching career, though the effect of this increase was very small. Having stronger beliefs in their teaching ability was a salient theme shared by the interview participants regarding the impact of the urban field experience. Lindsey compared her perception of her teaching ability before and after the experience. She said,

> Before I came to Philadelphia, on the scale of 10, I would say 70% confidence. Now with the experience in urban school in the past a week and half, I rate my confidence 9. My goal was to improve classroom management. Now that I have been in urban school, I have seen that done a lot, and I can have a lot more control of the kids in my classroom.

Other participants experienced similar changes in their teaching ability. When asked about what she had benefited from the urban field experience, Stephanie responded,

Definitely classroom management. I never had to deal with the class that the students are not listening when I taught up front. I mean the schools I have been to thus far, when the teachers are up front, the students are listening. If they are not listening, when I tried, they will be listening. But when I taught on Friday, it took me numerous times to ask them to be quiet. And when they were quiet, there were still a few that would not stop talking. My teacher use a method that she gave them three warning. After the third warning, they have to leave the room.

For Vickie, the change went beyond classroom management, to such skills of making connection with students, and use of teacher language. She described how she learned from her co-operating teacher.

Well, I definitely have learned how to bond with the children, being caring, and being authoritative. At first, I did not know how. Then I observed my cooperating teacher. She raised her voice a lot. But I noticed that children do respect her. So I followed her a little bit. Now I am able to give attention to an individual child, as well as the whole class. Also, I think my teacher language improved. I used to say "uh", "sometimes", or "you guys". Now I am trying not to do that, even though they use them.

Getting more confident about her teaching ability through urban classroom experience, particularly by observing her cooperating teacher was also what Sarah benefited from the urban field experience. She told the researcher,

I think I am more confident of my teaching, especially after being here and learning a lot of things that would definitely work. My co-operating teacher I am having now is one of the best teachers I have ever seen. He is amazing. The

classroom is structured. The kids respect him and he respects them. The kids

couldn't be in a better classroom. They listen; they do need to hold the structure;

but they are having fun.

Some cooperating teachers were not so positive role models.   However,

participants learned from the experience just the same. Kevin depicted his cooperating

teacher as follows.

She hasn't taught anything yet, in the whole week. The way she goes about it is

giving a worksheet that has directions. You find the answers in your text, she goes

over them, and then you take a test on it. But, it's great for me actually because it

shows me what doesn't work and what not to do.

In brief, qualitative data analysis basically supported the results of quantitative

data. Being in the urban classroom and having some hands-on experience with the

students offered the participants opportunities to improve their teaching ability.

Observing the cooperating teachers also contribute to the growth of participants' teaching

ability, although some cooperating teachers were not so positive teacher figures

themselves.

Changed perception of teaching in urban settings. Quantitative data of the

current study showed that participants perceive teaching in urban settings as more

important influences on their decision to teach, though the change was small in effect size.

There was not explicit evidence that interview participants considered the perception of

teaching in urban settings as more, or less important to their choice of a teaching career.

Although they expressed a series of changed views about urban schools, students, and

teachers before and after the experience, some of the changes were mixed.

Generally, through the short-term urban field experience, interview participants learned the conditions in urban schools were not as bad as they expected. Jenna so stated,

I expected there would be no supply, or minimum resources in the classroom, pencils and papers will be pretty much it. I kind of expected the worst. I expected the neighborhood to be down, not appealing. I have got to say I threw them all, on most part. Within the school itself, they have so much more supplies than I expected. The books, unbelievable. Teachers had probably hundreds some books for kids to read. And there are posters… they have completely put my prior projection on urban schools out. The neighborhood is kind of I expected. But the school was not.

However, Jenna also noticed that the school at which she was working used a lot more discipline programs. She said, "There are a lot more suspensions here. The principal where I am in right now said he suspended a lot of kindergartener and first graders." Lindsey experienced similar changes in her views of urban schools and students. She told the researchers,

I thought they didn't have much materials or funding. I found it is completely the opposite. The kids in my school have better supplies than I had in my elementary school. They have textbook, new desks, computers ... everything.

Kevin, however, found the working conditions in the school he was place not so satisfactory. He described,

They don't have technology as we do. They have 4 desk computers. They are a little old. But they are I-Mac. They worked. I haven't seen overhead projectors. I think they have them, but they are probably somewhere, not in every room.

Similarly, some participants changed their negative perception of urban students and teachers, while others' perception remained negative. Vickie saw the positive side of urban schools, but at the same time, she also noticed the things that were not so positive. She told the researcher,

I feel that urban schools are more family oriented. The students in general really live together, even in different classes. And you are able to work closely with all the teachers, and see what is good for the child. But at the same time, I heard a lot of negative things too at the urban school – teachers talking about students, and passed all the negative activities. It's really frustrating.

Lindsey found the teachers were just the same as she expected, however, the students were not. She said,

The teachers are pretty much as I expected. I expected some of them to yell, and drill. The kids, I was pleasantly surprised. I expected all of them to poorly behave. When I came to the Urban Seminar, I found exactly the opposite.

Kevin thought the teachers in his school were horrible. He observed, "They yelled at students. … Teacher to teacher, from what I have seen, they are very sore on each other…. The teachers are bitter at the principal sometimes, but face to face, they are fine." Kevin said that his cooperating teacher was there "pretty much for pay check".

Sarah noticed not every urban seminar participant got something positive from the experience. She believed it was a matter of attitude. She commented,

Maybe they do not to accept the change. Maybe they want to live in a small town. They don't want to admit it is OK here. They can be good teachers there because they want to live there. I heard some students said, "I don't want to live here." "I

hate it here." I think if you have a positive attitude rather than a negative one, you would see more things that are positive.

Based on the controversial reports of the interview participants, it is not possible to conclude with confidence whether the changed perception of teaching in urban settings meant that it was regarded as a more important influence on participants' decision to teach. It seemed that the experience was effective in providing a more realistic view of teaching in urban schools, more than anything else.

Increased satisfaction. According to the quantitative data, satisfaction with the choice of a teaching career was perceived as a more important influence on the choice of a teaching career after the urban field experience. Qualitative data showed similar results. Interview participants described the satisfaction they experienced to different extent, in the form of making connections with the students, gaining respect, and making a difference within a short time period. Jack was very excited when he talked about the connection he was able to make with his students. He said,

In a short time, I have huge connections with the kids. There are quite a few that have become attached. And I have known the names of the kids in my class already, 31 of them. I really got to know them and interact with them. They really like embracing me. They ask how long are you going to stay, are you coming back. So I was surprised how we hit it off.

For Delena, the experience allowed her to enjoy connecting with Black students for the first time in the classroom. She found her students identified with her and regarded her as a role model. She stated,

I think it is easier to connect with them (kids here in Philly). Even though I used to work with white children who have different backgrounds, sometimes I felt like I am an outsider a little bit. Most of the kids here are actually Hispanic. I feel I can connect with them. I think here students see me as coming from them. Sometimes kids ask me, "Oh, you go to college?!" I would say, "Yeah. If you keep doing well at school, you will go to college too."

Katlyn was placed in a middle school, working with students who were primarily decedents of Puerto Ricans. She was not very confident if she could gain respect from her students. When that happened, she was very pleased. She narrated,

One time a girl came into the classroom. I had her seat, and she wanted to sit there. I thought to myself, "You know what? I don't care. I can move." But another student came and said, "No, you are a student teacher. This is a student. You have the seat here. She can move." It was incredible that they looked after me like that.

In spite of the short time duration, Stephanie experienced the internal reward of teaching, a factor that drove her to the teaching profession. Within a few days, several students had become attached to her, and that she was able to made difference in their learning. She shared,

I have a couple of students who have clung to me. If I am staying there, they want to be beside me. The teacher said she never got them to do work. But when I am there, they would sit there, and we would do work the entire time. If I leave, they would stop. So I can say that for that a few students, I have made differences in the couple of days when I was there. That's really rewarding to see.

