

Abstract

Title of dissertation: EXAMINING THE PERCEPTIONS AND SOURCES OF THE SELF-EFFICACY BELIEFS OF PRINCIPALS OF HIGH-ACHIEVING ELEMENTARY SCHOOLS

James Virga, Jr., Doctor of Education, 2012

Dissertation directed by: Professor Carol Parham
Department of Counseling, Higher Education, and Special Education

School principals have a significant impact on the academic achievement of their students (Leithwood et al., 2004; Marzano et al., 2005). This important responsibility is magnified by the fact that principals have a job that is increasingly complex and demanding (Copland, 2001; West et al., 2010). Recently, researchers and educators have voiced concern over whether current programs for principal preparation are sufficient to prepare school leaders for their challenging jobs (Hess & Kelly, 2005, 2007). When individuals are dealing with demanding circumstances, such as those encountered in a stressful job with high accountability, the self-efficacy beliefs of the individuals involved are a key factor in performance and success. Research is needed to better understand the self-efficacy beliefs of schools principals, especially how these beliefs are formed and sustained through professional development experiences.

This mixed-methods study focused on the perceptions and sources of the self-efficacy beliefs of elementary school principals whose schools had demonstrated high levels of student achievement in comparison to similar schools. In the quantitative phase of the study, 40 high-achieving elementary schools were identified through analysis of state assessment data. All 40 schools were from a single school district in the mid-

Atlantic United States, which had a history of structured leadership development for aspiring principals. The principals of the schools were asked to complete the Principal Self-Efficacy Scale (PSES) (Tschannen-Moran & Gareis, 2004) and answer demographic questions. Analysis of the survey data did not find any statistically significant relationships between PSES scores and demographic factors. Then the researcher conducted interviews with six of the principals who had completed the PSES. Participants were selected based on their PSES scores and demographic data. The qualitative data confirmed that the principals derived their self-efficacy beliefs from the four sources identified by Bandura: mastery experiences, vicarious experiences, verbal persuasion, and affective states. The study found that the district's multiyear leadership development program provided multiple opportunities for developing principals to build their self-efficacy beliefs. Further research is recommended with larger samples of principals. In addition, future research should examine the relationships among principal efficacy, teacher efficacy, and student achievement.

EXAMINING THE PERCEPTIONS AND SOURCES OF THE SELF-EFFICACY
BELIEFS OF PRINCIPALS OF HIGH-ACHIEVING ELEMENTARY SCHOOLS

by

James John Virga, Jr.

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfillment
of the requirements for the degree of
Doctor of Education
2012

Advisory Committee:

Professor Carol Parham, Chair
Professor Dennis Kivlighan
Professor George Marx
Professor Patricia Richardson
Dr. Duane Arbogast

Dedication

This dissertation is dedicated to my wife Andrea, without whose enduring love, understanding, and support this work simply would not have been possible, and to our three children, Michael, Lizzie, and Jack, who are a constant source of joy, laughter, and pride. This dissertation is also dedicated to my mother, Anne M. Virga, who instilled in me a desire to learn and grow throughout my life, and my father, James J. Virga, Sr., who taught me the value of hard work.

Acknowledgments

It would not have been possible for me to complete this study without the support and guidance of numerous individuals. I am forever grateful to the following people:

- Dr. Carol Parham, my advisor and committee chair, whose advice, encouragement, and guidance helped me to identify a compelling research topic and then follow through to complete the study.
- Dr. Dennis Kivlighan, Dr. George Marx, Dr. Patricia Richardson, and Dr. Duane Arbogast, the other members of my dissertation committee, for their questions, insights, and advice. I am especially grateful to Dr. Arbogast for his thoughtful feedback as I was drafting and revising dissertation chapters.
- The members of my MPEL2 cohort, who served as colleagues and partners during the doctoral coursework and as voices of encouragement during the dissertation writing process.
- Mary Lou Sommardahl, for her expert editing, and Dr. Charla McKinzie, for her support with the quantitative data analysis.
- The principals who agreed to participate in the study, especially the six principals who participated in the interview phase, whose candor and generosity contributed greatly to this research.
- My school system colleagues who encouraged and supported my pursuit of this research, including Dr. Jerry Weast, Mr. Larry Bowers, Dr. Frieda Lacey, Dr. David Steinberg, Dr. Frank Stetson, Dr. Deb Mugge, Dr. Susan Marks, Dr. Myra Smith, Dr. Shawn Joseph, Mr. Adrian Talley, and Mrs. Cindy Loeb.
- Dr. Megan Tschannen-Moran, for her responsiveness and guidance regarding use of the Principal Self-Efficacy Scale.
- My wife Andrea and our three children, Michael, Lizzie, and Jack, for their wonderful patience, support, and encouragement.

Thank you all for your support.

