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Teacher Efficacy Beliefs:  
Understanding the Relationship Between  
Efficacy and Achievement in Urban Elementary Schools

by

Margaret Harris

A dissertation submitted in partial satisfaction of the  
requirements for the degree of

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Graduate Division

of the

University of California, Berkeley

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## Abstract

### Teacher Efficacy Beliefs: Understanding the Relationship Between Teacher Efficacy and Achievement in Urban Elementary Schools

By

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Doctorate of Education

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Within the last three decades there has been a surge of interest in how teacher beliefs affect the teaching and learning process. A major focus of the research in teacher beliefs has been in understanding the nature of teacher self-efficacy beliefs and how it affects the choices, decisions, and effectiveness of teachers. Bandura's work (1982, 1986, 1993, 1996, 1997), developed and defended the idea that our beliefs in our abilities affect our behavior, motivation, and ultimately our successes and failures. Bandura, (1986), Dewey (1997) and Pajares (1992) suggest beliefs are the best predictors of individual behaviors and that beliefs influence teachers' perceptions, judgments and practices.

This study, a cross-sectional design experiment, examines key variables that might influence teacher expectations. To that end, this study seeks to: (a) provide a limited overview of teachers' self-reported efficacy beliefs; (b) examine the influence of these beliefs on student groups; and (c) understand which efficacy beliefs may influence teacher practice.

Offered, is a discussion of understanding teacher self-efficacy beliefs and the variables - particularly locus of control - that may influence teacher expectations, thus, how teacher efficacy beliefs may contribute to the choices teachers make in their instructional practices which may subsequently affect student academic outcomes. While significant limitations restrain the strength of the findings, the study will begin to provide a basis for modifying teachers' sense of self-efficacy beliefs and to understand how stated beliefs affect practices that may subsequently affect student academic outcomes.

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## Chapter 1

### Introduction

Why do good ideas about teaching and learning have so little impact on the educational outcomes of certain student groups? While student academic gains in urban schools have been apparent in some cases, the surge of reform programs that were meant to close gaps in student academic achievement, have been sporadic and short-lived. For the past 44 years, educational policy and practices have been driven by the on-going attempt to provide answers to the question of why some students, particularly African American, Latino, and low-socioeconomic status students, who attend urban public schools, achieve so little as compared to their White counterparts.

In previous decades, we witnessed numerous reform efforts that were supposed to lead to equitable student outcomes. The first wave of reforms were driven by public policy and mandates characterized by adherence to the Industrial Age model. This model of education sorted students according to their likely place in the job market through the use of traditional academic subjects. However, this rigid competitive model provided little change to the function and nature of schooling (Cuban, 1990).

When the publication, *A Nation At Risk* (1983), propelled the movement in education to reshape our schools, the second wave of reforms were viewed as a one-time event that would fix the problems with regards to student academic achievement. During the 1980s, educators began to shift their interest in academic motivation and achievement to cognitive processes and information processing. In this back-to-basics period, reforms were accompanied by an effort to dictate curricular practices according to their success in raising student achievement. Until 1988, some progress was made in narrowing the academic achievement gaps between student groups (Corley, 2003). However, the numerous approaches to curriculum and instruction, intensive teacher training, mandatory after-school programs and summer school for struggling students, were shown to close the academic achievement gaps only slightly (Jencks & Phillips, 1998).

The third wave of reforms emphasized capacity building and system changing activities that addressed fundamental transformations of the infrastructure of schools. Examples of these reforms include the effective schools movement, school choice and privatization plans, site-based management, school restructuring, and attempts to implement culturally-relevant curricula and instruction (Ablemann & Elmore, 1999; Aness, 2000; Delpit, 1995; Deschenes, Cuban, & Tyack, 2001; Spillane, 2002). Once again, there was little change in the academic outcomes of students, particularly those student groups that had been marginalized in society, namely, African American, Latino, and low-socioeconomic status students.

Currently, we are, once again, in the midst of a surge of reform programs to find the “silver bullet” that will improve the academic achievement of low-achieving students and low-achieving schools. However, these reforms have paid little attention to how educators’ beliefs affect their effectiveness, and how this has a direct impact on student academic achievement. Despite the very best intentions and rhetoric about serving all students, the cycles of reforms that have been implemented thus far still have not rectified the inequities between various student groups. Even though the gap in academic achievement between student groups has many causes, the assumptions teachers make are often directly related to perceptions they have of the learning capacities of student groups in urban schools, particularly African American, Latino, and low-

socioeconomic students (Ogbu, 1982).

A key construct of teacher beliefs has been self-efficacy. Defined as a judgment of one's ability to perform a task within a specific domain. Pajares (1992) asserts that cluster of beliefs around a particular situation forms attitudes, and these attitudes become active agents. Bandura's research (1977, 1997) on the study of self-efficacy in education identified the importance of teacher beliefs and how these beliefs affects their ability to perform the task of educating each student. Thus, a key factor in educational reform effectiveness must include educators' beliefs and attitudes and its central role in educational reform. However, little is known regarding the connection between teachers' sense of self-efficacy and their effectiveness.

When I first began teaching in 1972, it was with a passion that was born of the civil-rights movement. The vision I began to develop then was not about the external changes of school reform, but about internal changes needed by educators to ensure that all of our students were getting the kind of education they needed in order to compete within the mainstream segments of society. After years of self-examination and reflection, it has remained clear that teachers' beliefs and attitudes were neither peripheral nor incidental to students' academic achievement. The challenge I faced then remain my challenge now: how can I help teachers to realize that all students can achieve equal outcomes, and to see themselves as catalysts for that achievement?

I suggest, based on my professional observations as a teacher and administrator, that teachers treat African American, Latino, and low socio-economic student groups differently. Thus, to create a challenging, non-stigmatized learning environment that meets students' needs, I propose that significant changes in the beliefs and attitudes of educators are needed. Thus, as a part of my research journey, I am going to take you on a walk through some of the issues that I believe might contribute to the way teachers treat students – and how that treatment may lead to gaps in achievement between various groups of students.

### *Statement of the Problem*

*“Teachers are at the heart of any meaningful change in the way schools educate our children. Some of the unconscious underpinnings of education is a result of individual and institutional beliefs and metaphor.” - Yero, 2002*

Regardless of the rhetoric that all children can learn, the belief that many groups of children cannot learn at high levels still persists (Ferguson, 1999). Even with the very best intentions and rhetoric about serving all students, cycles of educational reform have not rectified the educational outcomes of inequity between various student groups. Thus, under what conditions is it possible to examine and alter long-standing assumptions, attitudes, beliefs, and practices about school, teaching, and student achievement?

Despite prior research (Bandura, 1977, 1994, 1997, 2001), and despite the interest in this construct, gaps still exist in our understanding of teacher efficacy beliefs. First there are the potential inconsistencies in the way teacher efficacy has been defined and the variability in the manner in which it is measured. Second, it is known that efficacy is related to a number of important variables, but we do not fully understand the nature of the relationship between efficacy variables and teacher practices. While several studies have documented a strong link between perceived teacher self-efficacy beliefs and differences in student achievement (Ashton, & Webb, 1986; Bandura, 1994; Berlak, 2001; Dilts, 1990; Rosenthal & Jacobson, 1968) a

number of unresolved issues continue to perplex researchers working in the area of teacher efficacy. Thus, in what ways do teacher's efficacy beliefs influence teaching behavior? (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Because beliefs do not occur in isolation and are affected and influenced by other systems, it is very difficult to change teacher beliefs (Hollingsworth, 1989). To begin to look at how to change teachers' beliefs, a number of factors still need to be studied in an attempt to ferret out reasons for this lack of success. Dilts (1990) provides a framework for the mental constructs that educators use. This framework is based upon educators' beliefs about students' environment, behavior, perceived capabilities, beliefs, and identity.

Limited research has been conducted on the multiple determinants that comprise a teacher's sense of self-efficacy. In addition, few studies have been conducted on how the conscious beliefs of educators affect their practices. There is also a need to further explore the interaction between educators' pedagogical beliefs, self-efficacy beliefs, and the way in which their perceptions of students' learning capacities underlie their actions. Because teacher beliefs and teachers' attitudes can impact their effectiveness in improving student academic achievement, it becomes critical that educators intentionally have opportunities to confront and change the beliefs that they hold that guide their thinking and actions.

Examining the components that may contribute to teacher efficacy beliefs may help to uncover what constructs affect teacher efficacy beliefs that may undercut teacher' practices. The temptation is to oversimplify the reasons for the academic achievement gap. The reality is that the academic achievement gap that exists between student groups is the product of complex interactions among the many school variables. I can think of no more appropriate place to step back to explore the issues that might underpin teacher's self-efficacy beliefs regarding student academic achievement.

## Chapter 2

### Review of the Literature

#### *Overview*

As a construct, teacher efficacy is an integral aspect of the teaching process and has become the pillar in the research on teachers' beliefs. Based on the understanding developed by Rotter's (1966) and Bandura's (1977) foundational theories, and the work of many researchers that followed, the construct of efficacy continues to evolve to gain a better understanding of its meaning and role in teacher efficacy and student outcomes. The following review of the literature will explore the research that is relevant to understand the development of and interpreting the results of this study.

#### *Theoretical Origins of Teacher Efficacy Beliefs*

Teacher efficacy has evolved from two theoretical frameworks - locus of control and self-efficacy - and assesses two distinct components of the teacher efficacy belief systems. The first area of research on self-efficacy is grounded in Rotter's (1966) social learning theory of internal versus external control. Rotter's social learning theory - Locus of Control (1966) - predicts that expectancies develop most quickly and are most susceptible to change when an individual has relatively few life expectancies and that these internal and external dimensions are separate and act independently (Guskey, 1988). Thus, locus of control refers to the degree an individual believes that the perceived cause or causes of an outcome are within or outside of one's control. According to this theory teachers who believe that they are competent to teach difficult or unmotivated students are considered to have internal control. Conversely, teachers who believe that environmental factors have more influence on student learning than their teaching are considered to have external control.

The second area of research on teacher efficacy is grounded in Bandura's social learning theory research (1963), in which he introduced the construct of self-efficacy in 1977, thus giving prominence to the concept of self efficacy in 1986. Bandura stated behavior is acquired and regulated through a central cognitive mechanism and individuals possess a self system that enables them to exercise control over their thoughts and actions. Suggesting that the mind is an active force that constructs one's reality and selectively encodes information, Bandura's Social Cognitive Theory (1977) explains human behavior in terms of a continuous reciprocal interaction between cognitive, behavioral, and environmental influences. Hence, factors such as socioeconomic status, educational, and familial structures do not affect humans directly, but they influence peoples' self-efficacy beliefs, and other self-regulatory influences (see Figure 2.1).

<b>Rotter</b>	<b>Bandura</b>
<b>Theoretical</b>	<b>Framework</b>
Locus of Control: the degree an individual believes that the perceived cause(s) of an intended outcome are within his/her control (1966)	Self Efficacy: the conviction that one can successfully execute the behavior required to produce outcomes (1963; 1977; 1986)
<b>Teacher Efficacy</b>	<b>Conceptualization</b>
Teachers' beliefs in their ability to control factors in order to achieve desired outcomes	Teachers' beliefs in their ability to organize and execute courses of action in order to achieve desired outcomes

Figure 2.1. Theoretical Framework.

Based on the understanding developed by Rotter's (1966) and Bandura's (1963, 1977, 1986) foundational theories, these reciprocal interactions impact teachers' self-efficacy beliefs, however, this interaction does not imply that all sources of influence are of equal strength. Pajares (1997) summed up self-efficacy as an individual being both products and producers of their own social systems and teachers view events and interpret them on the basis of information to which they attend.

#### *Definitions of Construct of Teacher Efficacy*

Bandura defines self-efficacy as "peoples' judgment of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1977, p. 7). Incorporating Bandura's self-efficacy theory to the teacher efficacy construct, McLaughlin and Marsh (1978), researchers with the Rand corporation, define teacher efficacy as "the extent to which the teacher believes he or she has the capacity to affect student performance" (Guskey & Passaro, 1994, p. 628). Many other researchers (Gibson & Dembo, 1984; Hoy & Woolfolk, 1990; Tschannen-Moran et al., 1998) also incorporated Bandura's theory, but because individuals function collectively as well as individually, surmised that self-efficacy can be both a personal and social construct, thus transforming the definition of teacher efficacy to the extent to which a teacher believes he or she can affect student performance (Hipp & Bredson, 1995). Definitions of general teacher efficacy tend to focus on the ability of teachers to help students beyond the external factors that may impact the learning process. Definitions of personal teaching efficacy focus on the individual teacher's ability to perform actions and these actions influence student learning (McLaughlin & Marsh, 1978) (see Figure 2.2).

<b>Key definitions based on Rotter's framework</b>	<b>Key definitions based on Bandura's framework</b>
<u>McLaughlin &amp; Marsh (1978)</u> : The extent to which the teacher believed he or she had the capacity to affect student performance	<u>Ashton, Buhr, &amp; Crocker (1984)</u> : A teacher's belief in his or her ability to have a positive effect on student learning
<u>Rose &amp; Medway (1981)</u> : The extent to which a teacher believes that he or she can control student outcomes	<u>Gibson &amp; Dembo (1984)</u> : A belief that teachers can help even the most difficult or unmotivated students
<u>Guskey (1981)</u> : A teacher's belief or conviction that he or she can influence how well students learn even those who are difficult or unmotivated	<u>Tschannen-Moran &amp; Woolfolk Hoy (2001)</u> : A judgment of a teacher's capabilities to bring about desired outcomes of student engagement and learning

*Figure 2.2. Evolution of the definition of teacher-efficacy.*

For the purpose of this study, I will use efficacy defined as: clusters of beliefs around a particular situation form attitudes and these attitudes become action; and by one's belief in one's ability to perform to a task within a specified domain.

### *Measurement and Development*

Research on teacher efficacy beliefs has been conducted for more than 40 years, and self-efficacy has been measured in a variety of ways with instruments developed to assess teacher efficacy based on Rotter's and Bandura's areas of research. While much has been discovered about this construct, the search for the proper assessment tool has been well sought after.

Fundamental to Rotter's social learning theory (1966) – the study of causal perceptions – Rotter developed the Internal-External Locus of Control (I-E) scale to account for and measure individual differences in causal perceptions (Pajares, 1992; Tschannen-Moran et al., 1998). The I-E construct relating to whether or not individuals feel that they have control over events that happen to them, has been applied to a wide variety of educational problems. It was discovered that teacher efficacy was a significant predictor of student achievement - more internally controlled teachers produced higher levels of achievement in their students than do more externally oriented teachers. Even though researchers have used the I-E scale in studying the relationship between locus of control and student achievement, this scale was never designed to measure experiences such as those associated with classroom teaching, nor were it intended to be predictive of classroom variables and teaching outcomes (Pajares, 1997).

The introduction of locus of control generated considerable research focused on identifying antecedents of generalized control expectancies. Using the work of Rotter (1966) as a theoretical base, McLaughlin and Marsh - Rand researchers - conducted a study in 1976, of teacher efficacy in an attempt to link teacher efficacy with student achievement. With the focus of locus of control and teachers' perceived role in effecting student outcomes, they created a tool, the Rand efficacy questions, to look at the impact of locus of control. Teachers were asked to respond to two items, which measured reflecting internal and external control described as personal (PTE) and general (GTE) teaching efficacy in order to identify a teacher's level of efficacy. This study sought to refine the notion of teacher expectations and began to reveal that teachers form expectations for student performance and these expectations influence student performance (Pajares, 1992; Tschannen-Moran et al., 1998). The results of this study indicated a definite link between teachers' sense of efficacy and student success, but only in reading.

Later, specific expectancy scales generated considerable research in the 1980's and was considered more extensive than the original two questions of the Rand measure. While keeping the meaning and measurement of teacher efficacy close to Rotter's theory, Rose and Medway (1981) developed a 28-item measure called the Teacher Locus of Control (TLC) which assessed teachers' feelings of an internal or external locus of control for student outcomes. Teachers were asked to assign responsibility for student success or failure. Participants had to choose between two competency explanations for situations described by choosing between two competing explanations for described situations in which half of the items described student success while the other half described student failure. For each success situation and for each failure situation, one explanation attributed the positive outcome internally to the teacher (1+) and the assigned (1-) for responsibility outside the teacher. Scores have been weakly but significantly related to

the individual Rand items with correlations ranging from .11 to .41. Rose and Medway found that the TLC was a better predictor of teacher behaviors than the original Rotter's scale because it was more specific to a teaching context. They also found that teachers with high efficacy on both measures had more internally-oriented scores on the TLC for both student success and student failure than teachers who scored low (Rose & Medway, 1981). However, this measure never received wide acceptance, in part, because of the ambiguity regarding the significance of the impact of teacher efficacy.

Guskey's locus of control theory (1981), also rooted in Rotter's (1966) conception of locus of control, developed a 30-item instrument (Responsibility for Student Achievement) which added to the locus of control framework. Consisting of two subscales, participants were asked to distribute 100 points between two alternatives: one stating that the event was caused by the teacher (personal teaching efficacy - PTE) and the other stating that the event occurred because of factors outside the teachers' immediate control (general teaching efficacy - GTE). Guskey's scale measured the amount of responsibility for student learning a teacher felt and the subscale scores reflected the degree of responsibility felt for student success and the degree of responsibility felt for student failure. These positive and negative outcomes indicate these dimensions operate independently in their influence on perception of efficacy. Later, Guskey and Passaro (1994) suggested that the two dimensions, general teaching efficacy (GTE) and personal teaching efficacy (PTE) had internal and external distinctions, instead of efficacy expectations. This scale defined efficacy as the beliefs teachers have that they can influence how well students learn. Because Guskey's 100 point scale was considered cumbersome, this scale was not widely used by researchers.