Overall, the qualitative data showed that the urban field experience did have some impact on the interview participants in spite of the short time period. After their experience in the urban classroom and community, participants gained more confidence of their teaching ability; they acquired realistic knowledge about teaching in urban settings; they also experienced more satisfaction with the choice of a teaching career. Another impact of the experience on participants' intention to teach in urban settings will be discussed separately to answer research question 8.

Research Question #8

The eighth question in the current study is "To what extent does a short-term urban field experience influence pre-service teachers' intention to teach in urban settings?" Quantitative data analysis indicated that participants were more likely to teach in urban settings after they completed the urban field experience. The increase was statistically significant, with medium effect size.

Qualitative data analysis found Kevin, Jenna, and Sarah were the only interview participants who explicitly described the changes in their intention to teach in urban settings before and after the experience. Kevin said he came to the urban seminar, not wanting to teach in urban schools at all. After the experience, he wanted to come in to make difference though he was still very concerned about the working conditions at urban schools. As for Jenna, the expectation to participate in the urban seminar was to find out whether she could or wanted to teach in urban settings. After the experience, Jenna told the researcher,

> If I got an offer of an urban job before this, I would turn it down. If I never
>
> experienced this – never lived in the city, never met these kids, no. I didn't think

I would fit in the school, I didn't think I would fit in the community. But now, I have changed my view of urban schools. I also changed my opinion to my option for working in urban schools. If I have the opportunity, I will serious consider taking a job here.

Testing the possibility to teach in urban settings was also the primary reason for Sarah to participate in the urban field experience. After the experience, Sarah said that teaching in urban schools was definitely an option. She explained,

When I first came here, I was afraid to be outside. I was afraid to do this, I was afraid to do that because I had all these norms. I used to think location would be the top consideration if I had to take a teaching job. But now it is really not anymore. I think I can teach anywhere as long as I get a job.

In order to gain in-depth understanding, the researcher compared other participants' expectations and values for participating in the urban seminar with the intention they conveyed to teach or not to teach in urban settings for implicit evidence. The findings presented a very inconclusive picture. While participants indicated change in teaching ability, perception of teaching in urban schools, and satisfaction with their choice of a teaching career, they also expressed great concern about living in a city. Stephanie came to check out whether she could teach in urban settings. After the experience, she felt she had the ability, but she still could not make the decision. She explained,

My instinct tells me, "Stay here. Go and teach in my dad's school. I grew up in the school. I am familiar with everything. A lot of teachers that I had are still there. So I know I have a lot of mentors available for me and that would be able to help

me. But I feel the draw between there and urban. It's kind of like I want to get out of my comfort zone, but at the same time, I always know I would fall back on that.

It seemed that the urban field experience assured Stephanie of her confidence about teaching ability, but it did not help her much in leaving her comfort zone.

Lindsey was another participant who had the intention to find out what it was like to teach urban children. During the interview, she expressed change in her view of teaching in urban settings as well as appreciation of cultural diversity in urban schools. Jenna sounds certain about her intention to teach in urban settings. She said would start from urban schools, through the program of Teach for America, teaching and living in a city. However, she also indicated she did not want to live in a city, but would live in the outskirts and work in the city. In short, the urban field experience helped Lindsey believe that she could teach in urban schools. Nonetheless, it appeared ineffective in convincing her of the possibility of living in a city.

The concern about living in a city was shared by several other participants as well. For example, when interviewed, he was undecided yet as for where to teach. In the meanwhile, he showed reluctance to teach in urban settings when he told the researcher,

I think even if I don't teach in an urban setting, summer is free. I can even volunteer to teach and tutor during summer. I can have my rural or suburban job, and then I could travel to or live in a major city in summer and work with the kids that way.

Delena decided to student teach in Philadelphia. Although she said she would be open to schools that were most needed, she indicated she wanted to "teach in a good school." Consistently, to Delena, and several other participants including Dana and Jenna,

"healthy neighborhood" or "safe community" was among the top consideration of the place where they wanted to teach.

According to what Vickie suggested that in order to be an effective teacher in urban settings, "you should want to be there, more than anything else." Therefore, a concern about whether they would be able to live in a city may deter individuals from taking a job there. The short-term urban field experience did not seem to have had much effect in changing participants' concerns in this respect.

To sum up, the short-term urban field experience seemed to have had some impact on changing some participants' intention to teach in urban settings. However, to majority other participants, the evidence was not sufficient for any possible conclusion.

Summary

This chapter presented the results of quantitative and qualitative data analyses. Quantitative data provided evidence for relatively weak correlations between the participants' intention to teach in urban settings and such motivation factors as social utility value, satisfaction of the choice, teaching ability, and perceived difficulty of teaching, at a statistically significant level. In addition, participants underwent significant changes in some of their entering motivation for choosing a teaching career and intention to teach in urban schools after they completed the short-term urban field experience. In general, participants reported intrinsic career value and social influence as more important influences on the decision to teach, and social dissuasion as less important influences at the end of the urban seminar compared to prior to it.

Consistent with the quantitative data, social utility value and perceived difficulty of teaching were found correlated with the interview participants' intention to teach or not to teach in urban settings. In the meanwhile, unlike quantitative data, qualitative data

analysis found that the desire to be close to family, concerns about neighborhood safety, willingness to live in city, and concerns about school leadership and collegial support seemed to correlate with participants' choice of where to teach. As for the impact of the urban field experience on participants' change in motivation for becoming a teacher, interview participants indicated increase in perceived teaching ability, perception of teaching in urban settings, and satisfaction with the choice after the urban seminar. There was no sufficient evidence, however, for a conclusion about whether the urban field experience had some impact on the interview participants' intention to teach or not to teach in urban settings.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

The purpose of the study was to explore whether pre-service teachers' motivations for entering the teaching profession were related to their intention to teach, or not to teach in urban settings; and to examine if their entry motivations for teaching and the intention to teach in urban setting would change over a short-term urban field experience. In order to answer the eight research questions related to the purpose, both quantitative and qualitative research methods were applied in the current study. Quantitative data were collected from a pre- and post-survey administered to the experimental group, teacher education students participating in a short-term urban field experience in a large urban school district, using the FIT-Choice Scale and the research-developed questionnaire. The other source of quantitative data was a survey among the control group, teacher education students at the researcher's home university who did not participate in the urban field experience, using the FIT-Choice Scale only. Follow-up interviews were conducted, which collected in-depth information from selective number of urban field experience participants.

Thus far, Chapter 1 described the background of the study; Chapter 2 reviewed the literature related; Chapter 3 explained the research methodology; and Chapter 4 presented the results of both quantitative and qualitative data analyses. The last chapter, Chapter 5, will consist of four sections. Section 1 discusses the findings pertaining to each of the research questions, including the quantitative and qualitative results. Section 2 interprets the implications of the findings. Section 3 provides some recommendations. Finally, section 4 draws a conclusion and ends the chapter as well as the study.

Discussion

The study has so far profiled factors influencing pre-service teachers' choice of a teaching career, the relationship between these initial motivation factors and their intention to teach or not to teach in urban schools, as well as the change in their motivations and intention over a short-term urban field experience. In this section, the findings, both quantitative and qualitative, will be discussed according to each of the research questions.

Research Question #1

The first research question asked what motivates pre-service teachers to choose the teaching career. Quantitative data showed that the pre-service teachers chose to teach more likely because of such factors as *teaching ability*, *social utility value*, *intrinsic career value*, *prior teaching and learning experience*, and *perceived task demand of teaching*, whereas less likely by *perceived task return of teaching*, *personal utility value*, and *social influence*. The data also indicated that pre-service teachers in the control group reported experiencing more important influences from *intrinsic career value*, *personal utility value* (*job security* and *time with family*), *previous teaching and learning experience*, and *perceived task return of teaching* (*status of teachers* and *salary*). To the contrary, participants in the experimental group reported having more important influences from such factors as *work with children*, *perceived difficulty of teaching*, *social dissuasion*, and *fallback career*.