Table of Contents

Table of Contents	i
List of Tables	ix
List of Figures	x
Chapter One: Introduction	1
Overview.....	1
Principal Leadership	2
Pressures on principals.....	3
Principal preparation.....	5
Social Cognitive Theory and Self-efficacy.....	5
The four sources of self-efficacy	6
Self-efficacy and Education.....	7
Principal Self-Efficacy.....	8
Background.....	10
District A’s leadership development program	10
Statement of the Problem and Research Questions	13
Potential Significance	15
Limitations	16
Definition of Terms	16
Organization of the Study.....	18
Chapter Two: Review of Literature and Research.....	20
Introduction.....	20
Principal Leadership	21

Principals and student achievement	22
The impact of principal leadership.....	23
Linking principal leadership and student results.....	25
Challenges facing principals	27
Concerns about principal preparation	28
The risk of principal burnout and principal shortages.	29
Supporting principal development	30
Social Cognitive Theory and Self-Efficacy	31
Triadic reciprocal causation.	32
The impact of self-efficacy on behavior.	33
Four sources of self-efficacy.....	35
Characteristics associated with high self-efficacy and low self-efficacy.	37
Self-Efficacy Research in Education	39
Teacher self-efficacy.....	39
The effects of teacher efficacy.	41
Measuring teacher efficacy.	43
Collective teacher efficacy	43
The impact of collective teacher efficacy.	44
Principals' Influence on Teacher Efficacy.....	45
Principal Self-Efficacy.....	46
The critical role of principals.	46
Defining principal self-efficacy.	47
The effects of principal self-efficacy.	48

Measuring principal self-efficacy	51
Developing principal self-efficacy.....	53
Guiding Conceptual Framework.....	54
Chapter Three: Design and Methodology.....	58
Overview.....	58
Research Rationale and Approach	58
Study Sample Population.....	61
Survey Instruments	62
Identification of the sample for the quantitative phase of the study	65
Distribution of surveys in the quantitative phase of the study.....	66
Conducting Interviews	67
Data Analysis	69
Ethical Issues and Personal Involvement.....	71
Summary.....	71
Chapter Four: Findings	73
Overview.....	73
Quantitative Data	75
Qualitative Data	84
Selection of interview participants.....	84
Qualitative Data	90
Principals’ perceptions about the sources of their self-efficacy beliefs.....	90
Background information about the participants.....	90
Mastery experiences.....	92

Vicarious experiences	101
Affective states.....	109
Principals' perceptions of leadership development experiences.....	114
Themes.....	121
Theme 1: Focus on students.....	121
Theme 2: Knowledge of instruction and feedback to teachers	123
Theme 3: The importance of hiring high-quality staff.....	125
Theme 4: Building relationships.....	127
Theme 5: Overcoming adversity.....	129
Summary.....	132
Chapter Five: Discussion, Conclusions, and Implications.....	134
Introduction.....	134
Research questions.....	135
Methodology.....	135
Analysis Related to Research Questions 1 and 2.....	136
Total scale and subscales	137
Gender.....	138
Years as a principal.....	139
School enrollment size	140
Socioeconomic characteristics of the student body	141
Analysis Related to Research Questions 3 and 4.....	143
Recommendations for Future Practice.....	149
Recommendations for Future Research.....	151

Summary.....	154
Appendices.....	155
Appendix A: The Principal Self-Efficacy Scale (PSES) and Demographic Questions..	156
Appendix B: Survey Consent Letter.....	158
Appendix C: Principal Interview Questions	159
Appendix D: Interview Consent Letter.....	161
References.....	162

List of Tables

Table 1. <i>Sample Interview Topics and Questions</i>	69
Table 2. <i>Demographic Characteristics of Principals Completing Principal Self-efficacy Scale</i>	77
Table 3. <i>Reliability Coefficients for the Principal Self-Efficacy Scale (Tschannen-Moran & Gareis, 2004)</i>	79
Table 4. <i>Reliability Coefficients Computed for the Study Participants Taking the Principal Self-Efficacy Scale</i>	80
Table 5. <i>Means, Standard Deviations, and Ranges for Total PSES and Subscales</i>	81
Table 6. <i>Mean Level Differences in PSES Scores by Gender</i>	81
Table 7. <i>Mean Level Differences in PSES Subscale Scores by a Dichotomous Measure of Length of Time as a Principal</i>	82
Table 8. <i>Mean Level Differences in PSES Subscale Scores by a Dichotomous Measure of Length of Time at Current School</i>	82
Table 9. <i>Mean Level Differences in PSES Subscale Scores by a Dichotomous Measure of School Enrollment</i>	83
Table 10. <i>Mean Level Differences in PSES Subscale Scores by a Discrete Measure of Percentage of Students Receiving Free or Reduced-Price Lunch</i>	84
Table 11. <i>Demographic Characteristics of Participating Principals</i>	86
Table 12. <i>Coding System</i>	89
Table 13. <i>Subtheme Codes</i>	89