To further explore the construct of locus of control (LOC) and expand the Rand efficacy questions to increase their reliability, Ashton, Olejnik, Crocker, & McAuliffe, developed the Webb Efficacy Scale (1982) as an attempt to extend the measure of teacher efficacy while maintaining a narrower conceptualization of the construct. This forced-choice format was created to reduce the problem of social desirability bias and to increase the reliability of the Rand items. Even though this measure was never widely accepted, it, however, revealed that teachers who scored higher on this scale had less negative affect in their teaching style. But, this measure, also failed to gain wide acceptance and no further studies were found that utilized the scale. Subsequently, Ashton, Buhr, & Crocker (1984) developed the Ashton Vignettes to address the assumption that teacher efficacy is context specific. Describing situations a teacher might encounter, these scenario-type items were categorized into six different areas: discipline, work with parents, playing, socialization, motivation, and evaluation. Testing two situations, the vignettes required teachers to make judgments as to their effectiveness in handling situations. The first vignette resulted in a judgment (extremely ineffective to extremely effective), and the second requiring teachers to make a comparison (much less effective to much more effective). Even though this measure was correlated with Rand items, it has not been widely accepted by researchers (see Figure 2.3).

Researcher(s)	Definition	Measurement
McLaughlin & Marsh (1978) – Rand Researchers	The extent to which a teacher believed he/she has the capacity to affect student performance	Rand efficacy questions: Two item measure reflecting internal and external control, described as PTE and GTE
Rose & Medway (1981)	The extent to which a teacher believes he/she can control student outcomes	Teacher Locus of Control Scale assesses teachers feelings of internal/external LOC for student

Guskey (1981)	A teacher's belief that he/she can influence how well students learn	outcomes Responsibility for Student Achievement Scale assesses teachers' responsibility for student success and/or failure
Ashton, Olejnik, Crocker, & McAuliffe (1982)	A teacher's belief in his/her ability to have a positive effect on student learning	Webb Efficacy Scale assesses beliefs about teaching efficacy and personal abilities
Ashton, Buhr, & Crocker (1984)	(see above)	Ashton's Vignettes assesses outcome and efficacy expectations

*Figure 2.3.* Research trends based on Rotter's theoretical framework.

Specific expectancy scales have generated considerable research in the area of LOC resulting in confusion about what factors are and are not related to individual differences in what Rotter originally defined as locus of control. Bandura concluded that a measurement should focus on specific knowledge areas, asserting that a teachers' sense of efficacy encompassed not only instruction, but the ability to manage class, build a learning environment, and motivate students. In an attempt to provide a multi-faceted picture of teachers' efficacy beliefs, Bandura constructed his own Teacher Efficacy Scale (unpublished) instrument of 30 items with 7 subscales. Each item, measured on a 9-point Likert scale anchored with: nothing, very little, some influence, quite a bit, and a general deal, led Bandura to argue that perceived self-efficacy results from diverse sources of information and these sources of information must be processed and weighed through self-reflected information such as vicarious experiences, social persuasions, and psychological and emotional arousal (Bandura, 1986). While this unpublished work was circulated, the reliability and validity information about the measure is not well-known.

In 1984, Gibson and Dembo expanded research on teacher efficacy by using a combined conceptual framework from Bandura and from the Rand researchers. Gibson and Dembo developed The Teacher Efficacy Scale (TES), to assess what teachers perceived to be outcome expectations (general teaching - GTE) and efficacy expectations (personal teaching efficacy - PTE). Measuring teacher efficacy to a two-factor dimensional construct, this scale of 30-items was scored on a 6-point Likert scale ranging from "strongly disagree" to "strongly agree." Because only 16 of the 30 items produced acceptable reliability coefficients as indicated by Cronbach's alpha, Gibson and Dembo eventually narrowed the efficacy scale to a 16-item instrument. This modified instrument has been in use widespread and, as a result, the working definition of teaching efficacy has come to be understood as the combination of GTE and PTE (Woolfolk & Hoy, 1990). The outcome of this study supported Bandura's hypotheses that people with a high sense of efficacy perform better than those who doubt their capabilities.

To better clarify and understand the salient entities within the teacher efficacy construct, Guskey and Passaro (1994) randomly selected efficacy items from the Gibson and Dembo's scale (1984). By rewording selected items, they sought to see if items thought to reflect a personal internal orientation remained the same or were altered to reflect a general external orientation. They used the same method for the general teaching efficacy items. Upon close review, Guskey and Passaro questioned the true meaning of the factors found by Gibson and Dembo. Their analysis found that the two dimensions of efficacy that exist fell into the categories of internal and external control orientations rather than GTE and PTE. Since both the referent and locus of control were altered, their work demonstrated the need to better clarify and

understand the meaning of teacher efficacy from both the theoretical and measurement perspective.

Rooted in Bandura's construct of self-efficacy, Tschannen-Moran et al. (1998), proposed a new model of teacher efficacy, The Teacher Sense of Efficacy Scale (TSES). The TSES is a measure of efficacy that assesses tasks associated with teaching in the domains of engagement, classroom management, and instructional practice. The three-factor structure of this measure enabled them to identify specific areas of concern in teachers' relationship between the domain of teaching tasks, teacher performance outcomes and student achievement. Tschannen-Moran et al. (1998) contend that teachers' sense of efficacy is cyclical – the higher one's efficacy is leads to greater effort and persistence, thus, improved teaching and learning. At the same time, this cycle applies to the belief that lower efficacy leads to less effort and persistence, thus poor teaching performance (see Figure 2.4).

Researcher(s)	Definition	Measurement
Bandura (unpublished)	People's judgment of their capabilities to organize and execute courses of action to achieve desired outcomes	Bandura's Teacher Efficacy Scale attempts to provide a multi-faceted picture of teacher efficacy beliefs
Gibson & Dembo (1984)	Teacher efficacy is the combination of GTE and PTE	Teacher Efficacy Scale (TES) assesses general teacher efficacy and personal teaching efficacy
Guskey & Passaro (1994)	(Add clarity to teacher efficacy)	Utilized Gibson & Dembo scale to demonstrate the need to better clarify and understand teacher efficacy from both a theoretical and a measurement perspective
Tschannen-Moran & Woolfolk-Hoy (2001)	Teachers' judgment of his/her capacity to bring about desired outcomes of student engagement and learning	Teachers Sense of Efficacy Scale assesses teacher beliefs in their ability to organize and execute courses of action to achieve desired outcomes

Figure 2.4: Research trends based on Bandura's theoretical framework.

### *Research Trends on Teacher Efficacy Beliefs and Student Achievement*

While a myriad of studies focus on teacher efficacy and the predictors of teacher efficacy beliefs, McLaughlin and Marsh (1978) were among the first researchers to put forth the extended causal chain from teacher efficacy to student achievement by proposing that a teacher's level of efficacy influences his or her behaviors which in turn affect the behavior of students. In my experience, many educators are unaware that one's expectations can eventually lead students to behave and achieve in ways that confirm their expectations. Lortie (2002) noted that teachers' beliefs create filters through which they process teaching experiences, and in most studies, a teachers' sense of efficacy has been assessed with two factors: personal efficacy, which refers to an individual's assessment of their own competency; and teaching efficacy, which refers to teacher expectations that he or she can influence student learning. However, the majority of the research has been correlation or comparative in nature, and typically, teachers' expectations and perceptions are based on teacher reports on factors such as students' academic ability. Further compounding the issue is significant long term research has not been done to examine the impact of many of the determinants of teachers' efficacy beliefs. Researchers have sought to validate

these two strands which suggest that students tend to fulfill their teachers' expectations. This has given rise to criticism directed at this research.

The temptation, however, is to oversimplify the reasons for the differences in student achievement. Because our system of education is largely built on negative beliefs and practices, Weinstein (2002) posits that the application of expectancy theory to education is complex and researchers continue to debate the methodological flaws of single studies. As evidence that the phenomenon has not yet been proven, researchers sample thin slices of time and then aggregate these results, thereby, failing to capture the specific conditions or risk factors that maximize or minimize the potential for negative self-fulfilling prophecies (Weinstein, 2002).

Because teachers' beliefs and attitudes may influence the learning capacities of students, I suggest that teachers' expectations give rise to the learning outcomes of students. In 1974, Brophy and Good documented how teacher expectancies and beliefs influence student motivation and achievement. They noted that much of the research was correlational, but many of the links were also validated experimentally. In reviewing a large number of research studies, they concluded in some cases teacher/student interactions created a self-fulfilling prophecy by communicating expectations to their students. By cataloging student attributes (social class, race, gender, etc.) that may affect teachers' interactions with their students, Brophy and Good found teacher's efficacy beliefs guides their actions and communicates with students, influencing their motivation and achievement. It is these conscious and unconscious beliefs that are considered to be prevailing determinants of one's intentions and actions (Bandura, 1977) that leads to the metaphors and language teachers' use. These not only reflect their beliefs, but shape their thinking and practice in education (Cook-Sather, 2003) and offers insights into the way people conceptualize and understand their world. Weinstein (2002) states, "expectancy processes do not reside solely in the minds of teachers, but instead are built into the very fabric of our institutions and our society" (p. 273).

Both quantitative and qualitative studies have documented a strong link between perceived teacher self-efficacy beliefs and differences in students' academic outcomes (Alderman, 1999; Bandura, 1977, 1994; Cook-Sather, 2003; Delpit & Rozendal, 2003; Jones, 2003; Rosenthal & Jacobson, 1968; Rosenthal, 1973; Tschannen-Moran, Woolfolk Hoy, & Hoy, 2004), and there is compelling evidence that the beliefs that teachers hold regarding their students have a powerful influence on their teaching (Fordham, 1996; Gordon, 2003; Haberman, 1991; Jones, 2003; Ogbu, 1982; Pang & Sablan, 1998). In most of these studies, teacher's sense of efficacy was assessed again with two factors: personal teaching efficacy and teaching efficacy. Pang and Sablan (1998) focused on teacher efficacy beliefs of teaching African American students. Adapting items from the work of Gibson and Dembo (1984) and Woolfolk and Hoy (1990), Pang and Sablan used a 49-item questionnaire that was guided by what seemed to be important issues to survey based on this past research. They compared the efficacy beliefs of pre-service teachers to in-service teachers. Respondents were generally committed to multicultural instruction, but varied in their reported instructional practices and perceived levels of preparedness, effectiveness, and needs. Pang and Sablan noted a higher personal efficacy mean for the pre-service teachers and concluded that teachers in general believe that they felt inadequately prepared to teach African American students because they might not be able to reach these students. This has led them to suggest that their results are an assessment of locus of control or outcome expectancy rather than of self-efficacy, and is rooted in the individuals' beliefs about their own abilities. Pang and Sablan also concluded that a critical dimension of teacher-efficacy has not been investigated - the impact of teachers' beliefs about race.

Pettus and Allain (1999) argued that the rapidly changing demographic make-up in schools requires teachers to be more responsive to diverse student populations. The purpose of their investigation was to develop a viable survey questionnaire for assessing prospective teachers' attitudes and perceptions concerning multicultural education issues. They also wanted to test the efficacy of their instrument for identifying attitude differences among prospective teachers. They initially developed positive and negative position statements about the cultural and educational issues that might serve as indicators of attitudes and predictors of instructional behaviors. With the goal of collecting information regarding the consistency of the questions and to determine if each item contributed sufficiently to the total instrument, a Likert-scale format questionnaire was administered as a pre and post test to 62 teachers. Pettus and Allain's investigation assumed that "prospective teachers with positive attitudes and opinions are more prone to behave appropriately and constructively in actual teaching situations" (p. 652) in a multicultural classroom setting. However, caution must be used because it is questioned if teachers responded to their opinions or to what they perceived to be a more socially acceptable response by others.

Some beliefs educators hold are a result of historic belief systems. Pohan and Aguilar (2001), in their search for measures to assess teachers' efficacy beliefs about issues pertaining to the diversity of historically marginalized socio-cultural groups, concluded that studies of teachers' beliefs about diversity using empirical measures, reliability and validity data were seldom reported and the data derived from these empirically based measures were interpreted with limited or no discussion on instrument reliability and validity (Pohan & Aguilar, 2001). Pohan and Aguilar found that race and/or ethnicity were frequently associated with the concept of diversity. This approach to diversity, however, excluded the socio-cultural discrepancies associated with social class and languages which was more in alignment with the more contemporary approaches to multicultural education. Finding several studies that used both quantitative and qualitative measures, they determined that there was a need for the development of sound instrumentation on diversity research. Because their intent was to provide guidance for the development and design of educational and professional development programs to better prepare teachers for being more effective with diverse student groups, one scale, The Professional Belief About Diversity Scale (2001) consisted of 25 items measuring diversity and the educational context of instruction. The other scale, The Personal Belief About Diversity Scale (2001), consisted of 15 items measuring issues relating to diversity of race and social class. Both scales used a 5-point Likert Scale ranging from "strongly disagree" to "strongly agree" with several items on both scales worded negatively to avoid a response set and then reversed keyed to establish attitudes and predictors of instructional behaviors. Data was pooled to the two test conditions and an analyses of variance (ANOVA) test did not reveal significance differences. It is also suggested that these scales might be useful as initial gauges of beliefs about diversity and its significance to effective teaching. Pohan and Aguilar intended for these scales to be used for the purpose of investigating the relationship between a person's beliefs and variables that might affect educational policies or interventions (see Table 2.5).

Researcher(s)	Research Trend	Note
McLaughlin & Marsh (1978)	Causal chain from teacher efficacy to student achievement	Teacher's level of efficacy influences his/her behavior which affect students' behaviors
Weinstein (2002)	Preventive Intervention – create "buffering" opportunities and close relationships for children that can instill	Expectancy processes resides not only in the minds of teachers, but are built into the fabric of our institutions and our society

Brophy & Good (1974)	high expectations, teach strategies to meet these goals, and advocate for unmet needs  Teacher expectancies and beliefs influence student motivation and achievement	Inequities are related to the history of inter-group relationships and student attributes creates self-fulfilling prophecies
Pang & Sablan (1998)	Adapted Gibson & Dembo (1984) and Woolfolk & Hoy (1990) scales and found the assessment to be that of LOC rather than that of self-efficacy	Questions guided by what seemed to be important issues to survey educators  Goal to collect information regarding the consistency of the questions
Pettus & Allain (1999)	Purpose to develop a viable questionnaire for assessing prospective teacher attitudes and perceptions concerning multi-cultural education issues	
Pohan & Aguilar (2001)	Search for a measure to assess teacher efficacy beliefs about issues pertaining to the diversity of historically marginalized socio-cultural groups	Professional Belief About Diversity and Personal Belief About Diversity assesses issues relating to diversity of race and race and to be a useful tool as an initial gauge of beliefs about diversity and effective teaching

*Table 2.5.* Research trends on teacher efficacy beliefs and student achievement.

Since Bandura (1977) introduced the construct of self-efficacy, researchers have been successful in demonstrating that an individual's self-efficacy beliefs influence how people behave and can often be better predicted of the beliefs they hold about their capabilities. Through the years, the concept of teacher efficacy has been connected with many educational variables. The focus on teacher efficacy beliefs has ranged from its impact to outcomes (Bandura, 1977, 1986; Pajares, 1997; Guskey & Passaro, 1994; Gibson & Dembo, 1984; Hoy & Woolfolk, 1990; Tschannen-Moran et al., 1998), the characteristics of efficacious teachers (Alderman, 1999; Cook-Sather, 2003; Delpit & Rozendal, 2003; Jones, 2003; Rosenthal & Jacobson, 1968; Rosenthal, 1973), to its measurement and development (Bandura, 1977, 1994; Guskey, 1981; Rose & Medway, 1981; Gibson & Dembo, 1984; Woolfolk & Hoy, 1990; Guskey & Passaro, 1994; Tschannen-Moran et al., 2004). While research has established teachers' differential expectations for students and these expectations may influence student achievement, researchers have not highlighted the basis upon which these differentiated expectations are formed or how they are manifested within the classroom. Absent in the literature reviewed are cross-sectional snapshots of teacher perceptions of their capabilities and the interplay between teachers' pedagogical beliefs and self-efficacy beliefs and the way in which these perceptions underlie their actions.

### *Summary*

Research has provided some understanding to the complex role that teacher efficacy beliefs play in the academic achievement of students, and research has suggested there is little difference in how these variables influence teacher practices. Despite the interest in this construct, there are still gaps in our understanding of teacher efficacy. Thus, the following observations and implications from the literature review can be made:

1. The meaning and definitions of teacher efficacy construct are continuing to evolve and be developed.
2. Researchers have acknowledged the problems of measuring teacher efficacy.

3. Investigations and analyses of studies are based on the theoretical perspective of individual researchers.
4. The nature and degree of teacher efficacy beliefs are likely to vary among teachers as a result of teachers' beliefs about teaching and their students.
5. The need to discover the correlates relating to teachers' sense of efficacy and beliefs they hold and how these beliefs influence educational practices.
6. Teacher efficacy is cyclical in nature and evolves as experiences are encountered.
7. Despite the fact that teacher efficacy beliefs and expectations have been investigated in educational settings, few studies have directly investigated the relationship between teacher efficacy beliefs and teachers' perceptions of their instructional practices towards their students.