Qualitative data analysis identified motivation factors similar to that of quantitative data. However, the results suggested that different factors seemed to play different roles in participants' decision of a teaching career. In addition to *intrinsic career*

value, *social utility value*, and *prior experience working with children*, pre-service teachers interviewed cited *social influence* as one of the most important factors for their decision to teach. While *personal utility value* and *task return of teaching* were not considered as important influences on most interview participants, they were the major reason for the decision of one participant. Other factors, including *teaching ability*, *perceived task demand of teaching*, were not mentioned as the reasons that drove the participants to teaching. Nonetheless, those factors seemed to have mediated the participants' career choice.

Results of the quantitative data generally confirmed the findings of prior research. Pre-service teachers in the present study indicated that the factors of *shape the future of children*, *make social contribution*, *work with children*, *teaching ability*, *prior teaching and learning experience*, and *intrinsic value* were important motivations for choosing a teaching career (Farkas et al., 2000; Jarvis & Woodrow, 2005; Reif & Warring, 2002; Singclair, Dowson, & McInerney, 2006). To the contrary, *social influence*, *social dissuasion*, *social status*, *salary*, *time with family*, and *fallback career* were considered less important to the choice of teaching career (Watt & Richardson, 2006, 2007).

Participants in the current study perceived teaching as a highly demanding career with low return. According to Watt and Richardson (2007), the difference between task demand and task return was related to component of cost in Eccles et al.'s (1983) expectancy-value theory, or what one had to give up to a particular task. Based on the theory, individuals may be discouraged from teaching if they perceive teaching as highly demanding. However, consistent with Watt and Richardson (2007), in the current study, factors of *task demand*, *expertise*, and *difficulty*, were positively related with the

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satisfaction of the choice (the indicator used to predict the choice in Watt and Richardson's study) at a statistically significant level (r_e =0.23, r_d= 0.29, p < .01) (See Table 12). The researchers interpreted such results as that teaching affords the opportunity for realization of personal and social values, rewards that are not always inherent in other occupations. This is consistent with what Herzberg's (1959) Motivation-Hygiene theory suggested that, as a motivator, *work itself*, creativity or challenge, could give individuals tremendous satisfaction. Present analyses, however, indicated that the challenge of teaching could be a double-edged sword, as it may originate from such possible sources as requirement for knowledge and skills, or the working conditions.

It is interesting to note that, unlike the findings in Watt and Richardson's study, in which participants reported experiencing stronger *social dissuasion* than *social influence*, *social influence* was rated slightly higher than *social dissuasion* in the current study (4.36 vs. 4.10). In addition, although quantitative data showed that *social influence* was considered a less important influence on the decision to teach (rated below the median), results of qualitative analysis indicated it had very important influence on the interview participants. This echoed earlier research findings that previous teachers and family were influences on the choice of a teaching career (Miller & Endo, 2005; Santoli, 2009; Stroud et al., 2000; Yonger et al., 2004). Moreover, consistent with Su's study (1996), minority participants in the interview group were more likely to report experiencing strong resistance from families and relatives compared to the White participants.

The present study found some systematic differences between the experimental group and control groups. The differences indicated that pre-service teachers in the control group were more likely to choose a teaching career due to such factors as *job*

security, *time with family*, status of teachers, and *salary*. That was probably related to the decision of not to participate in the urban field experience, as it might be perceived as not being able to provide the opportunity to realize such personal goals. Participants in the experimental group, on the other hand, were more likely to choose a teaching career because of their desire to *work with children* and *difficulty of teaching*. Their decision to participate in the urban field experience might be related to the possibility that the experience provided them opportunity for actualizing their social value, as well as offering challenges that were attractive to them. Interestingly, the experimental group reported significantly stronger experiences of *social dissuasion* from teaching, whereas the control group reported stronger *intrinsic career value*. All of the differences between the two groups may be due to self-selection.

In addition, qualitative data showed some evidence that time with family, salary, and benefits were more likely to be attractive to non-traditional teacher education students as previous studies suggested (Milanoski, 2003; Reif and Warring, 2002; Robinson-Pan, 2003). Moreover, similar to what King (1993) and Su (1996) found, minority students in the interview reported that lack of respect for teachers and low salary were obstacles against the decision to teach.

In summarizing findings for the first research question, pre-service teachers in the current study chose a teaching career due to their perceived ability to teach effectively, intrinsic value inherent to teaching, desires to realize personal and social values through teaching, as well as perception of teaching. The results provided some evidence for the expectancy-value theory that individual choose certain task according to their expectation to succeed and the value attached to the task itself. Also confirmed was the application of

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the expectancy-value theory in profiling pre-service teachers' motivations for choosing a teaching career in Watt and Richardson's study (2007). In spite of the different cultural backgrounds, no major difference was discovered between participants in Watt and Richardson's study and pre-service teachers in the current study regarding their motivation for becoming a teacher.

Research Question #2

The second research question asked whether there are identifiable groups of pre-service teachers, based on their motivations for choosing a teaching career and their intention to teach in urban settings. Quantitative data analysis identified two groups, Group HHH and Group HHL, based on three factors selected, namely, *social utility value*, *intrinsic career value*, and *personal utility value*. Participants in the HHH group (193) scored relatively high in all of the three factors, while participants in the HHL group (155) scored relatively high in *social utility value* and *intrinsic career value*, but relatively low in *personal utility value*.

Although pre-service teachers in Group HHH reported slightly stronger intention to teach in urban settings than those in Group HHL, the difference did not reach a statistically significant level. Consistent with the overall trend, HHH participants in the experimental group were more likely to teach in urban settings than the HHL participants. Nonetheless, HHH participants in the control group demonstrated an opposite trend by showing relatively weaker intention to teach in urban settings than their HHL peers did. Neither difference, however, was statistically significant.

It is not surprising to find that participants in Group HHH and HHL, or majority of the total sample (348 out of 443), perceived *social utility value* and *intrinsic career*

value as important influences on their decision to become a teacher. As shown in Table 9, it was the participants who scored high on these two factors that stood out of the entire sample as a cluster. This large cluster split into two smaller groups that were almost equal in size when *personal utility value* was added into the equation, indicating that while most participants had similar perception on the important of *social utility value* and *intrinsic career*, they do have different views of how *personal utility value* influence their career choice.

It was anticipated that pre-service teachers who scored relatively high in *personal utility value* would report weaker intention to teach in urban settings, while those scored relatively low would express stronger intention. The mixed trends presented in the results and insignificant statistics were not able to support such a hypothesis. This was consistent with earlier studies, which found no significant relationships between *personal utility value* and the decision of becoming a teacher, or the intention to persist in the teaching profession (Reif & Warring, 2002; Watt & Richardson, 2007, 2008).

As Lortie (1975) suggests, teaching is perceived as a profession that emphasizes service and dedication. For that reason, teachers and teacher candidates may be reluctant to admit explicitly that they decided to enter the profession for personal goals such as job security, time with family, benefits, and salary. Because the results to this research question were based on self-reported survey data only, it is reasonable to speculate that *personal utility value* might have influenced participants' career choice "more than their answers indicate" (Lortie, 1975, p30). By the same token, *social utility value* and *intrinsic career value* might not be as important influences as majority participants reported.

Research Question #3

The third research question asked about the relationship between pre-service teachers' motivations to teach and their intention to teach in urban settings. Quantitative data analysis indicated positive correlations between the *intention to teach in urban settings* and such first-order factors as *enhance social equity*, *make social contribution, work with children, shape the future of children*, *satisfaction with the choice*, *teaching ability,* and *difficulty of teaching*. All of correlations were weak, but statistically significant. *Intrinsic career value,* a factor moderately correlated with the choice of teaching, showed no significant correlation with the intention. Negative correlations were found between intention and factors of *fallback career*, *job security*, *prior teaching and learning experience*, *salary*, and *social dissuasion*. None of the correlations, however, was statistically significant.