List of Figures

Figure 1. Triadic reciprocal causality: personal factors (P), behavior (B), and external events (E). 33

Figure 2. Efficacy beliefs and outcome expectancies influence the person, behavior, and outcome..... 35

Figure 3. Guiding conceptual framework..... 57

Chapter One: Introduction

Overview

Over the past three decades, numerous researchers have confirmed that the school principal plays a critical role in the quality of a school and the learning environments provided for students (Cotton, 2003; Hallinger & Heck, 1996; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Rice 2010). Leithwood et al. (2004) asserted, “Leadership is second only to classroom instruction among all factors that contribute to what students learn at school”; further, “successful leadership is critical to school reform” (p. 27). Yet principals in 2012 are faced with a job that is increasingly complex and difficult (Siegrist, Weeks, Pate, & Monetti, 2009); furthermore, studies have indicated that the United States will be facing a principal shortage in the next two decades (Copland, 2001).

Consequently, there is great interest among researchers, policymakers, and school district officials alike concerning how to train educators to be skilled school administrators, how to increase the effectiveness of persons currently serving as principals, and how to retain highly effective principals in their critical positions. Recently, the research in the area of human self-efficacy beliefs has begun to provide some insight into how to prepare individuals for the rigors of the principalship. There is a growing understanding that principals’ perceptions of their own self-efficacy play a critical role in their approach to the job, their response to difficult circumstances, and their ability to persevere when encountering obstacles and pressure (Tschannen-Moran & Gareis, 2004).

This study seeks to add to this discussion by examining the perceptions of principals of high-achieving elementary schools regarding their own self-efficacy beliefs and the sources of those beliefs. This study will be informed by three bodies of work: (a) research on school principal leadership and its impact on staff and students, (b) study of social cognitive theory and the influence of personal self-efficacy beliefs, and (c) emerging research into the self-efficacy beliefs of school principals. Through weaving these strands together and specifically focusing on principals' perceptions of their own self-efficacy beliefs, this study will add to the research literature and inform efforts to prepare individuals to be successful principals.

Principal Leadership

Numerous studies have confirmed that the leadership of the school principal is a significant factor in the quality of schools and the academic achievement of students (Cotton, 2003; DuFour & Eaker, 1998; Grissom & Loeb, 2009; Hallinger & Heck, 1996; Hess & Kelly, 2007; Leithwood, Harris, & Hopkins, 2008; Leithwood et al., 2004; McGuigan & Hoy, 2006; Nettles & Herrington, 2007; Rice, 2010; Sergiovanni, 1994). Researchers have studied the impact of school principals' leadership on many factors in their schools, including school climate, teacher morale, and instructional effectiveness (Cotton, 2003; Hallinger & Heck, 1996; Leithwood & Jantzi, 2008; Marzano, Waters, & McNulty, 2005). Beginning with the effective schools research conducted in the 1970s, researchers have sought to understand the principal's role, the leadership styles that lead to success, and the specific skills and behaviors that principals need to demonstrate to support student achievement (Brookover & Lezotte, 1979; Edmonds & Frederiksen, 1978; Lezotte, 1992). Although the critical role of the principal was commonly

recognized and accepted by most educators and policymakers, empirical evidence was lacking. Throughout the 1980s and 1990s, numerous studies were conducted in an effort to find a substantive link between principal leadership and school success. Hallinger and Heck reviewed 40 studies conducted between 1980 and 1995 and concluded that principals have a significant, though indirect, effect on student achievement. They explained that principals do not directly affect student achievement gains in the same way as a classroom teacher does—by working personally with students. Rather, their impact is indirect, because it is delivered through teachers and other staff they supervise. This conclusion was reinforced by Cotton, whose review of multiple studies determined that principals exert “substantial indirect impact” on student learning, although this influence is mediated by the actions of teachers and others. Marzano et al. added to the research literature by conducting a meta-analysis of studies on principal leadership, concluding that effective principals can have a significant impact on the academic growth of students through consistent implementation of research-based leadership practices. The research is clear that a highly skilled school principal can positively affect student outcomes through effective leadership of and collaboration with teachers, school staff, and parents. Nevertheless, as modern principals strive to have a positive effect on the students in their schools, they are facing greater pressure and scrutiny than ever before.