### *Purpose of the Study*

Perhaps, the most compelling reason for my interest in the salient aspects of teacher efficacy beliefs is the probable link between teacher efficacy beliefs and student academic success. Research findings have generally supported Bandura's (1986) contention that efficacy beliefs mediate the effect of skills or other self-beliefs on subsequent performance attainment of people (Bandura, 1997). This reciprocal interaction indicates that there is a need to use a more multi-dimensional indicator to get a more nuanced picture of how teacher efficacy beliefs might influence teacher practices. This investigation expects to identify the multifaceted beliefs that teachers may use to inform their thoughts and actions. Subsequently, teacher efficacy has been built on two theoretical frameworks – locus of control theory and self efficacy theories. It is my hope that this study will contribute to the development of a more inclusive pedagogy for educators seeking to improve the manner in which they think and act.

Specifically, this study will be a design experiment to use a redesigned and more effective instrument to explore the construct of efficacy in more detail as a precursor for determining the types of interventions that might be effective for impacting efficacy in ways that reduce the achievement gap. Thus, this investigation will seek to unpack aspects of self-efficacy by uncovering teacher efficacy beliefs that drive practice, and to: (a) provide an overview of teachers' self-reported efficacy beliefs; (b) examine the beliefs of this construct that may contribute towards differentiated student outcomes; and, (c) understand which efficacy beliefs may impact teacher practices.

### *Research Questions*

The following research questions have guided this investigation:

1. What is the nature of variations of efficacy perceptions and its sub-constructs?
2. Is self-efficacy unitary or is it multidimensional?
3. Which self-efficacy scales appear to be the most related to differential forms of student achievement?
4. What are the specific expectancy beliefs that may contribute more to differences in learning outcomes?

### *Significance of the Study*

A major challenge confronts us – the gaps in academic achievement exist among students by: ethnicity; socioeconomic and socio-demographic status; and the cultural differences within schools. Additionally, there is evidence that key components of teacher effectiveness are the belief systems that may impact teacher practice and, thus, student outcomes. Most of the discussion to date about the causes of the academic gap in student achievement has focused on the curriculum and instructional issues, with little analysis of how the culture of teacher beliefs may contribute to the academic gap by propelling some students towards success and hindering others.

It also suggests that we need to have ways for teachers to make their beliefs explicit before they can hope to reflect upon them, much less change or modify them before change efforts are likely to improve student achievement. If we learn how our attitudes and our thinking influences our emotions and behaviors we can possibly alter our way of thinking as a means to develop effective new philosophies for interacting with various student groups and make that a critical component of school reform.

Given the importance of self-efficacy as a construct to understand teacher practice and student achievement, and given the previously noted deficiencies in the analysis of it to date, it is important to develop a more detailed profile of this construct as it relates to differences in teacher practice and student achievement. This is critical for both theory and for designing an appropriate intervention.

## Chapter 3

## Method

*Overview*

Through the use of quantitative and qualitative methods of analysis this study was designed to: examine teachers' self-efficacy beliefs and to better understand teachers' self-efficacy perceptions of their capabilities and responsibilities in urban elementary schools; and examine the association between these perceptions and teacher practices. The analysis was designed to provide insights into the possible relationship between teacher self-efficacy and expectancy beliefs and teacher practices which may influence differences in student academic outcomes (see Figure 3.1).

All data were exported from surveymonkey.com into MS Excel. Data were then imported from MS Excel into SPSS version 15.0. Once in SPSS the data were merged with the student data. All statistical analyses were performed using SPSS 15.0.

<b>Question</b>	<b>Hypothesis</b>	<b>Methodology</b>	<b>Type of Variable</b>	<b>Analysis</b>	<b>Justification</b>
1. What is the nature of variation of self-efficacy and its sub-constructs?  2. Is self-efficacy a unitary concept or is it multidimensional?	Teachers self-efficacy beliefs affect their practice.	Modification of Bandura's Instrument: Teacher Self-Efficacy Scale (1997)	Independent	Exploratory data analyses  Pearsons correlations Descriptive statistics  Multiple tables to view raw data and to show various kinds of relationships	Teacher perceived beliefs are multidimensional that operate independently
3. Which efficacy scales appear to be the most related to differential forms of student achievement?  4. What are the specific expectancy beliefs that may contribute more to differences in learning outcomes?	Teacher self-efficacy perceptions have significance on student academic outcomes.	Student data analysis  Open-ended responses	Dependent	Descriptive statistics Pearsons correlations  Exploratory data analysis Associations Pearsons correlations	Teachers' perceived beliefs may influence practice and make significant contributions towards student academic success or failure

Figure 3.1. Methods and Analyses of teacher beliefs and expectations affects on student academic results.

### Sample

This study took place in a small urban school district in northern California that included 10 elementary schools, which ranged from low socioeconomic Title 1 schools to high socioeconomic schools, with varying student demographics. Each school was labeled by an identifying code to protect the anonymity of the participating teachers, schools, and the district. While, there were no prior definitions of the population and the group that had taken the survey, it was not known what the effect of having to use volunteers who were willing, would have on the results. In addition, participants received no inducement or reward to be a part of the study.

The survey was sent by e-mail to 100 teachers at the end of the school year after the administration of the 2007 state's norm reference tests. Working jointly with the district's Educational Services Department, teacher participation was solicited from all elementary teachers in the district. Teachers were notified (via e-mail) that their input is critical in providing information needed to design and develop a district-wide professional development program that will focus on teachers as adult learners with individual learning styles and needs.

Each school had a teaching staff of at least 10 classroom teachers. The 37 teachers who voluntarily participated in the study were asked to complete the modified Bandura instrument, posted on surveymonkey.com, and to provide their demographic information which included their school, grade level taught, and their years of teaching. They also completed three open-ended questions about the relationship of their beliefs to their practices and student outcomes.

It is important to note that an efficacy scale is typically given to several teachers in the same school, with the results aggregated to determine one score. In this study, the self-efficacy scale was completed only by individual participants and was the participating teachers' perception of their efficacy and not that of the school. In Table 3.1 (see below), each school's percentage of teachers participating in this study is presented and the percentage of the grade levels represented. Of the participants, 12 teachers chose not to identify their school. What is known of those teachers who declined to state school affiliation, four teachers taught multiple grades (two in grades K-5 and two in grades K-8); two teachers stated other as their grade level; one teacher worked with students with disabilities; one teacher worked as an intervention teacher; and three teachers worked at multiple school sites.

Table 3.1

#### *Teacher Background Characteristics*

Variable	N	% of survey participants
<b>School</b>		
unknown	12	32.4
H	10	27.0
B	3	8.1
W	3	8.1
O	1	2.7
P	2	5.4
L	2	5.4

	J	1	2.7
	OK	1	2.7
	C	1	2.7
	special education	1	2.7
	<b>Total</b>	<b>37</b>	<b>100.0</b>
<b>Grade</b>			
	1st	4	11.8
	2nd	5	14.7
	3rd	7	20.6
	4th	2	5.9
	5th	6	17.6
	K	4	11.8
	K-5th	2	5.9
	K-8	2	5.9
	other	2	5.9
	<b>Total</b>	<b>34</b>	<b>100.0</b>

Three variables were used to represent the teacher demographic characteristics: grade level taught; years of teaching and years in the district; and teacher and school demographics. On average, teachers indicated that they worked in the district for 13.89 year ( $SD = 10.99$ ) and had been teaching for an average of 18.26 years ( $SD = 11.26$ ) (see Table 3.2). It is important to note that the efficacy beliefs on experienced teachers may be quite stable, and according to research, well-established and resistance to change.

Table 3.2

*Teacher Background Characteristics: Years in District; Years Teaching.*

	<i>N</i>	Min.	Max	<i>M</i>	<i>SD</i>
How many years have you worked in the district?	31	1	38	13.79	10.99
How many years have you been teaching?	37	2	38	18.26	11.26

Because of the small percentage of teacher respondents in this study, each school, along with the number of teacher respondents and school characteristics, is represented (see Table 3.3). While this sample is only a representation of the district's population, it has the same general

characteristics of the district's population. The data in the table also indicate that the results will be limited by the number of teachers in each school and in each grade level who responded to the survey. However, these results are intended to be neither all inclusive nor to represent all teachers. Instead, this is intended to be a useful way to begin to think about the ways teachers and schools may influence teacher efficacy beliefs and teacher effectiveness. In addition, since student data is reported by grade level, school, and district, teacher efficacy results will not reflect their beliefs as to the performance of his or her students. Rather, they will be related more indirectly to overall school and grade level results and can only be generally suggestive given that there are generally differences in teacher effectiveness within schools. Thus, the composite school score may not be reflective of any specific teacher scores.

Table 3.3

*Teacher Participants by School (where known) and Student Characteristics*

School	# of Teacher Respondents	% of African American Students	% of ELA proficiency of AA	% of Latino or Hispanic Students	% of ELA proficiency of L or H	% of English Learners	% of ELA proficiency of ELs	% of School Free and Reduced lunch	% of ELA proficiency of FRL
B	3	3	33	3	81.8	16	55.2	6	54.2
H	10	14	32	24	47.0	43	55.1	53	45.5
W	3	16	25	17	47.2	40	42.3	58	41.5
O	1	7	64.7	5	53.1	22	60.0	19	56.5
P	2	16	36.1	9	36.1	28	45.5	41	41.9
L	2	12	47.2	13	61.0	35	56.5	33	44.2
J	1	12.2	8.3	70.3	13.6	67.2	12.1	91.3	12.9
OK	1	multi-schools							
C	1	Multi-schools							
Special educ	1	multi-grade; multi-schools							
unknown	12	various grades							

While it is unclear as to the ethnicity of each teacher respondent, the district data is representative of each school's average teacher population and student population. This information may be useful in understanding the self-reported efficacy perceptions of teacher respondents and its possible relation to students' demographics. It is suggested when differences exist between the students' and teachers' demographics, this may result in teachers misreading the styles of language and patterns of social interactions. There is also evidence in the literature that teachers tend to base their expectations on the group performance of students rather than on the performance of an individual child (Good, 1987) (see Table 3.4).

Table 3.4

*District's certificated ethnic breakdown and student ethnic breakdown*

Staff ethnicity	% of certificated staff	% of student population
African American	3	13
American Indian	0	1
Asian	7	31
Filipino	2	9
Hispanic	5	12
White	83	31

It has been well established that teacher expectations are influenced by the race and ethnicity of students. However, the nature and degree of teacher expectations effects in a particular school or classroom are likely to vary among teachers as a result of teacher beliefs about teaching and learning.

*Data Collection Procedures*

To guarantee confidentiality of teacher respondents, teachers' names were not solicited. Instead, teachers were asked to identify themselves only by their school (optional), grade level, years of teaching, and years in the district. Data were grouped by grade levels and schools. Student data were grouped by schools, grade levels, socioeconomic levels (free and reduced lunch status) and socio-demographic areas (e.g. students' ethnicity, language). In this way the confidentiality of students, teachers, schools, and the district was guarded.

Our confidentiality policy was discussed with all teacher participants. To assure participants that their responses remained confidential, they were coded by the above, to protect their anonymity. Teacher participants, however, may have experienced feelings of discomfort when answering questions about their experiences. In order to mitigate this

risk, teacher participators had the option not to answer a question or discontinue completing the survey.

All data collected was entered into surveymonkey.com by each participant. Supervised by me, a data expert entered all data into the SPSS 15.0 format. I assumed the responsibility for the on-going monitoring of the data collection process, confidentiality of the investigation, and data interpretation. However, there may be measurement errors due to the occurrence of an item being misread within the instrument. This may contribute to the variability between samples that is not related to the purpose of this study.

### *Instruments*

In order to focus on the two areas of research, Rotters's social learning theory of locus of control and Bandura's social cognitive theory, the instrument used to collect data for this study on teachers' efficacy beliefs was developed by adapting items from the work of Bandura's Teacher Efficacy Scale (1997) and Guskey's Responsibility of Achievement (1981) (see Figure 3.2).

<b>Researcher</b>	<b>Definition</b>	<b>Measurement</b>
Bandura (1997)	A judgment of a teacher's capabilities to bring about desired outcome of student learning; teachers' beliefs that their efforts will have a positive effect on student achievement.	Teacher Self-Efficacy Scale: seven subscales assess efficacy to influence decision-making; influence on school resources; instructional efficacy; disciplinary efficacy; enlisting parental involvement; enlisting community involvement; and creating a positive school climate.
Guskey (1981)	A global measure of responsibility.	Responsibility for Student Achievement: two subscales reflect the degree of responsibility for student success and responsibility for student failure.

*Figure 3.2.* Research Trends.

It is suggested that a valid measure of teacher efficacy is not simply beliefs about ability, but the actions that follow from these beliefs. Merged as a single instrument (see Appendix A), the first part of this instrument was used to examine teacher self-efficacy perceptions, and to identify the efficacy perceptions and the extent to which teachers believe themselves to be capable of supporting their students' learning. The Bandura Modified Teacher Scale consists of seven sub-scales (see Figure 3.3).

<b>Efficacy Sub-scale</b>	<b>Definition</b>
Efficacy to influence decision-making (DM)	To make or have an impact on decisions and policies that may affect student outcomes.
Instructional Efficacy (I)	Instructional decisions.

Disciplinary Efficacy (D)	Ability to control student behaviors and attendance.
Efficacy to influence parental involvement (PI)	Ability to engage parents in supporting their child's learning and outcomes.
Efficacy to create a positive school climate (PSC)	Ability to motivate students and build self-esteem.
Efficacy to build a culturally relevant learning environment (C)	Ability to connect to students' home and cultures.
Efficacy on internal locus of control (LOC)	Responsibility for student success and responsibility for student failures. Ability to execute actions that lead to success.

Figure 3.3. Bandura's Modified Teacher Efficacy Scale.

The second part of this instrument, three open-ended questions, were used to identify teachers' perception of personal control over their responsibility for student outcomes and describe the salient beliefs about and the relationship between teachers' perceived efficacy to student academic achievement. The three open-ended questions were formulated using Guskey's scale of internal-external locus of control to assist in uncovering and describing the relationship of teachers' efficacies to teacher practices and student outcomes. These questions were used to solicit responses from teachers to better determine their beliefs about student achievement that underlie each of the components of efficacy (see Figure 3.4). Using correlational evidence with the established constructs contributes to reasonable validity, thus allowing for qualitative analyses.

Question	Efficacy sub-scale
1. What do you think are the major obstacles that prevent students from reaching the levels of proficiency or advancement?	Efficacy to build a culturally relevant learning environment.
2. What do you think are the causes of these obstacles?	Efficacy to build a culturally relevant learning environment.
3. How have you changed your practices to better fit these needs of your students?	Instructional Efficacy.

Figure 3.4. Open-ended survey questions.

### *Reliability and Validity*

Many factors impact the degree that a given test will yield reliable scores for a given administration. Although, the present study involved an extensive quantitative method, the qualitative study is important to the overall study. To improve the comprehensibility of the instrument used, the response format in the questionnaire was used to check comprehensibility and clarity of the items, and to gauge the validity of the responses to the 9-point Likert scale. Table 3.5 shows the respective teacher efficacy scales of this study, the corresponding survey items and the scale reliability measured with Cronbach's alpha for the Bandura's Modified Teacher Efficacy Scale part 1.

Table 3.5

*Reliability for the Teacher Scales*

Scale	Survey Items	Cronbach's Alpha
Efficacy to influence decision making	1, 8	.84
Instructional efficacy	19, 22, 25, 26, 28,	.76
Disciplinary efficacy	3, 11, 20	.76
Efficacy to enlist parental involvement	7, 19	.76
Efficacy to create a positive school climate	5, 12, 14, 16, 17, 18	.70
Cultural efficacy	4, 10, 13, 15, 21, 23, 27	.50
Efficacy on internal locus of control	2, 6, 24	.70

Construct validity relates to the appropriateness of the measure. Using Cronbach's alpha, a coefficient of consistency, measures how well a set of variables or items measures a single, uni-dimensional latent construct (reliability), and is used to estimate the proportion of variance that is consistent in a set of test scores. In this study the range is from 00.50 (cultural efficacy) to 00.84 (efficacy to influence decision making). These statistics are influenced by the small sample size. With the exception of the indicators for cultural efficacy construct, all correlations related to teacher efficacy beliefs show a high to moderate significant association, thus the correlations lend some support to the hypothesis that teacher self-efficacy beliefs may affect their practice.

While there is no previous reliability and validity data for this instrument, the reliability and validity for the two instruments, Bandura's and Guskey's, on which it is based, are as follows (see Figure 3.5).

Instrument	Scale	Reliability and Validity
Bandura's Teacher Efficacy Scale (1977)	Attempts to provide a multi-faceted picture of teachers' efficacy beliefs	Reliability and validity information about the measure have not been available. However, instrument validity has evolved from the use of Bandura's scale as the basis for further research.
Guskey's Responsibility for Student Achievement (1981)	Rooted in Rotter's (1966) conception of locus of control this 30-item instrument measures the amount of responsibility a teacher felt for student success or failure	Guskey reported inter-correlations ranging from .72-.81 between overall responsibility and responsibility for student success and student failure while the subscales for student

		<p>success and student failure were only weakly related (.20) or not at all. The use of this measure has served as the basis for further studies in LOC. No published studies were found in which other researchers had adopted this measure.</p>
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Figure 3.5. Instrument Reliability and Validity.

### *Student Data*

Student data were collected from the spring 2007 California Standards Test (STAR) scores. Non-confidential data results were accessed from the California Department of Education web site, and through the district's non-confidential accountability reports on student achievement. Students' data was identified and grouped cumulatively by: grade level, school, ethnicity, language, free and reduced lunch status; student background variables for student ethnicity, socioeconomic status; and student proficiency results from California's state standardized tests. The data was then aggregated by school, grade level, and socio-demographic information. Reference to individual students was not made, nor was there any contact with individual students.