Qualitative data showed that factors including *social influence, intrinsic career value, social utility value*, and *prior experience with children* emerged as important influences on the decision to become a teacher for almost all interview participants. However, when asked what they would consider before taking a teaching position, participants shared different concerns. Participants who reported they were undecided about where to teach reported they would be concerned about *staying close to family*, *working conditions in urban schools*, as well as *ability to teach in urban settings*. Participants who indicated a possibility of teaching in urban settings cited *neighborhood safety*, *school leadership*, and *benefits*. They also expressed a contradictory attitude toward a city: they love cities for the abundant resources and opportunities; however, they are reluctant to live in a city. Finally, while *neighborhood safety*, *school leadership*,

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and *ability to teach in urban settings* were the factors mentioned by participants who indicated a strong intention to teach in urban settings, they conveyed *strong desire to help children in disadvantage*.

According to expectancy-value theory, values and ability beliefs are the most important motivations that predict individual choices and behaviors (Eccles et al., 1983; 2005a). Based on the theory and the FIT-Choice model, intention to teach in urban settings would be predicted by individuals' belief in their own ability to teach in urban schools, beliefs in the intrinsic, social, and personal value of teaching in urban settings, as well as perceptions of teaching in urban settings. It is encouraging to find that pre-service teachers in the current study, who expressed stronger *social utility value*, *intrinsic career value*, and *teaching ability*, are also more likely to choose a teaching position in urban settings. This is consistent with what Tamir (2009) found about the motivations for graduates of elite colleges to choose teaching in urban schools.

The perception of teaching as a difficult and highly demanding profession was expected to deter people from teaching in urban settings. However, the present analyses showed that difficulty of teaching was positively related to the intention to teach in urban settings. Individuals who saw teaching as hard work that entails a heavy workload were more likely to teach in urban schools. This finding was not only contrary to what is predicted by expectancy-value theory, but also seems inconsistent with the fact that a considerable number of teachers quit teaching or change schools every year because their workload was too heavy (Johnson & Biekeland, 2003; Luekens et al., 2004). Similar prior studies did not find significant correlations between high demand and planned effort to persist and engage with teaching (Watt & Richardson, 2007).

It was hypothesized that due to the great amount of information about urban schools on mass media, *social influence* and/or *social dissuasion* would exert important influences on the choice to teach in urban settings to certain extent. The results did not support the hypothesis. No significant correlation was found between s*ocial influence* or *social dissuasion* with the intention to teach in urban settings. Interestingly, however, the factor of *prior teaching and learning experien*ces was negatively related to the intention, though the correlation was not statistically significant. It is particularly intriguing to note that the same factor was positively correlated with the decision to become a teacher at a statistically significant level (See Table 12).

The weak strength of the correlations suggests the possible existence of other factors that may contribute significantly to the intention to teach or not to teach in urban settings. Results of qualitative data analyses supported the possibility. Factors such as *staying close to family*, *working conditions, neighborhood safety*, and *school leadership* emerged as important influences on pre-service teachers' decision on where to teach. Only two of the factors, *staying close to family* and *working conditions*, have been documented in a limited number of studies on motivation as reasons for choosing to teach in urban settings (Boyd et al., 2005; Farkas et al., 2000). Other factors were frequently discussed more as causes for teacher attrition (For example, Johnson & Birkeland, 2003; Johnson et al., 2004; Lueken et al., 2004) Schneider, 2003).

Although *staying close to family* can fit into the *personal utility value* in the FIT-Choice model, it is difficult to categorize the other three factors in the model, or to explain to what extent these factors can influence the choice of teaching in urban settings. These factors are not an intrinsic part of teaching, but they are related to the conditions

under which teaching is performed. In his Two-Factor Theory, Herzberg (1959) called

such factors *hygiene factors.* The absence *of hygiene factors* causes dissatisfaction.

However, the presence of *hygiene factors* only prevented job dissatisfaction, instead of

increasing motivation. This theory probably explained why teachers cited such factors as

working conditions or *school leadership* as reasons for their leaving teaching rather than

motivations for entering it. An earlier study supported this speculation when it found that

factors like good working conditions usually appeared as an obstacle to overcome rather

than something that could motivate people to teach (Gordon, 2000).

The most unexpected finding about research question three was that no significant

correlation was found between *intrinsic value* and the intention to teach in urban settings.

It is getting increasingly interesting when the relationship is compared to the significant

correlation of *intrinsic value* with the choice of teaching (See Table 12). The finding

indicates that although *intrinsic value* like *love teaching* was a major motivator for

entering teaching, it did not have important influence on the intention to teach in urban

settings.

Research Question #4

The fourth research question asked what factors influenced pre-service teachers'

decision to participate in a short-term urban field experience. From the 39 items in the

researcher-developed questionnaire, 11 factors were generated through factor analysis.

These 11 factors explained 68.14% of the variance (See Table 14). In an order of high to

low, factors rated above the median included *improve multicultural competencies*,

difficulty of teaching in urban settings, *social utility value*, *social influence, test the*

possibility of teaching in urban settings, expertise of teaching in urban settings, and

ability of teaching in urban schools. Other factors including *intention to teach in urban settings, teacher salary and status, personal utility value, social dissuasion,* and *like cities* were rated below the median, indicating that they were considered as less important reasons for participation. *Prior teaching and learning experience in urban settings* was rated as the least important influence on the decision to participate in the urban field experience.

In qualitative data analysis, five themes emerged as important influences on pre-service teachers' decision to participate in the short-term urban field experience. The five factors were *testing the possibility to teach in urban settings, getting teaching experience, social influence (recruitment activities, faculty or peer recommendation), helping children in disadvantage,* and *getting 3 credits in a relatively short time duration.* The findings conformed to the findings of prior research that applied the expectancy-value motivation framework in teacher education (Watt & Richardson, 2007). Pre-service teachers' choice to participate in the urban field experience was significantly influenced by beliefs regarding teaching ability, as well as social and personal values. In addition, the factor *test the possibility of teaching in urban settings* was common to both quantitative and qualitative results. The desire of improving ability to teach in multicultural classrooms and getting more teaching experiences indicated that the personal goal to improve teaching ability was an important influence on the decision to participant in the urban field experience.

It is encouraging to see that *social influence* was rated as an important factor contributing to pre-service teachers' participation in the urban field experience. This confirmed that recruiting efforts made by participating universities were effective. It also

showed that faculty members' advocacy could make a difference in students' decision to participate. The fact that the urban field experience was highly recommended by students who participated in the past is probably the strongest testimony to its effectiveness and was a strong motivation for participation.

An interesting pattern was found concerning *personal utility value* when comparing pre-service teachers' motivations for participating in the short-term urban field experience with their motivations for entering the teaching profession. In neither context was *personal utility* value reported as an important influence on the choice made. However, qualitative data showed that individuals who cited *personal utility value* as an important motivation factor for choosing a teaching career also reported it as important to their decision to participate in the urban field experience. The pattern indicates that personal utility value probably plays a more important role than reported, and it can be used as a consistent predictor for career choice.

Research Question #5

The fifth research question asked whether there are identifiable groups of pre-service teachers, based on their motivations for participating in a short-term urban field experience and intention to teach in urban settings. Quantitative data analysis identified four groups of participants according to selective factors influencing participants' decision to participate. Three factors were selected: *social utility value*, *ability to teach in urban settings*, and *personal utility value*. In addition to the two hypothetical groups, Group HHL and Group LLH, two other groups were identified, both of which were larger than the hypothetical groups. Group HHH was the largest, consisting of participants who

scored relatively high in all three factors selected. Group LLL was the second largest, composed of participants scored low on all three factors.

The results of the One-Way ANOVA showed there were statistically significant differences among the four groups regarding the intention to teach in urban settings. Participants in Group HHL conveyed the strongest intention to teach in urban settings, followed by their peers in Groups HHH and LLL. Participants in Group LLH expressed the weakest intention. Post Hoc tests indicated statistically significant difference among the four groups. In an order of large to small, the difference in the intention to teach in urban settings was found between Groups HHL and LLH, Groups HHH and LLH, Groups HHL and LLL, and finally, Groups HHH and LLL.