Pressures on principals. Numerous researchers have detailed the extraordinary pressure placed on public schools in the United States over the past 10 years. With the advent of the No Child Left Behind Act (NCLB, 2001), schools and school systems have been subjected to unprecedented pressure to produce academic results for all students (Daly, 2009; Lyons, 2006; Marks & Nance 2007; Roellke & Rice, 2008; Santamaria,

2008; Sunderman, Orfield, & Kim, 2006; West, Peck, & Reitzug, 2010). This increased accountability and the accompanying consequences for poor performance have heightened the urgency in the debates about school leadership. A host of recent reports have sought to analyze the principalship and its impact on staff and students (Branch, Hanushek, & Rivkin, 2009; Clark, Martorell, & Rockoff, 2009; Condon & Clifford, 2009; Heck & Hallinger, 2010; Rice, 2010), and the National Board for Professional Teaching Standards (NBPTS) has launched a program to establish national certification for school leaders (NBPTS 2010). This increased scrutiny is occurring at the same time that principals in the field report increasing challenges in the day-to-day work of leading a school (Copland 2001; Guterman 2007; West et al., 2010). Current principals are faced with a job that is increasingly complex and difficult (Siegrist et al., 2009), as they are asked to lead in an environment that includes complications such as merit pay, new performance standards, and the need for entrepreneurial management (Hess & Kelly, 2005). In 2010, West et al. found that urban principals reported dealing with typical principal pressures such as extensive responsibilities, limited control, and lack of personal and professional time, at the same time that they were facing new challenges including increased pressure for school academic performance, issues involving new communication technologies, and new urban school political power dynamics. These types of mounting pressures have been shown to contribute to the burnout of school principals (Cushing, Kerrins, & Johnstone, 2003; Friedman, 1997; Whitaker, 1996); individuals who struggle with the physical, psychological, and emotional toll of the principalship often choose to leave the position.

Principal preparation. Although there is universal acknowledgment that the job of school principal is becoming more and more difficult, there has not been a significant change in the way that teachers and other educators are prepared for the principalship. In fact, there is a growing chorus of voices raising concerns about the quality of principal preparation programs in the United States (Hallinger & Snidvongs, 2008; Hess & Kelly, 2005, 2007; Versland, 2009). Critics charge that many university programs are not aligned with the demands of modern school leadership and subsequently do not provide aspiring administrators with the skills, knowledge, and mental toughness to be successful as principals. Considering all of these factors, it is not surprising that many states are facing critical shortages of individuals interested in and qualified for the principalship (Copland, 2001; Guterman, 2007; Hewitt, 2008).

Concerns about the pressures on the principal, the perceived ineffectiveness of principal preparation programs, and possible principal shortages in the future have caused researchers to seek answers in different areas of study, including social cognitive theory. Recent research has indicated that a key factor in principal effectiveness and sustainability may be the self-efficacy beliefs of the principals themselves.

Social Cognitive Theory and Self-efficacy

Although the interest in principal effectiveness has spiked over the past decade due to new accountability pressures and other factors, the research into individual effectiveness began several decades ago with the rise of behavioral psychology and social learning theory. In recent years, significant research into the areas of individual effectiveness has focused on the concept of self-efficacy, that is, the beliefs an individual has about his or her capabilities to be successful with a given task.

Albert Bandura is credited with identifying the critical role that self-efficacy beliefs play in human behavior and performance. Bandura (1997) defined self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). Persons’ beliefs about their own capabilities determine whether or not they will try to cope with situations, the amount of effort they will exert in trying to cope, and how long they will keep up the effort in the face of adversity (Bandura 1977). In short, people who think they can perform well on a task do better than those who think they will fail (Gist & Mitchell, 1992).

The four sources of self-efficacy. People develop beliefs about their own efficacy through four primary sources of information: mastery experiences, vicarious experiences, verbal persuasion, and affective states. When a person completes a task at a mastery level, the experience increases his or her self-efficacy beliefs about the ability to be successful with the task. Conversely, an experience of failure can lead to negative self-efficacy beliefs. Mastery experiences are the most powerful source of self-efficacy beliefs. When a person experiences success with a task, his or her perception of the ability to complete a similar task in the future is heightened. In other words, success breeds success. Vicarious experiences build self-efficacy by providing individuals with models of other people performing tasks successfully. When people observe someone similar to themselves performing a task successfully, they often experience an increase in their own expectation of success. This perception is lessened if the model is perceived to have some special advantage or capacity. Vicarious experiences are a more powerful source of efficacy when they are combined with mastery experiences. Verbal or social persuasion can increase an individual’s self-efficacy when a trusted peer or expert

provides encouragement or motivation. This type of experience is a relatively weak source of self-efficacy in comparison to mastery experiences and vicarious experiences. Finally, affective states or emotional arousal can be a source of self-efficacy. When a person is in a state of emotional arousal, that condition can have a significant effect on his or her self-efficacy beliefs. In most cases, a high state of arousal has a negative effect on self-efficacy beliefs. Emotional and stressful situations often lead to anxiety and poor performance (Bandura, 1982).