### *Procedure*

The goal of this investigation was: to better understand teachers' self-efficacy perceptions of their capabilities and responsibilities in an urban elementary school setting; to examine the association between teacher's self-perceptions on teacher practices; and to estimate their effect on student academic achievement.

### Key Question 1

*What is the nature of variation of self-efficacy and its sub-constructs?*

The first element of this investigation was to examine teachers' self-efficacy beliefs and to identify their efficacy perceptions. The perceptions teachers have towards school and schooling was elicited from teachers using the modification of Bandura's Teacher Self-Efficacy Scale (see Appendix A and B). This scale was designed to gather participants' self-perceptions of their efficacy beliefs in which they were asked to indicate their degree of agreement with each item by responding on a 9-point Likert scale from 1 (Nothing) to 9 (A Great Deal). The first element of this investigation was to examine the relationship between teachers' perceived efficacy and student outcomes. A variety of statistical methods were run using SPSS version 15.0. Results were analyzed through descriptive statistics and Pearson correlations to explore correlations between the independent variables (DM, I, D, PI, PSC, C, LOC) to dependent variables (student demographics and academic achievement). I examined the hypotheses generated by what I believed are the salient belief factors that helped or hindered teacher effectiveness and explored the associations with student data results. First, I computed the variations of

academic achievement of students within schools and between schools. To create this distribution, I compiled the average achievement scores attained by students based on the socioeconomic and socio-demographic levels. Next, the variations of this distribution indicated how much the average achievement of students differed from school to school considering only students' socioeconomic and socio-demographic information. Correlations and other basic descriptive statistics were used to determine the degree of interrelatedness among the seven efficacy subscales and to determine the varying attitudes teachers have towards the many different types of tasks that they are asked to perform. The goal is to determine which of the scales seems to operate independently.

### Key Question 2

*Is self-efficacy unitary or is it multidimensional?*

To answer Key Question 2, the average scores on each of the seven subsections were used to create variables based on the participants' responses to the modified Bandura's instrument by each teacher, grade level, and school. Teacher efficacy scores, were computed on each respective factor and it was determined what subsets have the greatest to least efficacy scores. A factor analysis was completed to examine the interrelationship among the items because these measures have an inherent multidimensionality.

It was also important that I determined how teachers responded to the questions and which factors teachers feel they have influence over the most. As part of the quantitative data analyses, this analysis provided me with an explanation of items in terms of their common underlying dimensions. While I examined the entire sequence of responses by each participant, I also distinguished between those categories by coding the data using the coding categories suggested by the identified subscales that were presented in both measures. Finally, I analyzed the data by describing each of the results in order to provide a multi-faceted picture of teachers' efficacy beliefs. In addition, I examined the data through Pearson Correlation to determine the degree of association between the teacher efficacy scale and teacher data and to see if there were highly significant correlations that do and do not respond to my stated hypotheses. An Analyses of Variance (ANOVA) was run to examine differences across the seven subscales. Analysis of Variance is a family method for testing hypotheses that involves the measures of more than two groups. I then isolated those beliefs, which I believed are indicative in predicting academic achievement. This variety of statistical methods was conducted using the SPSS Version 15.0 computer statistical analysis package and results were analyzed through correlations and descriptive statistics.

The next element of this investigation was to examine teacher's efficacy perceptions and the extent to which teachers believed themselves to be capable of supporting students' learning. In order to answer key question two, the average scores on each of the seven subscales of Bandura's modified instrument were determined. The seven subscales include efficacy to influence decision-making, instructional efficacy, disciplinary efficacy, efficacy to enlist parental involvement, efficacy to create a positive school climate, cultural efficacy, and efficacy on internal locus of control.

Because of the survey nature of this investigation, teachers' perceptions were assessed in terms of teacher self-reported effort, the short answer portion of the modified Bandura's scale provided qualitative data by assessing teachers' salient beliefs in relation to student outcomes. I began a detailed analysis with a coding process by organizing the written responses by text data and finding the most descriptive words in each response for each question. These categories (chunks) were labeled with a term based on the actual language of the participants. Information was then coded by labeling categories with a term in the actual language of teacher participants, thus creating themes. These themes were then interconnected into the seven subscales.

### Key Question 3

*Which self-efficacy scales appear to be most related to differential forms of student achievement?*

To determine the extent to which teacher self-efficacy beliefs affect and/or influence student academic success, the goal is to uncover and describe the relationship of teachers' efficacy to student academic outcomes. Teachers' efficacies were compared with students' academic outcomes. In order to examine the associations between perceived teacher efficacy beliefs and student outcomes, the data were subjected to a series of correlation analyses to determine the interrelationships among a number of factors. To examine the relationship between the perceived self-efficacy beliefs of participating teachers and that of student outcomes, a Pearson's correlation was conducted. I examined the correlations between the various efficacy subscales of teachers and various achievement averages of students. In looking at the correlation coefficients I was able to see if they were significantly different from 0. Significance, where found, established correlation. Where there were no significant correlations, this has implications for the usefulness of the instruments because of my sample size. Once the contributions of the independent variables (teacher efficacy beliefs) were determined, these outcomes were triangulated with student outcomes.

Due to the small sample size, a regression analysis could not be performed. Therefore, the R-square change and its test of significance could not be examined for exclusion of each predictor to determine the unique contribution of the predictor.

### Key Question 4

*What are the specific expectancy beliefs that may contribute more to differences in learning outcomes?*

Ultimately, this study proposes to describe the salient beliefs about teachers' perceptions and the relationship between teachers' self-efficacy beliefs to determine, if any, where influences might lay. Exploratory data analyses provided viable interpretation of the open-ended responses to the questions.

Tables were used for viewing the raw data and to visually display the interrelationship among the independent variables (teacher efficacies) and the dependent variables (student outcomes), and to show all allowable data through the use of these

tables to reveal the associations between teacher efficacies and the academic results of various student groups (see Appendix C). The results of this analysis reveal significant effects on teachers' sense of self-efficacy and its unique variables that may influence teachers' stated beliefs and the relationship to their practices. This also demonstrates the possible interdependence of teacher efficacy in relation to student outcomes.

## Chapter 4

## Results

*Overview*

Elements of this investigation were to identify teachers' sense of self-efficacy beliefs; explore teachers' self-efficacy beliefs and what factors could be predictive of students' academic success and/or failures; and explain the possible relationship between teachers' self-reported beliefs and student outcomes. This chapter presents the results of the data analyses conducted in this study. However, the data will be limited by the number of teachers in each school and in each grade level. In addition, since student data is reported by grade level, school and district, teacher efficacy results will not reflect their beliefs to the performance of his or her students.

The research questions, as indicated in Chapter 2, were used to frame the results with the goal of measuring teachers' self-efficacy perceptions and to estimating the overall magnitude of teacher effect on student academic achievement. In general, comparisons between teacher self-efficacy and student groups are displayed first, followed by further statistical analyses of the variables. Teacher efficacy results will be related more indirectly to overall school and grade level results and can only be suggestive given that there are generally differences in teacher effectiveness within schools and grade levels. Descriptive statistics for the variables in this study are shown in this chapter.

## Key Question 1

*Is self-efficacy unitary or is it multidimensional?*

To determine the nature of variation of self-efficacy and its sub-constructs, the average scores on each of the seven subscales of the modified Bandura's instrument were determined. The seven subscales include efficacy to influence decision-making, instructional efficacy, disciplinary efficacy, efficacy to enlist parental involvement, efficacy to create a positive school climate, cultural efficacy, and efficacy on internal locus of control. The descriptive statistics for the seven subscales can be found in Table 4.1. The means and standard deviations, which are broken down by the seven sub-scales, are the primary variables of the study.

Table 4.1

*Descriptive Statistics for Bandura's Modified Instrument*

Subscale	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
Efficacy to influence decision making	32	3.50	9.00	6.26	1.71
Instructional efficacy	27	3.80	8.20	5.86	1.17
Disciplinary efficacy	29	4.33	9.33	7.12	1.24
Efficacy to enlist parental involvement	30	3.00	8.00	5.18	1.28

Efficacy to create a positive school climate	29	3.83	8.17	5.72	1.00
Cultural efficacy	25	4.86	7.29	5.91	.75
Efficacy on internal locus of control	27	4.00	9.00	6.17	1.28

Teachers had the highest scores on the Disciplinary Efficacy subscale ( $M = 7.12$ ,  $SD = 1.24$ ) and lowest scores on the Efficacy to Enlist Parental Involvement subscale ( $M = 5.18$ ,  $SD = 1.28$ ). There is some variation across all measures ranging ( $M=5.18$  to  $M=7.12$ ) suggesting that there are some differences in the beliefs that teachers hold, particularly in Efficacy to Influence Decision Making ( $M= 6.26$ ,  $SD=1.71$ ), but not a dramatic amount in relation to the mean. The interpretation of these findings will be discussed in conjunction with other findings below.

Next, an analysis was done to see whether self-efficacy attitudes are related to the length of time that teachers have spent in the profession. However, because this is a cross-sectional study, these results may only indicate that the length of time differences of teachers entering the profession may be impacted by other variables outside the scope of this study. Pearson correlations (see Table 4.2 and Table 4.3) were examined to determine the degree of association between the efficacy scales and years in the district and years teaching. There was a positive significant correlation between years teaching and disciplinary efficacy ( $r = .39$ ,  $p = .03$ ). As the years of teaching increased, disciplinary teaching efficacy increased. There was also a positive significant correlation between years teaching in the district and disciplinary efficacy ( $r = .40$ ,  $p = .04$ ). As the years of teaching increased, disciplinary teaching efficacy increased. The connection between years of teaching and disciplinary teacher efficacy could be explained by the fact that as one gains more experience, one develops techniques of control. None of the other correlations of interest were significant. It therefore appears that other than for discipline, self-efficacy attitudes tend to be established early in one's career and become deeply held beliefs that do not change over time.

Table 4.2

*Pearson's Correlations for Self-Efficacy Subscales (N = 37)*

		Years in the district?	Years teaching?	Efficacy decision making	Instructional efficacy	Disciplinary efficacy	Efficacy Parental involvement	Efficacy school climate	Cultural efficacy	Efficacy locus of control
Years the district?	r	-								
Years teaching	r	.902(**)	-							
Efficacy decision making	r	-.031	-.212	-						
Instructional efficacy	r	.320	.375	.125	-					
Disciplinary efficacy	r	.394(*)	.403(*)	.337	.645(**)	-				
Efficacy parental involvement	r	-.192	-.100	.213	.489(**)	.323	-			
Efficacy school climate	r	.379	.251	.472(**)	.585(**)	.710(**)	.518(**)	-		
Cultural efficacy	r	-.074	.131	-.017	.531(**)	.336	.637(**)	.390	-	
Efficacy locus of control	r	.118	.214	.441(*)	.675(**)	.774(**)	.665(**)	.748(**)	.616(**)	-

Table 4.3

*Pearson's Correlations for Self-Efficacy Subscales Values of p*

		Years in the district?	Years teaching?	Efficacy decision making	Instructional efficacy	Disciplinary efficacy	Efficacy Parent involvement	Efficacy school climate	Cultural efficacy	Efficacy locus of control
Years the district?	p	-								
Years teaching	p	.000	-							
Efficacy decision making	p	.873	.244	-						
Instructional efficacy	p	.127	.054	.1535	-					
Disciplinary efficacy	p	.046	.030	.074	.000	-				
Efficacy parental involvement	p	.337	.598	.257	.010	.088	-			
Efficacy school climate	p	.056	.189	.010	.001	.000	.004	-		
Cultural efficacy	p	.742	.531	.934	.006	.101	.001	.054	-	
Efficacy locus of control	p	.581	.283	.021	.000	.000	.000	.000	.001	-

Next an effort was made to determine the belief systems within a school. To better understand the influence of the largest identified group of respondents and the other identified group, to those who did not identify their work site, Table 4.4 gives a picture of the cluster of responses and its influence on the statistical outcomes. The response, “Quite A Bit”, was randomly selected to provide a snapshot of some of the responses to the randomly pulled survey questions. These questions were then grouped according to their efficacy sub-scale: “efficacy on internal locus of control” (LOC), “efficacy to build a culturally relevant learning environment” (C), and “efficacy to influence parental involvement” (PI) (see Table 4.4). Since only one school (school H) had a larger number of respondents, a comparison was made with others who identified their work site.

Table 4.4

*Filtered % with response “quite a bit” in randomly pulled questions*

Efficacy sub-scale	Survey Question	School H % answered “quite a bit” (n=10)	Other Schools % answered “quite a bit” (n=15)	Total % of identified schools (n=25)	All respondents % of scores (n=37)
LOC	How much do you feel you can influence the learning of underachieving students?	30	23.1	26.1	21.9
	How much can you do to get students to believe they can do well in schoolwork?	40	23.1	30.4	31.3
C	How much do students’ socio-economic and/or cultural backgrounds influence your expectations of them?	0	22.2	10.5	7.1
	How much do you understand the cultural and social forces that impede student learning?	20	55.6	36.8	29.6
	How much can you do to understand the attitudes and beliefs of your students and families that may impact student achievement?	11.1	55.6	33.3	33.3
PI	How much can you do to get parents to become involved in their children’s learning?	10	23.1	17.4	15.6
	How much can you do to promote learning when there is a lack of support from home?	10	20	15	17.2

To examine if there are differences between variables, Analysis of Variance (ANOVA) was used to examine differences across the seven subscales by teacher grade level, but the sample size is too small to interpret significance tests in ANOVA. Due to the small number of cells in certain grade levels and lack of statistical power for this analysis, teacher grade was combined into two levels for all further analysis. Because of the number of respondents, the decision to cluster grade level groups was based on that number. Teacher self efficacy dimensions do not appear to vary by grade level. The distribution of this recoding can be found in Table 4.5.

Table 4.5

*Teacher Grade Recoded*

Grade	<i>N</i>	%
grades 1-4	18	52.9
all other grades	16	47.1
Total	34	100.0

The results of the ANOVA indicated that there were no significant differences by grade level in teacher efficacy perceptions (see Table 4.6 and Table 4.7). Once again, the small sample size is too small to interpret significance.

Table 4.6

*Descriptive Statistics by Teacher Grade Level*

Subscale	Grade	<i>N</i>	<i>M</i>	<i>SD</i>	Min.	Max.
Efficacy to influence decision making	grades 1-4	15	6.10	1.56	3.50	9.00
	other grades	15	6.73	1.75	3.50	9.00
	Total	30	6.41	1.66	3.50	9.00
Instructional efficacy	grades 1-4	14	5.94	1.33	3.80	8.20
	other grades	12	5.76	1.06	4.60	7.80
	Total	26	5.86	1.19	3.80	8.20
Disciplinary efficacy	grades 1-4	15	7.26	1.34	4.67	9.33
	other grades	12	7.00	1.21	4.33	8.67
	Total	27	7.14	1.27	4.33	9.33
Efficacy to enlist parental involvement	grades 1-4	15	5.00	1.32	3.00	7.50
	other grades	13	5.42	1.30	3.50	8.00
	Total	28	5.19	1.30	3.00	8.00
Efficacy to create a positive school climate	grades 1-4	15	5.61	1.14	3.83	7.33

	other grades	12	5.91	.919	4.33	8.17
	Total	27	5.74	1.04	3.83	8.17
Cultural efficacy	grades 1-4	13	6.05	.720	5.00	7.29
	other grades	11	5.72	.82	4.86	7.14
	Total	24	5.90	.76	4.86	7.29
Efficacy on internal locus of control	grades 1-4	14	6.21	1.32	4.00	8.00
	other grades	12	6.16	1.35	4.00	9.00
	Total	26	6.19	1.31	4.00	9.00

Table 4.7

*ANOVA for Teacher Efficacy Subscales by Teacher Grade Level*

Subscale		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Efficacy to influence decision making	Between Groups	3.00	1	3.00	1.09	.30
	Within Groups	77.03	28	2.75		
	Total	80.04	29			
Instructional efficacy	Between Groups	.20	1	.20	.13	.71
	Within Groups	35.62	24	1.48		
	Total	35.82	25			
Disciplinary efficacy	Between Groups	.47	1	.47	.28	.59
	Within Groups	41.60	25	1.66		
	Total	42.07	26			
Efficacy to enlist parental involvement	Between Groups	1.24	1	1.24	.72	.40
	Within Groups	44.92	26	1.72		
	Total	46.17	27			
Efficacy to create a positive school climate	Between Groups	.62	1	.62	.56	.45
	Within Groups	27.56	25	1.10		
	Total	28.18	26			
Cultural efficacy	Between Groups	.64	1	.64	1.08	.30
	Within Groups	12.97	22	.59		
	Total	13.61	23			
Efficacy on internal locus of control	Between Groups	.01	1	.01	.00	.92
	Within Groups	42.91	24	1.788		
	Total	42.92	25			

Grades 1-4 had higher efficacy scores in instructional efficacy, disciplinary efficacy, cultural efficacy, and efficacy of locus of control. This could be a result of self-contained classrooms and class-size reduction in grades K-3. The “other grades” held higher efficacy beliefs in efficacy to influence decision making, parent involvement, and school climate. This might be indicative of the structure of the upper grades or the support roles of those who worked with multiple grades.