As anticipated, pre-service teachers in the present study participated in the short-term urban field experience due to different expectancies, beliefs, and values. In addition, participants with different expectancies and values differed in their intention to teach in urban settings. The findings suggest that individuals who participated in the urban field experience due to a strong belief in their ability to teach in urban settings, the expectation of making a difference in urban children's lives, and the value of providing service to urban children were more likely to express an intention to choose a teaching position in urban settings. Conversely, those who chose to participate for personal goals such as job availability and obtaining course credits were less likely to teach in urban settings.

Research Question #6

The sixth research question asked whether there is significant correlation between pre-service teachers' motivations for participating in a short-term urban field experience and their intention to teach in urban settings. Results of the quantitative data analysis

showed a strong correlation between the *ability to teach in urban settings* and the intention to teach in urban settings. In addition, moderate correlations were found between *social utility value* and *intention,* as well as the factor *like cities* and the intention. Moreover, weak correlations were found between factor *prior teaching and learning experiences in urban settings*, *improve multicultural competence*, and *test the possibility to teach in urban settings* and the intention to teach in urban settings. All these correlations, regardless of the strength, were statistically significant (p<0.01). *Difficulty of teaching in urban settings* and *teacher status and salary* were also positively related with the intention at a statistically significant level (p<0.05), though the correlations were relatively weak.

It should be remembered that beliefs in teaching ability in general exerted very weak correlations with the intention to teach in urban settings ($r = .17$). However, when specified as the ability to teach in that particular setting, the correlation was significantly stronger ($r = .85$). Such finding brings the discussion back to what Tschannen-Moran and colleagues (1998) proposed as context-specific teacher efficacy. Researchers argued that teachers did not feel equally efficacious for all teaching situations. Teachers may feel capable of teaching particular subjects to certain students in specific settings, but may feel more or less efficacious under different circumstances. This argument helped explain why *ability to teach in urban settings* appeared to be a better predictor than generic teaching ability for the intention to teach in urban settings. Individuals who are confident of their general ability to teach may not necessarily feel confident to teach in urban settings. Teaching ability beliefs, in this case, cannot predict future choice of teaching in such context.

The suggestion on context-specific ability beliefs is probably applicable to beliefs about task values as well. For example, *social utility value* of teaching showed a relatively weak correlation with the intention to teach in urban settings ($r = .27$). The factor, *social utility value of teaching in urban settings*, however, generated a moderate correlation with the intention to teach there ($r = .59$).

It is interesting to note the other moderate correlation existing between the factor *like cities* and the intention to teach there. Pre-service teachers who liked cities, and who believed cities offer abundant resources were more likely to express intent to teach in cities. In spite of the moderate correlation, it is hard to determine whether attitude toward cities influences the intention to teach in an urban setting because it contributes directly to the intrinsic value of teaching in a city, or because it brings satisfaction to one's personal life instead of professional life.

Some of the findings were somewhat inconsistent with the existing literature. For example, none of the variables in the present analysis was found negatively related to the intention to teach in urban settings. The perception of teaching in urban settings, difficulty and expertise of teaching in urban settings, as well as teacher status and salary generated significant positive correlation with the intention, though the correlations were weak. No significant relationship was found between *personal utility value*, such as job availability in urban schools and course credits, and the intention of where to teach. Another unexpected finding was that the factor *improve multicultural competence* had a relatively weak correlation with the intention to teach in urban settings ($r = .37$). In fact, statistics showed that the same factor had a much stronger correlation with *ability to teach in urban settings* ($r = .56$) and *social utility value* ($r = .60$). A possible reason was

that, in the current study, multicultural competence was represented by such items as teaching skills in multicultural classrooms, ability of handling different teaching situations, and ability to help children with multicultural backgrounds. To improve multicultural competence means to improve the ability to teach in urban settings. In other words, to improve multicultural competence may contribute directly to the confidence of teaching in urban settings, hence, to the intention to teach in urban settings.

Research Question #7

The seventh research question asked to what extent a short-term urban field experience influences participants' motivations for choosing the teaching career. Results of quantitative data analyses indicated that there were significant changes in participants' motivations for entering teaching at the end of the urban field experience. Overall, majority factors changed to a certain extent toward the positive direction, with the exception of a few. In an order of medium to small effect size, factors that significantly changed positively included *intrinsic career value*, *social influence*, *social dissuasion*, *satisfaction with the choice*, *enhance social equity*, and *teaching ability*. Three other factors that changed toward the negative direction were *job transferability*, *difficulty of teaching*, and *time with family*. The differences were statistically significant and represented small effect sizes. For some reason, participants reported experiencing slightly less important influence from the factor *make social contribution*. The change, however, was not statistically significant.

Qualitative data analysis identified three salient changes in interview participants' motivations for entering the teaching profession. Participants reported stronger perception of their teaching ability after the urban field experience than prior to it. They also

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expressed changed views of teaching in urban settings, as well as an increased sense of satisfaction with the choice of a teaching career.

The results confirmed prior research findings regarding the impact of field experiences on motivation changes. Sinclair and colleagues (2006) suggest that entry motivations to teach may change substantially over time, particularly in response to the "real life" teaching experiences. However, unlike Sinclair et al.'s study, which found negative changes, the present analysis found that participants' entry motivations changed toward both positive and negative directions after the urban field experience. Other earlier studies had similar findings, indicating that the impact of field experience on pre-service teachers was contingent with such features as time, length, setting, and structure (Capraro et al., 2010; Gomez et al., 2009; Kyles & Olafson, 2008; McDonnough &Matkins, 2010).

The positive changes in *intrinsic motivation*, *social influence, social dissuasion, teaching ability,* and *satisfaction of the choice* were encouraging. However, no significant change was found in *social utility value*, one of the most important motivators to enter the teacher preparation program, except for the factor of *enhance social equity*. Moreover, the rating on factor *making social contribution* actually dropped slightly after the experience, though no conclusion can be reached since the difference was not statistically significant. Doppen (2007) documented similar findings in a study of an early field experience, in which no significant influence was found on participants' initial motivation for serving society. The non-significant change might result from the lack of corresponding elements in the urban field experience that was targeted at enhancing *social utility value*. In addition, it is possible that the short-term experience of teaching

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and living in urban settings challenged participants' beliefs about the social value of teaching. Moreover, as the factor was rated was relatively high before the urban field experience (M = 6.06), there might not be much room for significant increase.

Negative changes were found in *time with family* and *job transferability* as the results of participation in the urban field experience. After the experience, participants perceived the two factors as significantly more important influences on the decision to teach, although the differences were practically small. The increased personal value factors, however, did not affect the likelihood for participants to choose the teaching career. In fact, as indicated by *satisfaction with the choice of teaching*, participants were more likely to choose a teaching career after the urban field experience compared to prior to it. It is important to remember that *time with family* and *job transferability* were considered by participants in the current study as the least important influences on the decision to teach. Although the two factors were negatively correlated with the choice of a teaching career, the correlations were relatively weak. This is probably why the negative changes did not influence the overall positive trend of the choice to teach.

The change of pre-service teachers' views about teaching in urban settings conforms to the suggestion that early field experiences served as a reality check (Gomez et al., 2006; Malone et al., 2002). Such a finding was particularly salient from the interview data. Interview participants expressed that the experience helped them get rid of the negative views about urban schools before they came to the urban seminar. In the meanwhile, the experience also confirmed participants that teaching was a difficult and demanding career. Consistent with the finding in research question #3, *difficulty of teaching* remained significantly related to the choice in a positive way.

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Research Question #8

The last research question in the current study asked to what extent a short-term urban field experience influences pre-service teachers' intention to teach in urban settings. Quantitative data indicated that participants expressed stronger intention to teach in urban settings after the urban field experience than prior to it. The difference was statistically significant and it represented a medium-sized effect.

The analysis of the qualitative data revealed an inconclusive picture. In general, participants expressed willingness to consider teaching in urban settings as a possibility or option. However, they also expressed concerns about safety of living in a city, affordability of housing, as well as working condition at urban schools. Therefore, it was impossible to conclude whether participants became more, or less likely to teach in urban settings after the urban field experience.