Self-efficacy and Education

The study of self-efficacy in education was initiated with work that involved teachers. Beginning with a RAND study (Armor et al., 1976), researchers began to consider what teachers believed about their power to make a difference with their students and the effect this would have on their performance in the classroom. Studies have indicated a positive relationship between high teacher efficacy and job satisfaction (Lee, Dedrick, & Smith, 1991; Viel-Ruma, Houchins, Jolivette, & Benson, 2010), teacher commitment (Ware & Kitsantas 2007), and student achievement in reading and math (Goddard, Hoy, & Woolfolk Hoy, 2000).

As the studies on teacher efficacy continued and expanded, researchers began to explore the relationship between the efficacy beliefs of the teaching staff and the school principal (Dimmock & Hattie, 1996; Imants & De Brabander, 1996; McCormick, 2001). Several researchers found a link between principal leadership and the levels of efficacy among teachers (Dussault, Payette, & Leroux, 2008; Leithwood & Jantzi, 2008; Ross & Gray, 2006; Smith et al., 2003). This link was particularly noted when the principal was seen as a positive influence on the social organization of the school (Lee et al., 1991) and

when the school was in the process of restructuring (Dimmock & Hattie, 1996). Other researchers began to draw the connections between a principal with high self-efficacy and increases in student achievement (Leithwood & Jantzi, 2008; Tschannen-Moran & Gareis, 2004).

In addition to the positive effects that principal self-efficacy may have on others in the schoolhouse, it is important to note the role that self-efficacy plays in simply allowing the principal to persist in doing the work. High levels of self-efficacy help school principals to deal more effectively with the challenges they face every day. High self-efficacy beliefs in principals enable them to be more resilient. Bandura (2000) stated,

When faced with obstacles, setbacks, and failures, those who doubt their capabilities will slacken their efforts, give up, or settle for mediocre solutions. Those who have a strong belief in their capabilities redouble their efforts to master the challenge. (p. 120)

Research has just begun to scratch the surface in terms of the applicability of social cognitive theory to the work of the school principal. A better understanding of how principal self-efficacy beliefs are formed and sustained would inform efforts to prepare individuals to be successful principals.

Principal Self-Efficacy

The self-efficacy beliefs of schools principals and their perceptions of those beliefs play a critical role in principal leadership and, subsequently, the quality of the schools they lead. Bandura (1997) explained that principal sense of self-efficacy is a judgment that each principal makes about his or her capabilities to lead a school in a way that results in student success. He argued that principals with a high sense of self-efficacy approach their complex and difficult work with confidence, resiliency, and

perseverance. They are more likely to tackle difficult issues, they see setbacks as opportunities to learn, and they stay committed to the work, even when faced with difficult obstacles. Principals with low self-efficacy, on the other hand, when faced with resistance, reduce their efforts, give up, or settle for less than ideal solutions (Bandura, 2000). Characteristics of highly efficacious principals translate into positive effects for staff and students. Although the number of studies of principal efficacy is small, the studies that have been conducted have found links between high principal self-efficacy and positive school climate, teacher efficacy, instructional leadership, and student achievement (Dimmock & Hattie, 1996; Leithwood & Macall, 2008; Smith et al., 2003; Tschannen-Moran & Gareis, 2005;).

Despite the evidence that self-efficacy is clearly related to individual performance, there has been surprisingly little research devoted to understanding how to help individuals become more efficacious (Gist & Mitchell, 1992). The majority of the research has focused on the causes and effects of efficacy rather than strategies to increase it. As recently as 2001, McCormick could not find a single study that measured whether a leadership training program affected participants' self-efficacy. This lack of attention represents a void in the research because it leaves system and school leaders without proven strategies to build efficacy in their workforce, which the research has indicated should be a focus area for educational leaders (McCormick, 2001). As Goddard et al. (2000) stated, "One way for school administrators to improve student achievement is by working to raise the collective efficacy beliefs of their faculties" (p. 502). They also recommended engaging school staffs in mastery experiences, carefully designed staff development activities, and action research projects to build their

individual and collective efficacy. Gist and Mitchell (1992) detailed how training activities can be planned and implemented to build self-efficacy. They also encouraged the provision of professional development that uses mastery, modeling, and persuasion experience.

Background

This study of principals' perceptions of their self-efficacy beliefs and the experiences that helped form those beliefs will be conducted in District A, a suburban school district in the mid-Atlantic United States, which serves more than 140,000 kindergarten through Grade 12 students in 200 schools. District A has 131 elementary schools, 38 middle schools, 25 high schools, 1 career and technology center, and 5 special schools. Racial–ethnic composition of the student enrollment during the 2010–2011 school year was as follows: 37.2% White, 23.4% African American, 23.4% Hispanic, 15.7% Asian American, and less than 1% American Indian.