## Key Question 2

*Is self-efficacy a unitary concept or is it multidimensional, with constituent's sub-constructs (scales) that operate independently?*

Are the sub-constructs of self-efficacy distinct components of self-efficacy or are they highly interrelated? To determine the multi-dimensionality of this construct, correlational analyses were conducted for all subscales (see Table 4.2 and Table 4.3). Because total score variance is a central component to internal consistency reliability estimates, it is suggested that the different subscales are related to different study characteristics, suggesting the study characteristics may have had differential impact on reliability estimates. It is important to note that these results are tentative and limited by the scope of this study and the reliability estimates reported for data in hand. The correlations in Table 4.2 and Table 4.3 also show that there was a significant correlation between efficacy for internal locus of control and the following efficacy subscales: efficacy to influence decision making ( $r = .44, p = .02$ ), instructional efficacy ( $r = .67, p = .00$ ), disciplinary efficacy ( $r = .77, p = .00$ ), efficacy to enlist parental involvement ( $r = .66, p = .00$ ), efficacy to create a positive school climate ( $r = .74, p = .00$ ), and cultural efficacy ( $r = .61, p = .00$ ). These may suggest teachers who believe they have more autonomy have higher efficacy beliefs.

There was a significant positive association between efficacy decision making and efficacy for school climate ( $r = .47, p = .01$ ). Efficacy decision making was not significantly correlated with any other efficacy scale. However, teachers who believe they can influence decisions that are made in the school have overall higher efficacy beliefs only for school climate efficacy.

There was a significant positive correlation between instructional efficacy and the following efficacy subscales: disciplinary efficacy ( $r = .64, p = .00$ ), efficacy parental involvement ( $r = .48, p = .01$ ), efficacy to create a positive school climate ( $r = .58, p = .00$ ), cultural efficacy ( $r = .53, p = .00$ ), and efficacy on internal locus of control ( $r = .67, p = .00$ ). Thus, this suggests teachers who can connect learning to students' lived experiences have higher efficacy beliefs.

What has been learned about variation of self-efficacy beliefs is that internal locus of control efficacy was significantly related to all other efficacy beliefs. Therefore, the results indicate that the locus of control was indeed an influential factor in teachers' beliefs. In addition, efficacy of school climate is significantly related to five of the six other scales: years in the district ( $r=.379, p=.056$ ), efficacy decision making ( $r=.472, p=.010$ ), instructional efficacy ( $r=.585, p=.001$ ), disciplinary efficacy ( $r=.710, p=.000$ ), efficacy parental involvement ( $r=.518, p=.004$ ). The significance may suggest that these are the most central of the scales or there are only two distinct scales. In addition,

efficacy subscales are strongly and positively inter-correlated. These findings underscore the importance of looking at the totality of teachers' efficacy beliefs, and isolating those beliefs most critical in the current study, and the effects that they might play on teacher effectiveness and student academic outcomes. It becomes clear that teacher efficacy beliefs are multi-dimensional with sub-constructs that operate both dependent and independent.

### Key Question 3

*Which self-efficacy scales appear to be the most related to differential forms of student achievement?*

To determine which efficacy scales appear to be most related to differential forms of student achievement and related demographics, this part of the investigation is to describe the salient beliefs about teachers' perceptions and the relationship between teachers' perceived efficacy to student academic achievement. In addition this investigation was to determine, if any, the correlations between various efficacies for teachers. In order to answer key question three, a variety of statistical methods were used to establish a correlation between the independent variable (teacher beliefs) to the dependent variable (student outcome).

The descriptive statistics for the school-wide English Language Arts (ELA) and Math (MP) proficiency test scores, as well as various student background factors for the teachers who participated in the study can be found in Table 4.8. School-level data were only available for 25 of the teachers who participated in the study. The average school-wide ELA score was 58.56 (SD = 11.91) and the average school-wide MP score was 67.79 (SD = 8.76).

Even though African American (M = 12.18), Native American (M = .54), and Pacific Islander (M = 2.04), students represent a small percentage of students in the schools' population, their presence has a great significance on a school's proficiency levels in both ELA and MP. Asian (M = 28.79) and White (M = 23.18%) students represented the largest percentage of ethnic groups in the teachers' schools and they have the highest numbers who are proficient in both ELA and MP.

Table 4.8

*Descriptive Statistics for Test Scores and Student Socio-demographic Variables*

	Min.	Max	<i>M</i>	<i>SD</i>
Schoolwide ELA Scores	48.3	81.6	58.656	11.91
Schoolwide MP Scores	61.7	87.1	67.79	8.76
% African American	3	16	12.18	4.43
% Native American	0	1	.54	.50
% Asian	20	49	28.79	8.99
% Filipino	5	22	12.71	5.46
% Hispanic	3	24	16.00	7.67
% Pacific islander	1	3	2.04	.88
% White	15	46	23.18	9.71
Free/reduced lunch %	6	58	40.32	18.16
% English learners	16	43	34.00	10.31
Parent average education	2.8	4.2	3.199	.51

Results of these analyses and others below reveal that teachers' beliefs could have an effect on various student groups and these beliefs could have an effect on their practice. At the same time it appears that various student demographic groups have differential outcomes. However, one could speculate that various student groups may influence teachers' efficacy beliefs, and this may possibly lead to teacher self-efficacy beliefs which foster high academic attainment for certain groups of students and not for others.

*Correlations for Teachers' Self-efficacy Perceptions and Student Ethnicity*

To explore the relationships between student outcomes by percentage of ethnic group in school, language (ELL), socioeconomic status, and teacher efficacy subscales, Pearson correlation was used. Results may suggest a pattern in which efficacy beliefs are lower in schools with a higher proportion of students who have been identified as African American, Latino, Filipino and Pacific Islander. Having limited experience with diverse student groups may contribute to the limited views of student of color and this difference could possibly result in differences in teacher efficacy beliefs. There was a significant negative correlation between percentage of African American students and efficacy to enlist parental involvement ( $r = -.40, p = .04$ ). There was a significant negative correlation between percentage of African American students and efficacy on internal locus of control ( $r = -.49, p = .01$ ). As the percentage of African American students in the

school increased, teacher self-efficacy in these areas decreased (see Table 4.9 and Table 4.10). There was also a significant positive correlation between percentage of Asian students and efficacy to influence decision making ( $r = .54, p = .00$ ). There was also significant positive correlation between percentage of Asian students and efficacy on internal locus of control ( $r = .49, p = .01$ ). As the percentage of Asian students in the school increased, teacher self-efficacy in these areas increased (see Table 4.9 and Table 4.10).

There was a significant negative correlation between percentage of Filipino students and efficacy to influence decision making ( $r = -.44, p = .02$ ), efficacy to create a positive school climate ( $r = -.45, p = .02$ ), and efficacy on internal locus of control ( $r = -.54, p = .00$ ). As the percentage of Filipino students in the school increased, teacher self-efficacy in these areas decreased (see Table 4.10).

There was a significant negative correlation between percentage of Hispanic students and disciplinary efficacy ( $r = -.43, p = .02$ ), efficacy to enlist parental involvement ( $r = -.54, p = .00$ ), efficacy to create a positive school climate ( $r = -.43, p = .03$ ), and efficacy on internal locus of control ( $r = -.52, p = .01$ ). As the percentage of Hispanic students in the school increased, teacher self-efficacy in these areas decreased (see Table 4.11 and Table 4.12).

There was also significant negative correlation between percentage of Pacific Islander students and efficacy to enlist parental involvement ( $r = -.45, p = .02$ ), efficacy to create a positive school climate ( $r = -.40, p = .04$ ), and efficacy on internal locus of control ( $r = -.42, p = .04$ ). As the percentage of Pacific Islander students in the school increased, teacher self-efficacy in these areas decreased (see Table 4.11 and Table 4.12).

Finally, there was significant positive correlation between percentage of White students and efficacy on internal locus of control ( $r = .45, p = .03$ ). Thus, the notion that teachers' self-efficacy perceptions vary according to the socio-demographic levels of the schools in which they teach is supported.

Table 4.9

*Correlations between Student Ethnicity and Teachers' Self-efficacy Perceptions*

		% African American	% Native American	% Asian	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control
% African American	r										
% Native American	r	.334	1								
% Asian	r	-.930(**)	-.193	1							
Efficacy to influence decision making	r	-.375	.237	.546(**)	1						
Instructional efficacy	r	-.332	-.046	.314	.125	1					
Disciplinary efficacy	r	-.345	-.167	.343	.337	.645(**)	1				
Efficacy to enlist parental involvement	r	-.401(*)	-.308	.383	.213	.489(**)	.323	1			
Efficacy to create a Positive school climate	r	-.343	-.109	.330	.472(**)	.585(**)	.710(**)	.518(**)	1		
Cultural efficacy	r	-.035	-.018	-.002	-.017	.531(**)	.336	.637(**)	.390	1	
Efficacy on internal locus of control	r	-.499(*)	-.167	.493(*)	.441(*)	.675(**)	.774(**)	.665(**)	.748(**)	.616(**)	1

Table 4.10

*Correlations between Student Ethnicity and Teachers' Self-efficacy Perceptions-continued*

		% African American	% Native American	% Asian	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control
% African American	p										
% Native American	p	.082									
% Asian	p	.000	.325								
Efficacy to influence decision making	p	.054	.233	.003							
Instructional efficacy	p	.121	.836	.145	.535						
Disciplinary efficacy	p	.091	.425	.093	.074	.000					
Efficacy to enlist parental involvement	p	.047	.134	.059	.257	.010	.088				
Efficacy to create a positive school climate	p	.093	.604	.107	.010	.001	.000	.004			
Cultural efficacy	p	.876	.938	.993	.934	.006	.101	.001	.054		
Efficacy on internal locus of control	p	.015	.448	.017	.021	.000	.000	.000	.000	.001	

Table 4.11

*Correlations between Student Ethnicity and Teachers' Self-efficacy Perceptions-continued*

	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control	% Filipino	% Hispanic	% Pacific Islander	% White
Efficacy to influence decision making	r 1										
Instructional efficacy	r .125	1									
Disciplinary efficacy	r .337	.645(**)	1								
Efficacy to enlist parental involvement	r .213	.489(**)	.323	1							
Efficacy to create a positive school climate	r .472(**)	.585(**)	.710(**)	.518(**)	1						
Cultural efficacy	r -.017	.531(**)	.336	.637(**)	.390	1					
Efficacy on internal locus of control	r .441(*)	.675(**)	.774(**)	.665(**)	.748(**)	.616(**)	1				
% Filipino	r -.440(*)	-.339	-.377	-.341	-.451(*)	-.027	-.546(**)	1			
% Hispanic	r -.231	-.246	-.438(*)	-.542(**)	-.435(*)	-.088	-.527(**)	.509(**)	1		
% Pacific islander	r -.020	-.133	-.351	-.452(*)	-.405(*)	-.006	-.421(*)	.417(*)	.936(**)	1	
% White	r -.074	.154	.297	.325	.379	-.063	.454(*)	-.583(**)	-.770(**)	-.897(**)	1

Table 4.12

*Correlations between Student Ethnicity and Teachers' Self-efficacy Perceptions-continued*

	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control	% Filipino	% Hispanic	% Pacific Islander	% White
Efficacy to influence decision making	p										
Instructional efficacy	p	.535									
Disciplinary efficacy	p	.074	.000								
Efficacy to enlist parental involvement	p	.257	.010	.088							
Efficacy to create a positive school climate	p	.010	.001	.000	.004						
Cultural efficacy	p	.934	.006	.101	.001	.054					
Efficacy on internal locus of control	p	.021	.000	.000	.000	.001					
% Filipino	p	.022	.113	.063	.095	.024	.905	.007			
% Hispanic	p	.246	.257	.029	.005	.030	.698	.010	.006		
% Pacific islander	p	.920	.545	.086	.023	.045	.978	.045	.027	.000	
% White	p	.714	.482	.150	.113	.062	.781	.030	.001	.000	.000

*Correlations for Teachers' Self-efficacy Perceptions and Language*

Students' language may be a factor in teacher efficacy beliefs. There was a significant negative correlation between percentage of English language learners and efficacy to enlist parental involvement ( $r = -.42$ ,  $p = .03$ ), efficacy to create a positive school climate ( $r = -.41$ ,  $p = .03$ ), and efficacy on internal locus of control ( $r = -.47$ ,  $p = .02$ ). As the percentage of English language learners in the school increased, teacher self-efficacy in these areas decreased (see Table 4.13). This may suggest that teachers may construe language or speech patterns, other than their own, as deficiencies. Therefore, language may be a factor in making judgments about the potential of students which may lead to negative perceptions of a student's academic ability.

Table 4.13

*Correlations for Teachers' Self-efficacy Perceptions and Percentage of English Language Learners*

	% English learners	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control
% English learners	r 1 p							
Efficacy to influence decision making	r .210 p .292	1						
Instructional efficacy	r -.203 p .352	.125	1					
Disciplinary efficacy	r -.364 p .074	.337	.645(**)	1				
Efficacy to enlist parental involvement	r -.427(*) p .033	.213	.489(**)	.323	1			
Efficacy to create a positive school climate	r -.418(*) p .038	.472(**)	.585(**)	.710(**)	.518(**)	1		
Cultural efficacy	r .047 p .834	-.017	.531(**)	.336	.637(**)	.390	1	
Efficacy on internal locus of control	r -.473(*) p .023	.441(*)	.675(**)	.774(**)	.665(**)	.748(**)	.616(**)	1

*Correlations for Teachers' Self-efficacy Perceptions and Student Socioeconomic Indicators*

There was a significant negative correlation between percentage of students receiving a free/reduced lunch and disciplinary efficacy ( $r = -.42, p = .03$ ), efficacy to enlist parental involvement ( $r = -.47, p = .01$ ), efficacy to create a positive school climate ( $r = -.45, p = .02$ ), and efficacy on internal locus of control ( $r = -.57, p = .00$ ). As the percentage of students receiving a free/reduced lunch increased, teacher self-efficacy in these areas decreased (see Table 4.14). There was a significant interplay between teachers' efficacy perceptions and the socio-economic status of students. Teachers may, in general, have lower efficacy beliefs for students based on socio-economic status (SES). Thus, teachers may expect more from higher SES groups from those of lower SES groups. This may suggest that teachers' self-efficacy perceptions vary according to the SES levels of the schools in which they teach and that teachers may have lower efficacy beliefs of those students of lower-class backgrounds.

Table 4.14

*Correlations for Teachers' Self-efficacy Perceptions and Students Receiving a Free/Reduced Lunch*

		Free/Reduced lunch %	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control
Free/reduced lunch %	r	1							
	p								
Efficacy to influence decision making	r	-.361	1						
	p	.064							
Instructional efficacy	r	-.317	.125	1					
	p	.140	.535						
Disciplinary efficacy	r	-.425(*)	.337	.645(**)	1				
	p	.034	.074	.000					
Efficacy to enlist parental involvement	r	-.473(*)	.213	.489(**)	.323	1			
	p	.017	.257	.010	.088				
Efficacy to create a positive school climate	r	-.458(*)	.472(**)	.585(**)	.710(**)	.518(**)	1		
	p	.021	.010	.001	.000	.004			
Cultural efficacy	r	-.046	-.017	.531(**)	.336	.637(**)	.390	1	
	p	.838	.934	.006	.101	.001	.054		
Efficacy on internal locus of control	r	-.571(**)	.441(*)	.675(**)	.774(**)	.665(**)	.748(**)	.616(**)	1
	p	.004	.021	.000	.000	.000	.000	.001	

*Correlations for Teachers' Self-efficacy Perceptions and Student Achievement in English Language Arts*

There was a significant positive correlation between student achievement in English Language Arts (ELA) at the school level and disciplinary efficacy ( $r = .41, p = .04$ ), efficacy to enlist parental involvement ( $r = .46, p = .02$ ), efficacy to create a positive school climate ( $r = .42, p = .03$ ), and efficacy on internal locus of control ( $r = .56, p = .00$ ). As the student achievement in ELA at the school-wide level increased, teacher self-efficacy in these areas also increased (see Table 4.15).

There were also significant positive correlations between student achievement in ELA at the district level and efficacy to enlist parental involvement ( $r = .46, p = .01$ ), efficacy to create a positive school climate ( $r = .40, p = .04$ ), and efficacy on internal locus of control ( $r = .55, p = .00$ ). As the student achievement in ELA at the district-wide level increased, teacher self-efficacy in these areas also increased (see Table 4.15).

It is suggestive that teachers who believe they can promote learning when they believe there is a lack of support from the home have greater student academic outcomes; teachers who believe students improve because of their ability to motivate them achieve higher student achievement; teachers who believe they have greater classroom control results in higher academic achievement of students; and teachers who assume responsibility for student success results in higher student outcomes were supported. These results may suggest that teachers who perceive they can influence their own expectations for students based on race, ethnicity, and culture have higher student achievement was not supported.

Table 4.15

*Correlations for Teachers' Self-efficacy Perceptions and Student Achievement in English Language Arts*

		Schoolwide ELA Scores	District ELA Scores	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control
Schoolwide ELA Scores	r	1								
	p									
Efficacy to influence decision making	r	.329	.276	1						
	p	.100	.163							
Instructional efficacy	r	.344	.333	.125	1					
	p	.117	.120	.535						
Disciplinary efficacy	r	.413(*)	.391	.337	.645(**)	1				
	p	.045	.053	.074	.000					
Efficacy to enlist parental involvement	r	.463(*)	.466(*)	.213	.489(**)	.323	1			
	p	.023	.019	.257	.010	.088				
Efficacy to create a positive school climate	r	.425(*)	.404(*)	.472(**)	.585(**)	.710(**)	.518(**)	1		
	p	.039	.045	.010	.001	.000	.004			
Cultural efficacy	r	.063	.080	-.017	.531(**)	.336	.637(**)	.390	1	
	p	.785	.723	.934	.006	.101	.001	.054		
Efficacy on internal locus of control	r	.567(**)	.555(**)	.441(*)	.675(**)	.774(**)	.665(**)	.748(**)	.616(**)	1
	p	.006	.006	.021	.000	.000	.000	.000	.001	

*Correlations for Teachers' Self-efficacy Perceptions and Student Achievement in Math*

There was a significant positive correlation between student achievement in Math at the school level and efficacy on internal locus of control ( $r = .44, p = .03$ ). As the student achievement in Mathematics Performance (MP) at the school-wide level increased, teacher self-efficacy in these areas also increased (see Table 4.16). This may suggest that teachers who assume responsibility for student success results in higher student outcomes in math. There appears to be no other correlations that were significant.