The quantitative results indicated that the urban field experience had very positive impact on pre-service teachers' intention to teach in urban settings. Participants in the urban seminar are more willing to teach in urban settings at the conclusion of the experience. The statistically significant pre- and post-difference in intention represented a medium-size effect in practice. The finding is consistent with several earlier studies, which found field experience in urban, low-income schools had a positive impact on teacher candidates' intention to teach in urban schools (Feldman & Kent, 2006: Meson 1997; Ross & Smith, 1992).

The mixed results of the qualitative data reflect the complicated relationship between motivations and the choice of the teaching career, as well as among motivation factors themselves. Based on the expectancy-value theory, the intention to teach in urban

settings can be predicted by beliefs of ability to teach in urban settings, as well as values related to teaching in urban settings. Theoretically, stronger ability beliefs, stronger social and intrinsic values would predict stronger intention, while stronger personal value and perception of teaching as a high-demand career are related with weaker intention. Moreover, when ability beliefs and the teaching-related values changed, the intention would most likely change accordingly. The tied circumstances between the expressed willingness to teach in urban schools and the concerns about neighborhood security, living expenses, and school conditions indicated that, in reality, it might be more complicated. Factors such as teaching ability, social utility value, and intrinsic values might have weaker influence on the intention to teach in urban settings than they were reported. Likewise, the influences of personal utility value and perception of teaching might be stronger than participants expressed. Also revealed by the results was the possible existence of other factors that have important influence on the decision to teach and/or intention to teach in urban settings.

Implications and Recommendations

Based on the findings, several implications and recommendations that may be valuable to researchers, district and school administrators, teacher educators, and for K-12 teachers are listed below.

1. *Implication:* The motivations for choosing a teaching career are multidimensional, interactive, and dynamic. The Expectancy-Value Theory provides a comprehensive model to understand what influences the decision to teach. Nevertheless, several issues remain unresolved. For example, why intrinsic career value does not predict the intention to teach in urban settings? Why perception of teaching as a high

demanding career is not negatively correlated with the choice of a teaching career, as the model predicts? Why did some motivation factors change positively over time while others changed negatively?

Recommendation: Future research is needed to investigate these issues. The researcher suggests that data be collected from multiple sources and over a relatively longer period. In addition, collaborative efforts between quantitative and qualitative researchers should be encouraged, through which different research methods can inform and complement each other.

2. *Implication:* The FIT-Choice Model is context specific. It is a reliable and valid tool to measure the motivations for choosing the teaching career. The motivation factors for entering teaching in general may be weak predictors for the intention to teach in urban settings.

Recommendation: Future research effort should be made to develop new instruments to measure the factors that influence pre-service teachers' intention to teach in urban settings. As the findings of the current study suggest, the decision to teach in urban settings involves more, and probably different, ability beliefs and values than the choice of a teaching career in general does. Multiple open- or semi-structured interview, journaling, and observations may be applied to explore the possible factors before the instruments are developed.

3. *Implication:* The findings of the current study provide useful information for recruiting and hiring practices. Although the intrinsic and social utility values are cited by pre-service teachers as a major motivator for becoming a teacher, some candidates are more concerned if teaching can satisfy their personal goals.

Recommendation: District and school administrators should be informed of the research findings about what motivates individuals to choose the teaching career, and why they want to seek a teaching position in urban settings. Rather than using the information as screening criteria, it is suggested that administrators be aware that different recruiting policies would appear attractive to different candidates. For example, results of the quantitative data in the study indicated that salary did not have significant influence on either the choice of teaching or intention to teach in urban settings. Accordingly, financial incentives may be able to help urban schools recruit enough teachers; however, they probably will not help retain the teachers due to the absence of a correlation with *satisfaction with the choice*.

4. *Implication:* Teaching is generally perceived as teaching in suburban or small town settings. Individuals who choose to teach cite such intrinsic and social values as love for teaching, love of children, wanting to make a difference in students' life and serve the society. These motivations are challenged when it comes to the choice of teaching or not teaching in urban settings. Teaching in an urban setting creates social and cultural discomfort, which ethnic majority teacher candidates are not prepared for, and/or are not willing to handle.

Recommendation: A paradigm shift is needed in teacher education programs from preparing teachers who are motivated to teach some students to education teachers who can and are willing to teach all students, including those whose cultural backgrounds are different. Enhancing social equity and appreciating diversity should be the guiding principle of any teacher education program, instead of urban teacher education programs only. The curriculum should integrate field experiences in

different settings at different stages of teacher preparation. Moreover, teacher educators should encourage pre-service teachers to work with children in diverse educational and cultural settings in extra-curricular programs.

5. *Implication:* The short-term urban field experience had a significant impact on participants' motivations for choosing a teaching career and their intention to teach in urban settings. Teaching in urban schools and living in the communities can bring positive change to pre-service teachers' perception of teaching ability, beliefs of teaching in urban settings, and view of urban schools and students.

   Recommendation: In order to prepare teachers for diverse educational settings, teacher education programs should include urban field experiences as an integral part of teacher preparation curriculum. The urban field experiences should offer opportunities for pre-service teachers to work with children in the classroom and the community so that they can understand urban students in all aspects of their lives. Pre-service teachers should live in the community where they work so that they will have an authentic understanding of the life of being an urban teacher. More importantly, efforts should be made collaboratively between university coordinators and school teachers to address the problems pre-service teachers encountered during the field experience.

6. *Implication:* Compared to their White peers, pre-service teachers of color, particularly those who were born and educated in cities, are less likely to receive support from their schoolteachers for the choice of the teaching career. Moreover, they are more likely to experience dissuasion.

Recommendation: Secondary school teachers and guidance counselors should encourage students of color to consider teaching as a career choice. If a student expresses interest in teaching, or results of career inventory indicate a student has the potential of being a teacher, teachers should talk about it with the student. They can provide the student information about teachers, for example, their job responsibilities, average salary, and benefits offered in the area. Teachers should also inform the student about the training needed to become a teacher, and more importantly, the financial assistance available to support students throughout the training process. Schools should arrange a career trip to a teacher education program or institution, involving students in a class like teaching math or reading methods. Teachers should also encourage students to conduct career research on teaching. Teachers can encourage students to share their interest in teaching with family and friends. If they report getting negative comments, teachers should discuss the response and offer support.

Conclusions

The current study was conducted at a time when urban public schools in the United States are facing the challenge of teacher shortages. Through reviewing the literature of teacher shortages, the researcher argued that one of the causes for the shortage of teachers was that the efforts to solve those shortages did not target the right problems. Before developing policies to attract individuals to teach in urban settings, it is necessary to understand what motivates individuals to choose a teaching career in the first place, and what influences pre-service teachers' intention to teach, or not teach in urban settings.

This study was an effort to explore the aforementioned issues. Its major purpose was to investigate what contributed to the decision of entering the teaching career, to understand the relationship between the initial motivations for teaching and the intention to teach in urban settings, as well as examining whether a short-term urban field experience could influence the entry motivations and the intention.

Eight research questions were developed based on the purpose of the study. Based on the results of quantitative and qualitative analyses, the following conclusions were reached:

Overall, pre-service teachers in the study were motivated to choose a teaching career due to such factors as beliefs of teaching ability, the intrinsic, social, and personal values of teaching, perception of teaching, as well as prior learning and teaching experiences and social influence. These factors, however, did not have equally important influences on the decision to teach. Some factors have more important influences and acted as motivators for a career choice. Other factors are less important influences, which mediated the decision rather than initiating it.

As anticipated, several motivation factors for becoming a teacher were significantly correlated with their intention to teach in urban settings, though the relations were relatively weak. In general, two major factors that motivated participants' choice of a teaching career also had important influence on their intention to teach in urban settings. Intrinsic value, however, which exerted a significant correlation with the choice of teaching, had no significant correlation with the intention to teach in urban settings at all. It is, therefore, concluded that *intrinsic value* is a predictor for the choice of the teaching career, but not for the intention to teach in urban settings. Another interesting finding was

that participants who perceived teaching as difficult were more likely to teach in urban settings.