District A's leadership development program. District A has a long history of investing time and resources into the training and development of school administrators. Since the 1980s, the district has implemented a defined sequence of training activities designed to prepare individuals for the principalship. These activities have included orientation sessions for prospective administrators, partnership programs with local universities to help employees earn a master's degree in school administration, and multiyear training programs that provide targeted professional development and mentoring for aspiring principals. The leadership development program in District A begins with a series of future administrator workshops that provide teachers with an overview of school leadership. Following participation in these workshops and

successful completion of a master's degree in school administration, teachers in District A may apply to be included in the pool of candidates from which beginning assistant principals are chosen. Members of the pool are then selected by principals and assigned as 1st-year assistant principals (AP1). During their AP1 year, developing administrators receive on-the-job training from their principals and participate in leadership seminars with other AP1s. These seminars are planned and implemented by the district's directors of elementary and secondary leadership development, former principals who are now charged with training the new generation of school leaders. Each AP1 is also provided with a professional development team (PDT) comprising the AP1, the school principal, an assistant superintendent, and a mentor. The PDT meets regularly to hear updates on the AP1's performance and to provide training and guidance. The PDT plays a critical role in determining whether or not the AP1 will continue to progress through the leadership development program.

After successful completion of the AP1 year, the aspiring principal becomes a 2nd-year assistant principal (AP2). Once again, the leadership candidate is provided with training, seminars, mentoring, and guidance from a professional development team. As an AP2, the administrator's responsibilities are greater; the PDT expects a higher level of performance.

An aspiring principal who successfully completes the AP2 year can apply to be selected as a principal intern. As a principal intern, the aspiring administrator takes on an even greater level of responsibility. The intern year involves additional training, seminars, mentoring, and support from a PDT, which now includes a consulting principal. Consulting principals are former district principals who now serve as coaches

and mentors to developing administrators. The principal intern year culminates with the intern practicum, a period of 6 weeks during which the permanent principal is away from the school building while the principal intern serves as acting principal, managing all aspects of the school on a daily basis. At the conclusion of the intern year, the members of the PDT evaluate the intern based on the district's standards for principals and determine whether or not the intern is ready to be a principal in the district.

If the PDT agrees that the intern meets the standards, the intern is then eligible to apply for principal vacancies in the district. The interns compete with other successful interns and participate in an arduous interview process. Once an individual is selected as a new principal, the district continues to provide leadership development support. Every new principal participates in new-principal seminars that include direct coaching from the superintendent of the school system. In addition, the consulting principal first assigned during the intern year continues to work with the novice principal to provide support, advice, resources, and guidance. Appendix E presents information about the leadership development program in District A.

As a result of this comprehensive leadership development program, principals in District A are provided with individualized job-embedded professional development for 3 full years before becoming principals and for 1 full year after being appointed. District A's leadership development program provides multiple opportunities for aspiring principals to practice and master critical skills, to observe models of effective leadership, and to receive coaching and encouragement. These experiences help to build the confidence and self-efficacy of school principals in District A. District A's structured

leadership development program also makes it an ideal site to study the sources of principal self-efficacy.

Statement of the Problem and Research Questions

The research on human behavior has highlighted the importance of self-efficacy beliefs in human performance. Persons with high self-efficacy beliefs are more likely to embrace a challenge, rather than avoid it. In addition, high-efficacy individuals exert greater effort, demonstrate a higher degree of persistence, and complete tasks at a higher level than those with weaker self-efficacy beliefs (Bandura, 1997). Despite these findings, very little research has examined the self-efficacy beliefs of school principals (Tschannen-Moran & Gareis, 2004), even though multiple studies have shown that the principal's performance has a significant impact on staff and students (Cotton, 2003; Hallinger & Heck, 1998; Leithwood et al., 2008; Marzano et al., 2005). Even fewer studies have explored how to develop and heighten school principals' self-efficacy. As a result, it is rare to find a principal preparation program that provides participants with experiences that are explicitly designed to build their self-efficacy as school leaders (McCormick, 2001). Many leadership development programs are missing a key opportunity to provide their participants with possibly the most important tool they can have as school principals: a strong belief that they can be successful with the critical leadership tasks that lead to student learning. By adding to the limited research on this topic, this study will help to inform leadership development of principals and contribute to student academic achievement. Specifically, this study focused on the following research questions:

1. What perceptions do principals of high-achieving elementary schools have about their self-efficacy as it relates to the tasks and skills that are required of principals in today's public schools?
2. What relationship is there, if any, between principals' perceived self-efficacy beliefs and personal factors (gender, race or ethnicity, years as a principal, years as principal at current school) and demographic factors (school size, percentage of students qualified for free and reduced-price meals)?
3. What perceptions do principals of high-achieving elementary schools have about the sources of their self-efficacy beliefs?
4. What perceptions do principals of high-achieving elementary schools have about how their self-efficacy beliefs have been affected by professional development experiences and leadership development programs?