Table 4.16

*Correlations for Teachers' Self-efficacy Perceptions and Student Math Achievement*

		School MP Scores	District MP Scores	Decision making	Instructional efficacy	Disciplinary efficacy	Parental involvement	School climate	Cultural efficacy	Locus of control
Schoolwide MP Scores	r	1								
Efficacy to influence decision making	r	.342	.398(*)	1						
	p	.087	.040							
Instructional efficacy	r	.271	.291	.125	1					
	p	.222	.177	.535						
Disciplinary efficacy	r	.326	.270	.337	.645(**)	1				
	p	.120	.192	.074	.000					
Efficacy to enlist parental involvement	r	.377	.215	.213	.489(**)	.323	1			
	p	.069	.302	.257	.010	.088				
Efficacy to create a positive school climate	r	.317	.272	.472(**)	.585(**)	.710(**)	.518(**)	1		
	p	.132	.189	.010	.001	.000	.004			
Cultural efficacy	r	-.041	-.071	-.017	.531(**)	.336	.637(**)	.390	1	
	p	.860	.752	.934	.006	.101	.001	.054		
Efficacy on internal locus of control	r	.449(*)	.403	.441(*)	.675(**)	.774(**)	.665(**)	.748(**)	.616(**)	1
	p	.036	.057	.021	.000	.000	.000	.000	.001	

### *Correlations for Ethnicity and Student Achievement*

The correlations between the various student ethnic groups and the students' average school-wide ELA and MP scores were examined (see Table 4.17). There were several significant correlations between percentage of racial/ethnic groups in the schools and school-wide ELA and MP scores.

#### *ELA Scores and Ethnicity*

There was a significant negative correlation between percentage of African American students and ELA school-wide scores ( $r = -.95, p = .00$ ). There was a significant positive correlation between percentage of Asian students and ELA school-wide scores ( $r = .83, p = .03$ ). This suggests that African American students are not achieving as well as other ethnic groups, particularly, as compared to their Asian counterparts.

#### *MP Scores and Ethnicity*

There was a significant positive correlation between percentage of African American students and MP school-wide scores ( $r = .93, p = .00$ ). There was a significant positive correlation between percentage of Asian students and MP school-wide scores ( $r = .90, p = .01$ ). There was a significant negative correlation between percentage of Filipino students and MP school-wide scores ( $r = -.89, p = .01$ ). There were no other significant correlations for the school-wide test. This suggests that student groups that are marginalized in society perform less proficiently than their Asian (minus Filipino) and White counterparts.

Table 4.17

*Correlations between Percentage of Ethnic Minority Students and School-Wide ELA and MPA Scores for Seven Schools*

		African American	Native American	Asian	Pilipino	Hispanic	Pacific Islander	White	ELA Schoolwide	MP Schoolwide
% African American	<i>r</i>	-								
	<i>p</i>									
% Native American	<i>r</i>	.275								
	<i>p</i>	.551								
% Asian	<i>r</i>	-.862*	-.023							
	<i>p</i>	.012	.960							
% Filipino	<i>r</i>	.842*	-.114	-.745						
	<i>p</i>	.017	.807	.054						
% Hispanic	<i>r</i>	.585	.479	-.654	.488					
	<i>p</i>	.168	.277	.111	.266					
% Pacific Islander	<i>r</i>	.423	.510	-.361	.451	.846(*)				
	<i>p</i>	.344	.243	.426	.310	.016				
% White	<i>r</i>	-.546	-.512	.254	-.613	-.587	-.840(*)			
	<i>p</i>	.205	.240	.583	.143	.166	.018			
ELASchoolwide	<i>r</i>	-.955**	-.361	.834(*)	-.898(*)	-.762	-.701	.727		
	<i>p</i>	.003	.482	.039	.015	.078	.121	.102		
MPSchoolwide	<i>r</i>	-.937(**)	-.452	.902(*)	-.752	-.762	-.640	.592	.940(**)	
	<i>p</i>	.006	.368	.014	.085	.078	.171	.216	.005	

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed)

#### Key Question 4

*What are the specific expectancy efficacy beliefs that underlie the scales most related to differences in learning outcomes?*

The exact nature of the process of how teachers' self efficacy beliefs are formed is not within the scope of this current study. However, to determine the specific beliefs that may underlie the scales that may be most related to differences in learning outcomes, qualitative data were exported from surveymonkey.com into MS Excel. Data were then organized by each teacher's response(s) to each open-ended question. Next, the seven subscales, which include efficacy to influence decision making (DM), instructional efficacy (I), disciplinary efficacy (D), efficacy to enlist parental involvement (PI), efficacy to create a positive school climate (PSC), cultural efficacy (C), and efficacy on internal locus of control (LOC), were used to categorize teachers' responses. Key words were extracted from these survey responses to look at the salient beliefs of teachers and these key words assisted in determining the placement within the seven subscales of the modified Bandura's instrument (see Appendix B). The goal was to provide a viable interpretation of the qualitative data. Upon the results, I was then able to speculate as to possible underlying causation and sort out some plausible patterns of causation for future studies.

The systematic collection of data – open-ended responses – describes how teachers who responded to the survey (percentages), view their work. A constant comparative method was used to identify the ways that teachers understood their work and to generate plausible categories that would capture their efficacy beliefs. Systematic comparison was made between responses and efficacy subsets. To explore the relationships between student outcomes and to reduce the possibility of bias by the researcher, responses were given to outside administrators and professors which functioned as a form of triangulation that balanced potential bias in any one source.

I content-analyzed (see Figure 4.1) teachers' responses to the following questions: *What do you think are the major obstacles that prevent students from reaching the levels of proficiency (Q1 obstacles); What do you think are the causes of these obstacles (Q2 causes); In reference to your answers above, how do you change your practices to better fit the needs of students who are not proficient or advanced? Explain (Q3 practices)*. This analysis consisted of examining what teachers stated in relation to how they defined and described students' academic failure; what they believed are the causes of these students' failures; and how they change their teaching practices to better fit the needs of students. With regards to the overall picture detected, it is interesting to note, in terms, the possible interrelationship between teacher beliefs and practice. In order to provide a possible interpretation and which of the correlated teacher belief dimensions might have the largest contribution to explaining variance in teacher efficacy beliefs and learning outcomes, Figure 4.1 presents a comparison of results as to the possible obstacles and possible causes and the direction of the relationship for teacher practices.

Figure 4.1

*Open Ended Response Summary*

Efficacy Subscale	Q1 major obstacles	Q2 causes	Q3 change in practices
Efficacy to influence decision making	3	2	0
Instructional efficacy	2	1	19
Disciplinary efficacy	0	0	0
Efficacy to enlist parental involvement	5	8	4
Efficacy to create a positive school climate	3	1	2
Cultural efficacy	4	9	3
Efficacy on internal locus of control	27	26	2

Perhaps the most encouraging - yet discouraging - findings from this study suggest the metaphors teachers use reflect their beliefs; as shown earlier, teachers' beliefs have the power to shape not only their efficaciousness but also their practice. Teachers' responses to the open-ended questions reflect a consensus among teachers that the major obstacles they face rest solely on parents' ability and/or inability to provide academic, social, and emotional reinforcements needed for students to be successful learners. The causes and obstacles that are rooted in teachers' minds center on their perceptions of students' abilities and inabilities (LOC), the responsibilities of parents (PI), and cultural (C) emphasis on socioeconomic status, as the major causes of student failure. In the analysis, locus of control (LOC) – whether teachers have the ability or inability to address the obstacles and causes that prevent students from reaching high levels of proficiency - account for the major efficacy beliefs in response to questions 1 and 2. There was also a significant interaction between teacher efficacy between the obstacles (Q1) and causes (Q2). This suggest that locus of control is significantly related to student outcomes. What was not revealed in this study is the degree to which the metaphors teachers' hold may help them to make sense of the disparity in the differences of demographics of students and themselves. However, based on the limited number of teacher respondents, there is strong reason to believe that their beliefs about students' socio-demographic and socio-economic status play a vital role in their perceptions of students and their effectiveness. Loci of control (LOC) variables were significant in terms of its unique contributions to teachers' efficacy beliefs.

In examining teacher responses to question 3, on how they have changed their practices, teachers did modify or adjust their practices. However, the modifications made, as indicated by this study, were accomplished by developing more patience and tolerance towards students they perceived to be failures (see Appendix 2). A different range of responses may have been obtained if question 3 was asked in a more neutral way (i.e. Does the knowledge of Q1 and Q2 affect your instructional practices?).

There is strong reason to believe that teachers' belief about students who do not achieve proficiency plays a vital role in teachers' practices, thus their effectiveness. In looking at the various ways in which teachers sum up their perceptions, teacher self-efficacy beliefs influence students' learning experiences. With the limited number of respondents, it becomes clear that teachers face many challenges to be efficacious and impact student learning. The developments of their attitudes are influenced by both internal (their beliefs about students) and external factors and conditions (student ethnicity, language, parent involvement, etc.). Moreover, perceived self-efficacy is a strong predictor of behavior, whereas, locus of control is basically concerned with causal beliefs about the relationships between actions and outcomes, not with personal efficacy. Based on the consensus of teachers' responses to the three open-ended questions, 27 teachers stated:

- The major obstacles that prevent students from reaching proficiency is due to: ineffective parent involvement in their child's learning; inability of parents to support literacy and conceptual development of their child; student esteem issues; and too much academic rigor (curricular requirements and pacing) is being demanded as the factors in low student achievement.
- The causes of these obstacles are due to differences in social status and cultural practices of families.
- Actions taken by teachers to change their practices rest on their ability to cope with students' deficiencies along with repetition of established practices and remediation.
- The relationship between teachers' efficacy, teacher metaphors, and teacher practices remains a mystery.

## Chapter 5

### Discussion, Conclusion, and Cautions

Has low academic achievement among certain groups of students come to be accepted and expected? It comes as no surprise – not all students are learning and succeeding in school. The primary purpose of the present study was a cross-sectional design experiment to learn more about the nature of teacher self-efficacy beliefs and its components and more detail about how teacher efficacy beliefs may relate to student academic achievement. Even though this study has interesting findings, there are features that limit the generalization of these findings. The strongest limitation is the use of cross-sectional data to test my hypothesis because the data set only had information from a small sampling of teachers at one point in time. While the sample of teachers was small, and there were other major limitations, such as the results can only be suggestive given that there are generally differences in teacher effectiveness within schools and grade levels, the following is a series of potential key findings with implications for follow-up research and for designing interventions.

Based on the theoretical framework of two areas of teacher efficacy research examined – Rotter's (1966) social learning theory of internal vs. external control, and Bandura's (1977) social cognitive theory of the reciprocal interaction of beliefs and behaviors - this multi-method of data collection sought to uncover teacher efficacies which may contribute to student academic success or failure. In determining the extent to which teachers' beliefs and expectations influenced student success, the small sample of teachers' responses indicated there may be reason to believe that teacher' beliefs and expectations about their students play a critical role in their practice. Student outcomes were linked to the self-perceptions of this small sample of teachers by comparing the composite score of teachers' perceptions with student demographic and academic achievement. However, based on this present research, the reasons why some students are not achieving are diverse and complex. With this in mind, the purpose was to generate new insight for the purpose of informing future studies and providing guidance for administrative practices.

It has been established in the previous chapters that beliefs about whether one can produce certain actions (perceived self-efficacy beliefs) are not the same as beliefs about whether actions affect outcomes (locus of control). Bandura (1997) showed that perceived self-efficacy and locus of control bear little or no empirical relationship with each other. Yet, the construct of teacher efficacy is an integral part of the teaching process because of the possible link between teachers' beliefs and how these beliefs may enable teachers to perform the actions necessary to teach students. Thus, the expectations that the teacher respondents have may affect student outcomes. However, this study is intended to be neither all inclusive nor to represent the concerns of all groups of teachers. Instead, results may be a useful way to begin to think about the ways it may inform their practices.

The results of the present study can lead to two major conclusions. First, teacher self-efficacy beliefs may emerge as the significant predictors of student success and failure, suggesting that teachers' concepts about teaching are in part due to both efficacy beliefs and the students they teach. Second, the effects of these beliefs on teachers'

confidence about teaching may indicate that their effect vary towards the students they teach. With this focus, my view of the results of efficacy will be through the lens of both Rotter's and Bandura's work.

Offered is a discussion to better understand teacher beliefs and the possible variables that may influence teachers' beliefs and expectations; and to present action steps for confronting self-efficacy beliefs and expectations. The temptation is to oversimplify the reasons for teacher efficacy beliefs. The reality is that teacher efficacy beliefs are the product of complex and multi-dimensional interactions among the many variables which exist in schools. Using teachers' responses to the efficacy survey, these two theoretical models will be used to provide a perspective that may assist to explain the underachievement of students who have been marginalized in our schools and possible remedies for understanding teachers' affecting attitudes on teaching:

1. Locus of Control – Conflicting priorities and diverse student needs, contributes to the inability to disrupt the cycle of teacher efficacy beliefs and instructional practices that reinforces a deficit-thinking model.
2. Self-Efficacy Perceptions – Socio-economic and socio-demographic factors of students affect teacher effectiveness and may contribute to minimal changes in educational pedagogy and practices, thereby unknowingly employ instructional strategies, which reinforce teachers' perceived beliefs.

### *Locus of Control*

Although this research does not explicitly answer why some teachers may form different expectations for students based on their socio-demographic and socio-economic status, it is clear that there is a relationship between teacher expectations and student outcomes. Lortie (2002) noted that teachers' beliefs create filters through which they process teaching experiences. Because of the complexity of the teacher efficacy construct, teachers' responses to the survey statements seems to imply that student failure and the gap in the academic achievement between student groups is not a teacher failure, but are a result of the external factors that are beyond their control (see Appendix C).

Over the past two decades, demographic changes have altered the profile of the educational needs of children. According to the data collected in this study, teachers overall had the lowest self-efficacy scores on efficacy to enlist parental involvement. The collected data also shows there is a significant correlation between locus of control and efficacy to enlist parent involvement. Many of the teachers surveyed have concluded that certain families lack sufficient reading materials in their homes and students enter school without knowing certain basic skills. Thus, these results may contribute to the lack of success of students' to reach proficient levels in academics, particularly English Language Arts (ELA) and Mathematics Performance (MP). Surveyed teachers also feel that families do not place appropriate value on education and more importantly, families suffer from other social and economic problems which interfere with their ability to support their children to attain high academic levels. According to the qualitative analyses of this study, teachers link student success to parents' abilities or inability to provide positive supports for their children. With this in mind, teachers may have unconsciously released themselves from the accountability and responsibility of the lack

of academic progress of some students. This may suggest that teachers believe that the lack of involvement of the parent leads to the negative outcomes of students. I suggest that this link affects teachers' behaviors and the nature of this may influence teachers' perception of students' abilities. Bridging the chasm between these differences requires fundamental changes in the ways teachers' think.

Teachers may face many challenges that could hinder their ability to be efficacious and impact their students positively. This present study has shown that teachers may have varying self-efficacy perceptions based on a school's demographics. There is a significant correlation between the ethnic make-up of a school and the proficiency scores in ELA and math of these students. There is also a significant correlation between teachers' self-efficacy perceptions and the percentage of various ethnic student groups, particularly, African American, Latino or Hispanic, Pacific Islanders, and Filipino students. As the percentage of students increase in schools, teacher self-efficacy perceptions decrease. According to the data in this study, different groups of students do have different academic outcomes. I surmise that the barriers teachers perceive may begin to seem insurmountable. As a result, teachers may begin to believe that educational improvement for certain students cannot happen until such social inequities are alleviated. It becomes clear, teachers who assume responsibility for student success results in higher student outcomes. Conversely, teachers who do not assume this responsibility results in lower student achievement.

Often the gap in academic achievement accompanies differences between groups of students based on families' income, as well as culture. The relationship between the socio-economics/socio-demographics of schools, and the metaphors and language that teachers use, may be linked to the achievement of various students groups within schools has been shown in this investigation. It becomes clear that teachers' self-efficacy perceptions play a critical role in the choices they make and goals they set regarding the teaching of various student groups. These differences may suggest that teachers may unwittingly create and contribute to student failures, because what teachers do and think ultimately creates, changes, and sustains the fabric of a schools' culture. Teachers with more positive attitudes and opinions may be more likely to behave more constructively in teaching situations. This cyclical factor may allow the culture of the school to become a mismatch with the culture of its students. The results of these differences may not effectively serve its students (Deschenes et al., 2001). While some teachers have adopted some degree of change in their practices and self-efficacy beliefs, these changes have come in alarming ways. Although this study does not explicitly answer why some teachers may harbor certain beliefs and expectations and adopt practices based on a deficit model, according to the present study, many of the changes that teachers have made in their practices have been relatively small in nature and subsequently have not resulted in significant changes in the teaching practices necessary to change teachers' practices from this deficit-model of thinking. I hypothesize that this indirect link may affect teachers' behaviors and it becomes apparent that there is a relationship between LOC and student outcomes.