The short-term urban field experience was found to have significant impact on both the entry motivations for teaching and the intention to teach in urban settings. Even though several changes in the entry motivations occurred toward the negative direction, they did not affect the overall increase in satisfaction with the choice after the urban field experience. The mixed results on qualitative data provide more evidence for the complicated relationship between motivation factors, the choice of teaching career, and the intention to teach in urban settings.

Used as a motivation model, the Expectancy-Value Theory provides researchers, administrators, and teacher educators with a comprehensive framework to understand what influences the decision to teach, and what influences the intention to teach in urban settings. Findings in the current study offer the promise of solving the problem of teacher shortages by hiring the individuals who want to teach in urban settings, and providing the support for actualization of their expectancies and values.

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APPENDICES

Appendix A

FIT-Choice Scale (Factors Influencing Teaching Choice Scale)

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Please briefly state your main reason(s) for choosing to become a teacher:

PART B – INFLUENTIAL FACTORS
For each statement below, please rate how important it was in **YOUR** decision to become teacher, from **1** (not at all important in your decision) to **7** (extremely important in your decision).
Please **CIRCLE** the number that best describes the importance of each.

"I chose to become a teacher because…"

		Not at all important	Extremely important	
B1.	I am interested in teaching.		1 2 3 4 5 6 7	B1
B2.	Part-time teaching could allow more family time.		1 2 3 4 5 6 7	B2
B3.	My friends think I should become a teacher.		1 2 3 4 5 6 7	B3
B4.	As a teacher I will have lengthy holidays.		1 2 3 4 5 6 7	B4
B5.	I have the qualities of a good teacher.		1 2 3 4 5 6 7	B5
B6.	Teaching allows me to provide a service to society.		1 2 3 4 5 6 7	B6
B7.	I've always wanted to be a teacher.		1 2 3 4 5 6 7	B7
B8.	Teaching will be a useful job for me to have when travelling.		1 2 3 4 5 6 7	B8
B9.	Teaching will allow me to shape child/adolescent values.		1 2 3 4 5 6 7	B9
B10.	I want to help children/adolescents learn.		1 2 3 4 5 6 7	B10
B11.	I was unsure of what career I wanted.		1 2 3 4 5 6 7	B11
B12.	I like teaching.		1 2 3 4 5 6 7	B12
B13.	I want a job that involves working with children/adolescents.		1 2 3 4 5 6 7	B13
B14.	Teaching will offer a steady career path.		1 2 3 4 5 6 7	B14
B16.	Teaching hours will fit with the responsibilities of having a family.		1 2 3 4 5 6 7	B16
B17.	I have had inspirational teachers.		1 2 3 4 5 6 7	B17
B18.	As a teacher I will have a short working day.		1 2 3 4 5 6 7	B18
B19.	I have good teaching skills.		1 2 3 4 5 6 7	B19
B20.	Teachers make a worthwhile social contribution.		1 2 3 4 5 6 7	B20
B22.	A teaching qualification is recognised everywhere.		1 2 3 4 5 6 7	B22
B23.	Teaching will allow me to influence the next generation.		1 2 3 4 5 6 7	B23
B24.	My family think I should become a teacher.		1 2 3 4 5 6 7	B24

B26.	I want to work in a child/adolescent-centred environment.	**1 2 3 4 5 6 7**	B26
B27.	Teaching will provide a reliable income.	**1 2 3 4 5 6 7**	B27
B29.	School holidays will fit in with family commitments.	**1 2 3 4 5 6 7**	B29
B30.	I have had good teachers as role-models.	**1 2 3 4 5 6 7**	B30
B31.	Teaching enables me to 'give back' to society.	**1 2 3 4 5 6 7**	B31
B35.	I was not accepted into my first-choice career.	**1 2 3 4 5 6 7**	B35
B36.	Teaching will allow me to raise the ambitions of underprivileged youth.	**1 2 3 4 5 6 7**	B36
B37.	I like working with children/adolescents.	**1 2 3 4 5 6 7**	B37
B38.	Teaching will be a secure job.	**1 2 3 4 5 6 7**	B38
B39.	I have had positive learning experiences.	**1 2 3 4 5 6 7**	B39
B40.	People I've worked with think I should become a teacher.	**1 2 3 4 5 6 7**	B40
B43.	Teaching is a career suited to my abilities.	**1 2 3 4 5 6 7**	B43
B45.	A teaching job will allow me to choose where I wish to live.	**1 2 3 4 5 6 7**	B45
B48.	I chose teaching as a last-resort career.	**1 2 3 4 5 6 7**	B48
B49.	Teaching will allow me to benefit the socially disadvantaged.	**1 2 3 4 5 6 7**	B49
B52.	Teaching is a fulfilling career.	**1 2 3 4 5 6 7**	B52
B53.	Teaching will allow me to have an impact on children/adolescents.	**1 2 3 4 5 6 7**	B53
B54.	Teaching will allow me to work against social disadvantage.	**1 2 3 4 5 6 7**	B54

PART C – BELIEFS ABOUT TEACHING

For each question below, please rate the extent to which **YOU** agree it is true about teaching, from **1** (not at all) to **7** (extremely).
Please **CIRCLE** the number that best describes your agreement for each.

		Not at all **Extremely**	
C1.	Do you think teaching is well paid?	**1 2 3 4 5 6 7**	C1
C2.	Do you think teachers have a heavy workload?	**1 2 3 4 5 6 7**	C2
C3.	Do you think teachers earn a good salary?	**1 2 3 4 5 6 7**	C3
C4.	Do you believe teachers are perceived as professionals?	**1 2 3 4 5 6 7**	C4
C5.	Do you think teachers have high morale?	**1 2 3 4 5 6 7**	C5
C6.	Do you think teaching is a highly skilled occupation?	**1 2 3 4 5 6 7**	C6
C7.	Do you think teaching is emotionally demanding?	**1 2 3 4 5 6 7**	C7
C8.	Do you believe teaching is perceived as a high-status occupation?	**1 2 3 4 5 6 7**	C8
C9.	Do you think teachers feel valued by society?	**1 2 3 4 5 6 7**	C9
C10.	Do you think teaching requires high levels of expert knowledge?	**1 2 3 4 5 6 7**	C10
C11.	Do you think teaching is hard work?	**1 2 3 4 5 6 7**	C11

C12.	Do you believe teaching is a well-respected career?	**1 2 3 4 5 6 7**	C12
C13.	Do you think teachers feel their occupation has high social status?	**1 2 3 4 5 6 7**	C13
C14.	Do you think teachers need high levels of technical knowledge?	**1 2 3 4 5 6 7**	C14
C15	Do you think teachers need highly specialised knowledge?	**1 2 3 4 5 6 7**	C15

PART D – <u>YOUR</u> DECISION TO BECOME A TEACHER

For each question below, please rate the extent to which it is true for **YOU**, from **1** (not at all) to **7** (extremely).
Please **CIRCLE** the number that best describes your agreement for each.

		Not at all Extremely	
D1.	How carefully have you thought about becoming a teacher?	**1 2 3 4 5 6 7**	D1
D2.	Were you encouraged to pursue careers other than teaching?	**1 2 3 4 5 6 7**	D2
D3.	How satisfied are you with your choice of becoming a teacher?	**1 2 3 4 5 6 7**	D3
D4.	Did others tell you teaching was not a good career choice?	**1 2 3 4 5 6 7**	D4
D5.	How happy are you with your decision to become a teacher?	**1 2 3 4 5 6 7**	D5
D6.	Did others influence you to consider careers other than teaching?	**1 2 3 4 5 6 7**	D6

For information about this work, please contact Helen M. G. Watt and Paul W. Richardson.

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Appendix B

Permission Letter from Dr. Helen Watt

From: Helen Watt <Helen.Watt@Education.monash.edu.au>
Subject: Re: Request for permission
Date: Sun, 21 Dec 2008 14:18:46 +1100
To: Yong Yu <y.yu3@iup.edu>
Cc: Paul Richardson <paul.richardson@Education.monash.edu.au>, Helen Watt
 <Helen.Watt@education.monash.edu.au>

Dear Yong Yu,

Thank you for your emails and interest in our work. You are welcome to use our FIT-Choice scale in your PhD research.