These research questions were investigated through a mixed-methods study focused on principals of high-achieving elementary schools in District A, a single large school district in the mid-Atlantic region of the United States. The first phase of the study was quantitative in nature. In this phase, a sample of elementary school principals in the district was identified through analysis of state test scores. This data analysis was used to identify 40 high-achieving elementary schools. For the purpose of this study, high-achieving schools are defined as those whose state test scores in reading and mathematics are ranked in the top 33% in comparison to similar elementary schools in terms of student demographics. Once the sample of schools was identified, the principals of the selected schools were asked to complete the Principal Self-Efficacy Scale developed by Tschannen-Moran and Gareis (2004). The principals also were asked to

answer questions related to personal characteristics and school-level variables, including gender, race or ethnicity, number of years as a principal, number of years as principal of current school, school size, and percentage of students qualified to receive free or reduced-price meals. Survey responses were reviewed to determine each principal's level of perceived self-efficacy. Following this first quantitative phase of the study, the second phase focused on qualitative data. A smaller sample of six principals was selected to participate in in-depth interviews with the researcher. Interview participants were selected on the basis of two criteria: scores on the Principal Self-Efficacy Scale and demographic factors. The aim was to interview principals who reported high levels of self-efficacy and who represented a variety of personal and school demographics. The interviews focused on principals' perceptions of their own self-efficacy beliefs, the sources of those beliefs, and the impact of professional development experiences on their perceived self-efficacy (Appendix C). The full research design is described in detail in chapter three of this study.

Potential Significance

The findings of this study add to the collected knowledge regarding principal self-efficacy. By contributing to the literature and research about principal efficacy, this study will help principals and those who supervise them to respond effectively to the increasing challenges of their positions. In addition, the research results will inform the design and delivery of principal preparation programs that ensure explicit attention to the development of strong self-efficacy beliefs. By adding to the literature on the efficacy beliefs of principals, the sources of principal self-efficacy, and the links between professional development experiences and principal efficacy, this study will support

efforts to build the capacity of school leaders and, in turn, enhance learning environments for students.

Limitations

This study was limited by the size and context of the sample population. All of the responders to the survey instruments and all of the participants in follow-up interviews were working elementary school principals within a single large school district. Accordingly, the members of the sample had many common experiences that might not have been present in another school district. These common experiences, which included serving under similar leadership, implementing the same curriculum and system plan, and participating in similar professional development activities, need to be considered with regard to generalization of the findings in this study. In addition, the researcher is a former elementary principal in the school district, who participated in the district's leadership program and then held several positions that involved training principals in the system. These factors create the possibility of researcher bias. For these reasons, the researcher utilized both qualitative and quantitative research methods in an effort to balance any potential bias. Despite these safeguards, those seeking to generalize the findings of this study to other populations should exercise caution when doing so.

Definition of Terms

Collective efficacy. Defined by Bandura (1997) as “a group’s shared belief in its capabilities to organize and execute courses of action to produce desired levels of attainment” (p. 477).

High-achieving school. An elementary school in District A that has demonstrated a high level of student achievement, as measured by performance on state

assessments, in reading and mathematics, in comparison to schools with similar percentages of students qualifying for free or reduced-price meals.

Individual self-efficacy. Defined by Bandura (1997) as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3).

Instructional leadership efficacy. Defined by Tschannen-Moran and Gareis (2004) as a principal’s belief in his or her capability to “create a positive learning environment in his/her school; facilitate student learning in his/her school; generate a shared vision for his/her school” (p. 580).

Maryland School Assessment (MSA). School accountability measure for public schools in the State of Maryland. Standardized tests are administered annually to students in Grades 3-8 in reading, mathematics, and science. Scores on the tests determine whether or not schools in Maryland achieve adequate yearly progress (AYP), as mandated by No Child Left Behind.

Management leadership efficacy. Defined by Tschannen-Moran and Gareis (2004) as a principal’s belief in his or her capability to “handle the management aspect of the job; prioritize among the competing demands of the job, shape the operational policies and procedures that are necessary to manage his/her school” (p. 580).

Moral leadership efficacy. Defined by Tschannen-Moran and Gareis (2004) as a principal’s belief in his or her capability to “promote ethical behavior among school personnel, promote school spirit among a large majority of the student population; promote a positive image of his/her school with the media” (p. 580).

No Child Left Behind Act of 2001. Public Law 107-110 enacted by the federal government to ensure that “all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at minimum, proficiency on challenging state academic achievement standards and state academic assessments” (NCLB, 2001).