This limited investigation has revealed there was a significant correlation between locus of control and instructional efficacy. I surmise to better support students who have not reached high levels of academic proficiency, teachers become "passive" in their attack to put in place more effective instructional strategies. Instead teachers placed value

on being more understanding and patient; they praised students to make them feel good about themselves, but not of their accomplishments; and they skipped over areas in the curriculum and adjust the curriculum because they believe students do not possess grade-level skills required to do grade-level work. This empathy that teachers show may complicate issues in the cycle of teacher self-efficacy beliefs. Empathy may justify teachers to make choices based on their assumptions and beliefs they have, either real or imagined. These efficacy beliefs, particularly internal and external locus of control beliefs, have become so pervasive, that they have greatly determined teachers' perceptions about various student learning capacities. The lack of consciousness of their self-efficacy beliefs may contribute to teacher practices that do not lead to high student motivation, high leverage practices, and high academic attainment. This "mismatch" between teaching practices and students' needs may contribute to low academic achievement of certain student groups.

This limited investigation has also shown there is a significant correlation between locus of control and cultural efficacy. Many teachers are not aware of how they treat students and are unaware of the descriptors that they place on students, which may place certain students at risk of failure in their classroom and in the school. Bandura (1989) suggests that the symbols teachers use serves as mechanisms of thought and these thoughts lead to the formation of words. An individual's thought pattern and reactions are influenced by the strength or weakness of their efficacy beliefs, particularly, their locus of control self-efficacy beliefs which, often creates a self-fulfilling prophecy. This in turn gives meaning to teachers and, subsequently, their behaviors and actions. Problems with the use of words, or metaphors, that teachers use to organize their experiences may arise when this language serves to justify decisions to withhold opportunities from students who are perceived to have lower abilities or capacities to learn. The belief systems that teachers generate may, in part, be determined by their need to justify and/or explain their efforts in ways that gives them a sense of accomplishment. Once again, teachers may unconsciously build a wall between themselves and their students by using language that reinforces historic beliefs about certain student groups. This way of naming embodies and reflects specific underlying values that may prevent teachers from accessing other avenues of thought (Cook-Sather, 2003). This effect can happen under various conditions. It can occur when a teacher forms different expectations for students based on some student characteristic, when a teacher treats certain students differently, or when a teacher's behavior tells students what level of achievement is expected of them. I surmise that the remarks and thoughts that teachers hold not only convey negative messages to students, but teachers communicate low expectations to students (Brophy, 2004; Weinstein, 2002). Yet, this study does not uncover the extent teachers may choose activities that may be inadequate in increasing student achievement. Teachers' expectations then can become a self-fulfilling prophecy, especially when educators believe that they can predict how certain students are likely to achieve.

Teachers' responses indicate their locus of control beliefs regarding their responsibility for student success or failure may be conditional to their success with their students and that some teachers appear to maintain a belief that is externally oriented. This investigation has revealed that the schools that have higher percentages of students who qualify for free and reduced lunch, as well as schools with a higher percentage of students of color, have lower teachers' self-efficacy beliefs in locus of control. A

significant factor could be that teachers in these schools do not resemble their student populations (see Table 3.5). Thus, expectations that arise out of this incongruence may contribute to a misunderstanding of the needs of their students and more appropriate actions to address the needs of some student groups. This incongruence may also have significance on labels that teachers assign to students subsequently, determining not only how they perceive students' abilities, but how they respond to students' needs (Deschenes et al., 2001). I suggest teachers generate their belief systems because of their need to explain their efforts in ways that may give them a sense of accomplishment and these unexamined presuppositions may lead to errors in judgment. Whether conscious or unconscious, teacher expectations, which are influenced by their sense of locus of control, may likely be factors in creating, maintaining and sustaining the academic achievement gap between various student groups. This might underscore the concern about the unexamined ramifications of teachers' self-efficacy beliefs.

### *Self-Efficacy Perceptions*

Research has shown that teacher self-efficacy beliefs influence students' learning experiences and academic outcomes. According to this limited investigation, teachers may treat students differently depending on students' socio-demographic and socio-economic status; therefore, much needed attention should be given to the persistent and perplexing problem of the academic underachievement among various student groups. Influenced by certain self-efficacy perceptions, the forces that cause certain groups of students to be marginalized and to experience unequal and limited access to schools' instructional program are forever present. I hypothesized that teacher self-efficacy beliefs, and teacher self-efficacy perceptions, have significance on student academic outcomes. However, the findings of this study do not support that teachers have varying attitudes towards the many different types of tasks they are asked to perform and this study does not support that teachers believe they can influence their own expectations for students. The findings in this study do however support: teachers who can connect learning to students' lived experiences have higher efficacy beliefs; teachers who can influence decisions that are made in the school have a higher efficacy belief in school climate efficacy; and teachers who have more autonomy have higher efficacy beliefs.

The findings in this limited study also reveal teachers' self-efficacy perceptions do vary according to the socio-demographic levels of the schools in which they teach. The higher the percentage of African American, Hispanic, and Filipino students there are, the more negative correlations there are between teachers' self-efficacy sub-scales and student outcomes. Conversely, the higher percentage of White and Asian students, there are more positive correlations. Upon examining both the quantitative and qualitative data, this dissonance that might be created and exist between teachers and that of certain student groups may also be a primary reason why some students continue to suffer lower academic achievement. Teachers who believe students improve because of their ability to motivate them have higher student achievement, and teachers who believe they have greater classroom control results in higher academic achievement of students. Yet, as the percentage of students of color increase, teachers' self-efficacy perceptions decrease. There were also significant negative correlations between the percentage of students receiving free and reduced lunch and teacher self-efficacy beliefs. This may suggest that the socio-demographic status of students may not fully explain the large academic

achievement gap between student groups, but this becomes a significant factor. It was also revealed, as the percentage of students who receive free and reduced lunch increase, teacher self-efficacy perceptions decrease. This may suggest that the socio-economic, coupled with certain socio-demographics status of students may explain the consistent gap in student achievement is because teachers' beliefs may be ritualistic, and have come to be intrinsic. These perceptions have a tendency to become pervasive and may determine teachers' perceptions about student learning capacities. This can create a culture of beliefs and these beliefs may determine what self-efficacy beliefs and expectations may prevail in any particular school or district setting.

Spradley (2000), states that culture refers to people's systems of meaning for perceiving and interpreting what they believe is real and these beliefs, ideas, and ideals guide people in their endeavors (Butts, 1947). Because the culture of a school is composed of a set of complex relationships among people within the school, it may often be difficult for teachers to acknowledge that a change in how they perceive events are needed (Jones, 2003). There are no mechanisms in schools to ensure students of differing cultural and social backgrounds have no race-based achievement gaps. This might suggest that structural inequalities contribute to the lack of educational success of students whose backgrounds are diverse from the teacher, subsequently, the school, thus unwittingly create foundations for student failure. However, according to the limited data in this study, teachers do not view themselves as having lower expectations for various student groups. This misconception may be conscious or unconscious and may reflect societal biases that are ingrained in the society at large. Kagan (1990) suggests that factors in the classroom and schools transform students into "discrete subcultures" that may result in students feeling estranged, thus accounting for academic failures for some.

As discussed in the literature review, Bandura (1977) hypothesized that an individual's expectation for success determines the behavioral responses in one's ability to successfully engage in behaviors within a given environment. Based on the assumption that the beliefs that educators create, develop, and hold to be true about themselves and their students, influence their perceptions and judgments and are critical forces in students' success or failure. Because teachers make decisions based on their beliefs, the belief systems that teachers generate are, in part, determined by their need to explain their efforts in ways that give them a sense of accomplishment. Factors in this study can suggest that teacher efficacy may influence practice. Even though there are many variables that appear to influence teacher self-efficacy, this study did not reveal significant variation within various teacher groups across the sub-scales. Beliefs that affect how teachers behave were not the focus of this research, but it is clear that teachers' behavior is based upon their perceptions of what is occurring in the classroom. The reference frames that teachers develop may help them to categorize the information they receive. These could factor into teachers' self-reported perceptions towards the socio-demographic, the socio-economic, and the familial structures of students. Behavior determines which of the many environmental influences come into play, even though this investigation has been concerned with the relation of teacher efficacy beliefs to student outcomes.

## Conclusions

In a number of years, academic success has remained elusive for various student groups. We have come to learn many reasons why certain groups of students possibly do not succeed in school. The central idea generated by this limited study is that teachers' self-efficacy beliefs become reinforced and guided by normative beliefs, control beliefs, and behavioral beliefs. Teachers in this limited study concluded that certain families lack the skills, as well as educational materials in their homes, when their children enter school. They also feel that families do not place appropriate value in education and suffer from other social problems. Yet, many teachers believe educational improvement for certain student groups cannot happen until such deficits are alleviated. Therefore, teacher practices may result from their judgments from the expectations they have formed for certain groups of students and communicated overtly and implicitly. In addition, it has been shown that the socio-demographic and socio-economic status of students has an influence on teachers' self-efficacy beliefs and the assumptions that teachers hold may unwittingly introduce conditions for continued academic failure for certain student groups. Therefore, it becomes critical for teachers to have opportunities to examine the impact of their self-efficacy beliefs on their attitudes, perceptions, and practices. This will require a shift in thinking and break pedagogical traditions that now exist.

According to Dilts (1990), teachers' beliefs are so ingrained that teachers often confuse belief with reality. It might be useful for a teacher to be aware of their beliefs and the fact that each time they *size up or size down* a student, they are, in effect influencing that student's future achievement attainment (Tauber, 1998). The negative impact of this can be lessened if educators become diligent in understanding their beliefs and if they better understand the self-fulfilling prophecy concept (Cooper, 1980).

With the premise that teacher belief constructs may be primary to the academic success of students, what percentage of the variance in scores of students and that of teacher self-efficacy belief constructs must be considered in order to successfully implement educational reforms that effectively target the instructional beliefs and practices that eliminates the academic achievement gap between student groups? Clearly, this study has attempted to establish a relationship between teacher efficacy beliefs, locus of control beliefs, and student outcomes. Yet there still remains a lack of clarity about its antecedents. I suggest there is a correlation between teachers' beliefs about the nature of their ability and their teaching approaches and these beliefs may hold significant influence on teaching and the learning that takes place in the classroom. An integrated model of teacher efficacy shows the interplay of sources of efficacy information that this investigation revealed (see Figure 5.1).

If this study can establish that such beliefs are indeed critical to producing student success, this suggests that regardless of whatever programmatic reform schools implement, it becomes critical to have teachers intentionally confront the beliefs they hold that guide their thinking and actions in order for the reform to have a chance for success.

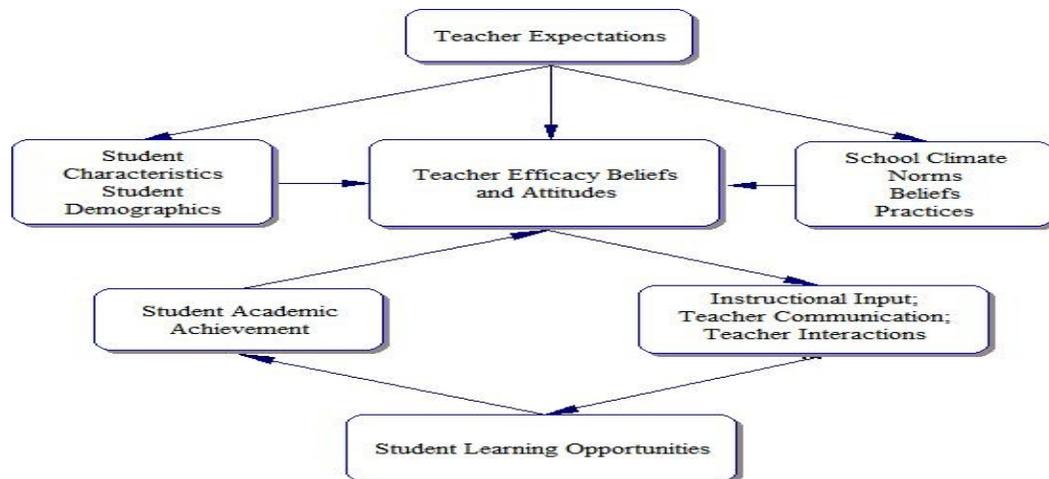


Figure 5.1. An Integrated Model of Teachers' Sense of Efficacy (Adapted from Tschannen-Moran, Woolfolk Hoy, and Hoy, 1998; Procter, 1984).

The construct of teacher efficacy is an integral part of the teaching process. The self-efficacy beliefs that teachers hold can enable them to perform actions necessary to teach all students, particularly students who have been marginalized by social and cultural practices. Therefore, there is a need for teachers to realize how their self-efficacy beliefs can serve as obstacles to the implementation of more successful pedagogy by moving away from using socio-demographic and socio-economic backgrounds of students as an excuse for the academic underperformances of certain student groups. There is little disagreement that teacher self-efficacy beliefs are associated with these students' academic failure. It becomes critical that we explore how teachers' beliefs shape the culture in which students are educated.

The argument has come full circle – teachers' attitudes and self-efficacy beliefs about their students are reflected in the kind of teaching they undertake and student academic outcomes. Bandura (1997) contends that the primary role of self-efficacy beliefs is that people's actions are based more on what they believe to be true than what is objectively true. Ultimately, this investigation is about transforming the self-efficacy beliefs, expectations, and behaviors of teachers who are currently present in our schools. Without a doubt, how teachers interact with students transmits messages for success or failure.

### *Limitations of the Study*

This study has several limitations. First, in the absence of a robust data system capable of tracking teacher self-efficacy beliefs, the major goal of this analysis was to ascertain the importance of the expectations of the teacher in relation to students' academic achievement in urban elementary schools. Beliefs are rooted in the subconscious memory and most teachers learn cumulatively from experience making the development and change of beliefs personal and subjective. Because beliefs can change as a result of experience, there are potential inconsistencies in the way teacher efficacy was defined and the variability in the manner in which it was measured. Therefore, it is

difficult to arrive at pure classifications because the research has been found to be heavily weighted toward process evaluations.

Another limitation of this study was the fact that all of the data were collected via self-report measures. Therefore the data collecting process became a challenge because there was not another way to collect data that isolated teachers' attitudes and beliefs. Self-selection was another possible limitation. Of the total number of elementary teachers in the district, only a small fraction completed the survey, thus volunteering to participate in the study. It is possible that those teachers volunteered in the study because they were more efficacious to begin with. In addition, I was limited to the existing measures of related variables and constructs and correlation coefficients demonstrate the direction and strength of the relationship among factors of the self-efficacy scale and student outcomes. Despite the interest in teacher efficacy construct, there are still gaps in our full understanding of teacher efficacy beliefs.

Third, the difficulty with people as research subjects is that they vary on many dimensions. In addition, the status of individuals on those dimensions affects their responses. Attitude scales often yield lower alpha coefficients than test of intelligence or other non-attitudinal constructs (Tschannen-Moran & Woolfolk Hoy, 2001). The variability in the manner in which teacher efficacy beliefs are measured, and the number of variables in understanding the nature of the relationships between efficacy and those variables is problematic.

To further ascertain the question of instrument validity, researchers have found that educators are more strongly associated with professional beliefs than with personal beliefs in both personal and professional contexts. It is also possible that the complexity of the classroom cause teachers to do what is most convenient or efficient instead of what their personal beliefs suggest is best for children (Pajares, 1992). Therefore, the reliance on teacher survey data for information has probably produced gaps that are evident in the body of evaluation of work surveyed.

Finally, the sample size was small. Having a small sample size may seriously limit the generality of the results. The design of this study does not enable one to conclude causal inferences regarding the relationship among variables at hand.

The meaning and measure of teachers' sense of efficacy have been the subjects of considerable debate among scholars and researchers (Ashton et al., 1982; Gibson & Dembo, 1984; Guskey, 1981; Pajares, 1996, 1997; Tschannen-Moran et al., 1998). Initially, measuring teachers' sense of efficacy was two dimensional consisting of personal teaching efficacy and general teaching efficacy. It now appears to be multidimensional, and little is known regarding the effect of teachers' efficacy beliefs and the variables within urban schooling. The focus on teacher efficacy beliefs has ranged from its impact to outcomes, the characteristics of efficacious teachers, to its measurement and development in which research has been both quantitative and qualitative. Dependent upon certain context variables, few investigations have sought to determine the nature of these variables or their effects on measures of teacher efficacy (Guskey, 1987).

### *Implications for Future Research*

While the limitations mentioned do make the results tenuous, it should be clear that future studies should formulate their research design to take into account the possible change in scores that occur when treatment is intervened. Given the potential educational value of the teacher efficacy construct, efforts to impact changes in teacher efficacy beliefs is valuable. However, a number of issues continue to perplex researchers working in the area of teacher efficacy. A critical question that constantly surfaces is in what ways a teacher's sense of self-efficacy influences his or her teaching behaviors and how these beliefs influence student achievement. Of all the factors discussed, self-efficacy beliefs provide the foundation for teacher motivation, and unless teachers believe that their actions can produce or influence positive student outcomes, they have no or little motivation to initiate or proceed with a task (Pajares, 2002). Yero (2002) believes that significant change in education will not likely happen until we examine how teachers' beliefs about teaching and learning influence what occurs in the classroom. Teachers need to know how they formulate their beliefs and how these beliefs influence their practice and how these cannot remain in separate domains. Significant change, however, will require teachers to have the time needed to create the changes in their mindsets that result from the opportunities needed for them to understand and discuss the conflict of thinking that has permeated our schools.