We have attached to this email:
1. the formatted copyrighted layout of the FIT-Choice scale for your convenience, and
2. a publication which presents the scale items organised under latent constructs in an easy to read Table. You can access other information at our project website here: www.fitchoice.org

We request that you keep us informed about the findings you discover using our scale.

We also plan to organise a book further ahead in time, when we would be interested to invite people who are used our scale across a range of different contexts to contribute, so please keep us informed about your progress and timelines.

best wishes and regards,
Helen Watt & Paul Richardson

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Appendix C

Researcher-Developed Questionnaire

Factors Influencing Participation in the Urban Seminar

<div style="border:1px solid">

FACTORS INFLUENCING YOUR PARTICIPATION IN THE URBAN SEMINAR
For each statement below, please rate how important it was in **YOUR** decision to participate in the Philadelphia Urban Seminar, from **1** (not at all important in your decision) to **7** (extremely important in your decision).
Please **CIRCLE** the number that best describes the importance of each statement.

</div>

"I chose to participate in Philadelphia Urban Seminar because …"

		Not at all Important	Extremely Important
1.	I can have more impact on children in urban settings.	1 2 3 4 5 6 7
2.	I had urban teaching experience before and thoroughly enjoyed it.	1 2 3 4 5 6 7
3.	Teaching in urban schools allows me to provide service to children who need teachers more than those in anywhere else.	1 2 3 4 5 6 7
4.	It was recommended by the faculty.	1 2 3 4 5 6 7
5.	I was unsure where I want to teach.	1 2 3 4 5 6 7
6.	Teaching in urban settings will be a secure job.	1 2 3 4 5 6 7
7.	I think I have the ability to be a good urban teacher.	1 2 3 4 5 6 7
8.	I like cities.	1 2 3 4 5 6 7
9.	I could get 3 credits in a relatively short time.	1 2 3 4 5 6 7
10.	Children in urban settings need teachers who care about them.	1 2 3 4 5 6 7
11.	I want to make difference in the life of urban children.	1 2 3 4 5 6 7
12.	It may be easier to get a job in urban schools.	1 2 3 4 5 6 7
13.	People I have talked to said it was a great experience.	1 2 3 4 5 6 7
14.	I had positive learning experiences in urban schools.	1 2 3 4 5 6 7
15.	I want to see what it is like to teach in an urban setting for future job purpose.	1 2 3 4 5 6 7
16.	The experience looks good on resume.	1 2 3 4 5 6 7
17.	It's close to my home.	1 2 3 4 5 6 7
18.	I am interested in working with urban children some day.	1 2 3 4 5 6 7
19.	I will be able to help children with diverse cultural background.	1 2 3 4 5 6 7
20.	It can help me develop teaching skills in multicultural classrooms.	1 2 3 4 5 6 7
21.	It will improve my cultural competence.	1 2 3 4 5 6 7
22.	It would help me to make the decision to teach, or not to teach in a city.	1 2 3 4 5 6 7
23.	It would test my personal ability of handling different teaching situations.	1 2 3 4 5 6 7

24. I want to put myself out of my comfort zone.   **1 2 3 4 5 6 7**

25. I enjoy the abundant resources a city offers.   **1 2 3 4 5 6 7**

26. It was highly recommended by students who participated in the past.   **1 2 3 4 5 6 7**

YOUR BELIEFS OF TEACHING IN URBAN SCHOOLS

     For each question below, please rate the extent to which **YOU** agree it is true about teaching from **1** (not at all) to **7** (extremely).
     Please **CIRCLE** the number that best describes your agreement for each.

	Not at all	**Extremely**
27. Do you think teaching in urban settings requires high levels of expert knowledge?		**1 2 3 4 5 6 7**
28. Do you think teaching in urban schools requires particular personality traits?		**1 2 3 4 5 6 7**
29. Do you think teaching in urban schools requires high levels of technical knowledge?		**1 2 3 4 5 6 7**
30. Do you think teachers in urban schools have a heavier workload?		**1 2 3 4 5 6 7**
31. Do you think urban teachers have high morale?		**1 2 3 4 5 6 7**
32. Do you think teaching in urban areas is emotionally more demanding than teaching in other areas?		**1 2 3 4 5 6 7**
33. Do you think the school conditions in urban schools are barriers to teaching?		**1 2 3 4 5 6 7**
34. Do you think teachers in urban schools get good salary and benefits?		**1 2 3 4 5 6 7**
35. Did others influence you to consider teaching in somewhere else other than urban areas?		**1 2 3 4 5 6 7**
36. Did others encourage you to participate in the urban field experience?		**1 2 3 4 5 6 7**
37. Did others tell you teaching in urban settings is not a good career choice?		**1 2 3 4 5 6 7**
38. Do you think urban teachers are underpaid?		**1 2 3 4 5 6 7**
39. How likely are you going to choose to teach in the following areas?		**1 2 3 4 5 6 7**
- Suburban areas		**1 2 3 4 5 6 7**
- Urban areas		**1 2 3 4 5 6 7**
- Rural areas		**1 2 3 4 5 6 7**
- Small towns		**1 2 3 4 5 6 7**

Thank you for taking the survey!

* If you are willing to participate in a brief interview as a follow-up to this survey, please complete the information below. As with the survey, your participation in an interview is completely voluntary and all interview data will be totally confidential.

_____ _____   _____
Name   Phone #   Email address

Appendix D

Demographic Information

1. The last 4 digits of your student ID: _____

2. The university you attend: _____

3. Gender: Female _____   Male _____

4. Hometown:

       Urban area _____   Suburban area _____
       Small town _____   Rural area _____

5. Ethnicity:

       African American   _____   Asian American   _____
       European American _____   Latino American   _____
       Native American   _____
       Others (Please specify) _____

6. Major: _____

7. Age
       18-22 _____   23-30 _____
       31- 35 _____   36- 40_____   Above 40 _____

8. Does the program you are attending have a focus on urban education?

       Yes _____   No _____

9. Do you currently have any student loans?

       Yes _____   No _____

10. Is Teacher Education your first-choice of major?

       Yes _____   No _____
       If not, what was your previous major? _____

11. Did you start college right after completing high school?

       Yes _____   No _____

12. If you answered "No" to item 10, did you have a full-time job prior to starting college?

       Yes _____   No _____
       If "Yes", what was your job? _____

Appendix E

Interview Protocol

1. Please tell me about yourself, as well as why and how you decided to become a teacher.
   Prompts:
       a.   Could you tell me something about the schools you attended as a student?
       b.   How did your teachers, parents, and friends, influence your decision of becoming a teacher?
       c.   What do you expect to achieve as a teacher?

2. How do you perceive the career of being a teacher?
   Prompts:
       a.   Do you think teaching is demanding? Why/Why not?
       b.   Do you think teachers are paid well? Why/Why not?

3. Please rate your satisfaction with the choice of being a teacher on a scale from 1 to 7, 1 being "very dissatisfied", and 7 being "very satisfied".

4. The participation of Philadelphia Urban Seminar is not part of your course requirements. What made you choose to participate in the experience?
   Prompts:
       a.   What did you expect to achieve through the experience?
       b.   What do you think you have benefited from the experience so far?

5. How do you compare a city to non-urban areas in general? What about urban schools, students, and teachers?

6. What do you think is unique or special about teaching in an urban school? Do you think teaching in urban schools requires highly specialized knowledge and skills? Why/Why not?

7. How do you view your teaching ability? Do you think you have the ability to be an effective teacher? Why/Why not?

8. What are the top three considerations if you are looking for a teaching position?

9. Do you intend to teach in urban schools when you finish the program? Why/Why not?
   Prompts:
     a. What do you expect to achieve as a teacher in urban schools?
     b. What do you think are the possible costs for you to teach in urban schools?

10. Is there anything else you would like to tell me about your decision to become a teacher?