### *Implications for Practice*

As daunting as this may seem, educator's beliefs and expectations should be viewed as a critical factor for meaningful change to occur in creating equitable educational opportunities for various groups of students. This current study has attempted to reveal that the beliefs teachers hold does frame classroom practices, yet, more research is necessary to better understand the conditions among the contextual factors and the collective efficacies of schools. If attitudes and beliefs of teachers influence practice, it is possible to help teachers move towards more effective teaching by providing them with opportunities to understand their current practices and consider a rationale for a change in practice with students who have been marginalized in their school. The challenge now is in helping teachers move to beliefs that are supportive to teaching students at risk and to more supportive beliefs that enables them to embrace more effective practices. Encouraging teachers to consciously probe their underlying assumptions about their own efficacy may enable them to extend and broaden their inherent capacities in thinking and perceiving, and to motivate all students to reach their fullest academic capacities. Once teachers are aware of these issues, it is my hope that they can begin to self-examine their beliefs and expectations to ensure that their interactions with students will lead to progress in learning and achievement.

How then do we begin to facilitate discussions that are needed to reshape school and district culture toward the systemic examination of the attitudes and beliefs that have driven practices that have not eliminated the academic achievement gap between student groups and fostered the systemic changes that are critical to effectively educate all students? An action plan must be created to: ensure the implementation of an on-going professional development program that effectively addresses teachers' self-efficacy

beliefs; use this plan as a tool district-wide; and continually assess the effectiveness of such plan.

Administrators then must create professional interventions that support highly effective beliefs, attitudes, and behaviors in teachers because teachers' actions directly impact student high attainment and high engagement in learning and to share theories that help communicate relevant implications to practitioners. "Instead of using our beliefs to incapacitate ourselves or students, we can use [these beliefs] to positively capacitate them" (Dilts, 1990, p. 3). Thus, a teacher who is aware of deficits in his or her beliefs and practices, under certain circumstances, will be able to have beliefs about how those deficits can be addressed. The next step in this line of research will be to try to bridge the gap between beliefs and practice. This should involve a careful examination of areas that:

- Provide and stimulate opportunities for teachers to talk with others about their experiences;
- Provide opportunities for teachers to examine issues that are critical to successful and effective teaching practices;
- Recognize the need to cultivate tools and dispositions for teachers to explore their own biases and personal experiences;
- Visit and revisit assumptions on a continuous cycle;
- Focus on factors within the system (school-wide and district-wide) that create barriers to more effective practices;
- Provide opportunities for skill and knowledge acquisition that are impacted by teachers' efficacy beliefs;
- Provide opportunities for parents, particularly those who have children who are least successful, to become well-informed and articulate in order to become effective agents for change.

Research has demonstrated that efficacy is related to outcomes, however, little work has looked at our ability to influence teacher efficacy. It now becomes educators' jobs to investigate different interventions to help teachers make the needed changes consonant with the capacity to ensure all students, particularly African American, Hispanic, and low-socioeconomic status students to achieve high levels of academic performance. The need for a continuum of sustained learning opportunities for teachers is clear. The task of building such a system may appear daunting. Yet there has never been a better time to tackle the problem. Without exception, we want our children to emerge from this tumultuous journey well educated. A new paradigm calls for on-going study and problem solving among teachers to promote more powerful teaching to transform schools. With the premise that teacher belief constructs is primary to the academic success of students and that teacher belief constructs should be considered in order to successfully implement educational reform recommendations, there is little disagreement that teacher efficacy beliefs are associated with students' academic success or failure. This study posits that without changes in the belief systems and culture they engender, students', particularly African American, Latino, and low-socioeconomic students, academic success will continue to be inconsistent and short-lived.

Further research should examine the locus of control ideologies to determine to what degree they are related to teacher effectiveness, particularly with students whose cultures differ from that of their teachers. This next step in this line of research will help to develop an intervention to assist teachers to assess and reassess their self-efficacy

beliefs, in particular locus of control beliefs, to help reduce, if not eliminate, the achievement gap in urban elementary schools.

## Appendix A

## Staff Survey

Completion of this page and survey indicates consent of participation.

Thank you for taking time to complete the following questionnaire. The questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for educators. Please indicate your opinion about each of the statements by circling the appropriate number. Your responses will provide the district with important data that will be used, along with other information, to determine program areas needing improvement, professional development, and/or support services.

Work Site:

Position:

Grade level (if applicable):

Number of years teaching in district:

Number of years total teaching:

Information gathered will not be use for personal evaluative purposes.

To honor the confidentiality of staff, students, schools, your responses will be kept confidential and will not be identified by name. Data will be presented in whole-district group format. Identifying code will be kept separate from identifying teacher information. Survey results will be kept for future studies.

## Appendix B

## Teacher Efficacy Survey

Directions: Read each question carefully. Consider each response from your own teaching experiences. Please indicate your frank opinion by circling the appropriate number. Your responses will remain confidential.

1. How much can you express your views freely on important school matters?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

2. How much do you feel you can influence the learning of underachieving students?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

3. How much can you do to get students to follow classroom rules?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

4. How much do you connect learning to students' cultural backgrounds?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

5. How much can you do to make the school a safe place?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

6. How much can you do to get students to believe they can do well in schoolwork?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

7. How much can you do to get parents to become involved in their children's learning?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

8. How much can you influence the decisions that are made in the school?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

9. How much do you help students to question ideas based on their own cultural backgrounds?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

## Appendix B

## Teacher Efficacy Survey - continued

10. How much does student disciplinary issues interfere with instruction?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

11. How much do you know and understand the cultural practices and beliefs that are in your immediate school community?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

12. How much can you help other teachers with their teaching skills?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

13. How much do you have your classroom environment reflect students' cultures?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

14. How much can you do to reduce school absenteeism?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

15. How much can you do to make students enjoy coming to school?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

16. How much can you do to enhance collaboration between teachers and the administration to make the school run effectively?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

17. How much can you do to promote learning when there is a lack of support from the home?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

18. How much can you do to get through to the students with the most disciplinary issues?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

19. How much can you do to have your curricular materials reflect your students' cultural backgrounds?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

## Appendix B

## Teacher Efficacy Survey - continued

20. How much can you do to keep students on task on difficult assignments?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

21. How much do students' socioeconomic and/or cultural backgrounds influence your expectations of them?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

22. How much can you do to provide students with more individualized methods of instruction?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

23. How much can you do to effectively utilize instructional strategies that promote positive self-images in students?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

24. How much can you do to maximize all learning experiences for struggling students?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

25. How much do you understand the cultural and social forces that impede student learning?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

26. How much can you do to motivate students who show low interest in schoolwork?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

27. How much can you do to understand the attitudes and beliefs of your students and families that may impact student achievement?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal

28. How much can you do to understand the historical and cultural aspects of your immediate school community?

1	2	3	4	5	6	7	8	9
Nothing	Very Little		Some Influence			Quite a Bit		A Great Deal



## Appendix C

## Open-Ended Response

*What do you think are the major obstacles that prevent students from reaching the levels of proficient and/or advanced?*

Teachers' Response(s)	Key Words	Efficacy Subscale
Family ability to work with child on a regular basis. There are also undiagnosed learning issues.	Family inability Undiagnosed learning issues	PI LOC
Students who do not have high self-esteem seem to do poorly in school.	Low self-esteem	LOC
Parents cannot support students in the more complex skills needed to be proficient.	Parents cannot support complex skills	PI LOC
Poor academic skills especially in reading.	Poor skills	LOC
Lack of preschool and early learning experiences	Lack of preschool, early experiences	LOC
Poor reading skills and poor math skills.	Poor skills	LOC
Lack of parents able to support homework completion and read regularly.	Parents unable to support	PI LOC
Lack of self esteem and motivation	Lack of self-esteem and motivation	LOC
Poor reading and comprehension skills	Poor skills	LOC
Parents do not provide a language enriched environment at home.	Lack of language enriched environment	C PI LOC
Lack of home support. Poor habits.	Lack of home support Poor habits	PI LOC
Not knowing English vocabulary Processing problems Poor organizational skills	Not knowing English vocabulary. Poor organizational skills	C LOC

## Appendix C

## Open-Ended Response – continued

<p>Absences from school and the school board require 40 minutes/day of homework at fourth grade. Some teachers just have students complete class work. I think the value of homework is in planning time, organizing, etc., though I know research isn't clear on this. It seems that our 3-4 hours of homework a night during high school are now down to one hour/night for "B" students at the high schools, depending on the learner. Parents are not included in the allocating of responsibility for student achievement.</p>	<p>Absences District policies</p>	<p>DM LOC</p>
<p>Managing routines better and having wisdom about student discipline. With discipline under control, students could have more free choice or group activities wherein they can get much more practice and learning rather than mainly relying on whole class instruction.</p>	<p>Management of routines. Lack of discipline and instructional control</p>	<p>I LOC</p>
<p>Reading and comprehension along with critical thinking skills and writing</p>	<p>Skills</p>	<p>LOC</p>
<p>The child's socio-economic status is the major obstacle for reaching levels of proficiency. Standardized tests are culturally biased.</p>	<p>Socio-economics obstacles Cultural bias</p>	<p>C LOC</p>
<p>Lack of attention and focus and time spent to acquire deep understanding. The curriculum is a mile wide and an inch deep.</p>	<p>Lack of attention and Focus. Curriculum issues</p>	<p>LOC DM</p>
<p>Lack of practice or interest in academic</p>	<p>Lack of practice and interest</p>	<p>LOC</p>
<p>1. Not having a strong foundation built during their lower grade school years. 2. Lack of academic support at home. 3. Insufficient time available for teachers to work with individual students during school day. 4. Insufficient support given to teachers with struggling students, especially in the cases where a small percentage of students are not meeting proficiency or beyond.</p>	<p>Lack of foundation. Lack of academic support at home. Insufficient time and insufficient supports.</p>	<p>LOC</p>

## Appendix C

## Open-Ended Response - continued

Poor study skills. Lack of motivation. Discipline problems; defiance; lack of respect towards adults and peers; violent behaviors. Poor attendance.	Poor study skills. Lack of Motivation. Lack of discipline and respect. Violent behaviors. Poor attendance.	PSC LOC
Inequity of access to information, lack of direct support of instruction after school hours, limited customization of instruction and follow up	Inequity of access. Lack of supports; Limited customization	LOC
For special ed kids - the amount of paperwork and federal guidelines influences how much time and creativity we can use to work with the kids.	Special Education issues	LOC
Privilege Socio-economic status	Socio-economics issues	C LOC
The amount of time spent in the classroom. Teachers that are not adequately trained. Districts that are consistently changing the goals and objectives for teachers and students.	Time spent Inadequate training District goals/objectives	LOC DM
The programs that we use and the pacing of these programs do not give us the chance to teach for understanding. We have so much to cover that we only teach for exposure and not for mastery.	Inability to teach for understanding. Poor program implementation	LOC I
Behavior and self-esteem issues	Behavior and self-esteem	PSC LOC
Students come to school angry and emotionally distraught	Angry and emotionally distraught	PSC LOC

*What do you think are the causes of these obstacles?*

Teachers' Response(s)	Key Words	Efficacy Subscale
We are not able to provide students and families with the supports that they need.	Unable to provide student/family supports	LOC
Social and emotional issues at home and school.	Social/emotional issues	LOC
Lack of parent training and/or motivation.	Lack of parent training And motivation	PI LOC
Ability to read critically. Poor vocabulary development.	Poor reading skills and vocabulary development.	LOC

## Appendix C

## Open-Ended Response - continued

All students' families do not make the same income.	Income	C LOC
Low expectations of teachers, parents, and/or students and lack of time spent to practice and absorb new concepts. Scattered curriculum that is trying to cover too much lightly instead of major concepts well.	Low expectations. Curriculum issues	LOC I
Time, resources, history of education as being a priority; Language barriers	Resources, history and language	LOC C

## Appendix C

## Open-Ended Response - continued

<p>Teacher, parent, and community failing to work as a team to provide success for all students. Perhaps in some cases, lack of funding and lack of professional development for teachers to build upon their skills first taught in their credentialing programs. Also, lack of support for parents to understand their rights and understand how they can influence their child's success at home. Additionally, expectations of district offices placed upon their teachers to cover so much curriculum (the school day and school year are only so long), and complete on-going testing that subtracts from teaching time causes some children to not truly learn the material taught. And the speed at which teachers are expected to teach material does not benefit student learning for the long-term. Lastly, the inability of our educational system (greater community) to wake-up and realize that not all children are being educated equally. When every school site does not reflect positive and healthy environments, and not all districts receive equal funding, it is clear there is an inequity. It becomes clear that some children are valued more than others by our educational system. When you begin with a disadvantage (whatever it may be), your efforts to be successful have to be 100% stronger than your counterpart who began on the "right" foot.</p>	<p>Failure to work as a team. Professional issues. Educational inequalities</p>	<p>LOC C</p>
<p>Lack of or no positive family support at home with their child. Parents do not agree with the benchmarks and state standards, making excuses for their child and degrading the teachers for it. Parents not sending their child to school due to poor weather, no transportation, siblings or parents not feeling well, going on regular family vacations during the school year, etc.</p>	<p>No positive family supports and lack of Agreements and responsibilities</p>	<p>PI LOC</p>

## Appendix C

## Open-Ended Response - continued

Economic differences, educational differences and expectations, use of extended time, limited access to technology and books.	Economic and educational differences and expectations.	C LOC
Income	Income	C LOC
Districts need to ensure that low performing students have high quality faculty and the resources they need in order to succeed. Students in high poverty neighborhoods are just as smart as students in more affluent neighborhoods. They lack experience and opportunity.	District resources. Poverty vs. affluent	DM C LOC
Mandated reading and math programs	Mandated programs	DM LOC
Inconsistency in discipline policies. 4 <sup>th</sup> and 5 <sup>th</sup> graders have had too many prior failures at school	Discipline policies and Prior failures	LOC PSC
Family and personal issues get in the way of students learning	Family and personal issues	PI LOC

*In reference in to your answers above, how do you change your practices to better fit the needs of students who are not proficient or advanced? Explain*

Teachers' Response(s)	Key Words	Efficacy subscale
I try to be more patient and understanding.	Patient and understanding	LOC
I try to praise students to make them feel good about themselves.	Praise	LOC
I try to communicate with parents on a regular basis.	Communicate	PI
I try to provide students with strategies that they can use across the curriculum.	Provide strategies	I
I give students a lot of homework to give them more practice in reading and math.	Homework	I
I try to use different strategies.	Different strategies	I
I try to provide opportunities for small group instruction.	Instruction	I
I try to be sensitive to students needs	Sensitive	C
Small group learning opportunities and pull-outs for reading lab	Learning opportunities	I
Provide a language enriched day.	Provide language enriched	I

## Appendix C

## Open-Ended Response - continued

Parent Education. Late afternoon/early evening workshops. Empowering students by helping them set reachable goals using rubrics to guide.	Parent education. Empowering students	PI I
Teach vocabulary constantly. Get kids talking. Directly instruct organizational skills	Vocabulary and Organizational skills	I
Trying to individualize instruction as much as possible and bring in adult volunteers 5 hours/week to give students support with their reading. I am this year going to give out stickers whenever I see positive learning behaviors	Individualize instruction. Volunteers support. Solicit positive learning behaviors	I PSC
Read up on discipline practices during the summer and prepare routines and "things to say" to teach the students.	Discipline practices	LOC
I am trying to send home work activities that cover these areas. I try to have opportunities to talk about our class work.	Homework and Opportunities to talk	I
I try to understand the students' cultural and socio-economic status. I don't blame the student(s) or their family for not being middle class. I realize that proficiency is an abstract and subjective ranking put on students, schools, and teachers to keep us all in our places. Using proficiency to determine anything is so outdated. We should be looking at student growth over time. We should be asking, "Is the student learning? Is s/he make good progress in learning the basic skills. How much growth does the child show over time. Expecting second language students and children of poverty to be at the same proficiency level as middle class white students is not only absurd, it's unrealistic. Look at growth over time - not proficiency rankings on a standardized test once a year.	Understand students' status	C I

## Appendix C

## Open-Ended Response - continued

Take time to go over concepts until mastered. Talk with students about goals, expectations, set realistic goals; get students to put forth effort to work as hard as needed. More practice of and repeated exposure to concepts with rewards for information learned.	Mastery of concepts. Student expectations and Exposure. Rewards	I
Lots of communication with parents/guardians alternative resources during the school day extended day tutoring best practices in classroom to ensure good use of time; assessment often to target areas that are difficult	Communication with parents. Use of alternative resources.	PI I
1. Try to incorporate time to work in small group with struggling students. 2. Make myself available during recess, lunch, and after school (with no additional pay). 3. Provide re-teach opportunities as often as needed. 4. Review all material prior to testing. 5. Completing district testing when I feel my students are prepared to take the test.	Instruction	I
Practices vary depending on the student, family and the situation.	Practices dependent Situation	I C
I try to provide motivational activities and those that key to interest levels as a "hook" to get them into the tasks at hand. I actively listen to their needs and wants and interests and customize instruction to support them. I also provide higher level thinking activities to promote deeper knowledge and understandings	Motivation Hook Higher level thinking	I
Few of my students are proficient or advanced, and all of my practices are designed to work with them.	Change in practices	I
Students need more proficient adults in the classroom. They need psycho-social services in order to help them focus on academics. Parent education is a must. High poverty areas need the best resources.	Psycho-social services and parent education	PI
I just try to do my best and I sometimes have to skip over some things in the programs.	Skip over	I

## Appendix C

## Open-Ended Response - continued

I have been trying to adjust the curriculum because many of my students do not have grade-level skills.	Adjust curriculum. Grade-level skills lacking	I
I tend to do a lot of one-on-one counseling and student motivation incentives. I also try to do actives that students can do well in.	Counseling and motivation incentives	PSC

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