Principal Sense of Efficacy Scale. An 18-item survey instrument developed by Tschannen-Moran and Gareis (2004) to measure the self-efficacy beliefs of principals in three areas: management, instructional leadership, and moral leadership.

Social cognitive theory. A learning theory focused on learning in social context, arguing that people learn from one another through observational learning, imitation, and modeling (Bandura, 1986).

Triadic causal reciprocation. Bandura’s (1986) premise that an individual’s perception (internal processes), his or her behavior, and his or her environment affect each other in a dynamic relationship that is reciprocal.

Organization of the Study

This study is organized into five chapters that serve to frame the study, outline the current literature, explain the study design and methods, present the findings, and offer analysis, including recommendations for future practice and additional research. The first chapter provides an overview of the study, a statement of the research questions, a description of the significance of the study, an acknowledgment of research limitations, and definitions of critical terms. The second chapter provides a review of the pertinent research on principal leadership, social cognitive theory, self-efficacy, teacher efficacy, and principal self-efficacy. This chapter also presents a guiding conceptual framework developed for the study. In the third chapter, the study’s design and methodology are

explained, including strategies for choosing the sample population, methods for collecting quantitative and qualitative information, and procedures for analyzing the data to address the study's research questions. The fourth chapter presents the findings of the study based upon a thorough review of the qualitative and quantitative data. In the fifth chapter, conclusions emerging from the data, implications for current practice, and recommendations for further research are discussed. Following this final chapter, the appendices provide useful information regarding study references, tools, and processes.

Chapter Two: Review of Literature and Research

Introduction

The purpose of this study was to examine the perceptions of principals of high-achieving elementary schools with regard to their own self-efficacy beliefs. Through survey instruments and follow-up interviews, the researcher explored how principals gauge their own self-efficacy in terms of moral, managerial, and instructional leadership. The researcher also investigated principals' perceptions of how they developed their self-efficacy beliefs as a result of personal and professional experiences. In addition, this study explored the relationships between principals' self-efficacy beliefs and a number of demographic characteristics.

To frame the study, it is necessary to review the research literature on several pertinent topics. This literature review is divided into five sections. The first section explores the research literature on principal leadership and the role that the school principal plays in school improvement and promotion of student learning. The second section examines social cognitive theory and Bandura's research on self-efficacy beliefs and their effect on human behavior and productivity. The third section explores the research on self-efficacy as it relates to teachers and their work with students. This content is included because the research on the individual and collective efficacy beliefs of teachers was a precursor to the research on principal self-efficacy. The fourth section describes the limited research that has explored the self-efficacy beliefs of school principals and the relationship between those beliefs and effects on teachers and students. The fifth section describes a guiding conceptual framework that the researcher has developed to analyze the sources and effects of principal self-efficacy beliefs.

Principal Leadership

Examination of the role of the principal in school success began with the foundational studies of effective schools research conducted by Brookover, Lezotte, Edmonds, and others in the 1970s (Brookover & Lezotte, 1979; Edmonds & Frederiksen, 1978). Specific study of the principal's role in school effectiveness and student performance began in earnest in the 1980s, when numerous researchers explored links between principal leadership and school success. Hallinger and Heck (1998) reviewed 40 studies conducted between 1980 and 1995 that examined the impact of the school principal on school effectiveness and improvement. In their review, the researchers examined journal articles, dissertation studies, and papers presented at peer-reviewed conferences that investigated the effects of the principal on one or more of six dependent variables: student achievement (22 studies), school effectiveness (16 studies), teacher perceptions of school effectiveness (4 studies), organizational effectiveness (1 study), attendance (1 study), and student self-concept (1 study). They found that 19 of the studies provided evidence of the principal's effect on at least one of the dependent variables; 10 of the studies had mixed results, and 11 could not determine that the principal had an effect. Of the 22 studies that examined the effect of principals on student achievement, 7 found clear evidence of effects, 6 had mixed results, and 9 found no effects. Through analysis of these data, the researchers determined that "principals exercise a measurable, though indirect, effect on school effectiveness and student achievement" (Hallinger & Heck, 1998, p. 186). Further, they posited, "While this indirect effect is relatively small, it is statistically significant, and we assert, meaningful" (p. 186).

Principals and student achievement. In 2003, Cotton published *Principals and Student Achievement: What the Research Says*, in which she presented her findings from a review of the research concerning the impact of the school principal on student learning and other variables. Cotton reviewed 81 studies, concentrating on work done after 1985. The selected studies examined principal effects on several variables, including student achievement (56 studies), student attitudes toward school (10 studies), student behavior (8 studies), teacher attitudes (15 studies), teacher behavior (4 studies), student dropouts (3 studies), and other variables (3 studies). Cotton summarized the research by stating that “many leadership behaviors and traits of principals are positively related to student achievement, student attitudes, and social behavior” (p. 67). She further described how “principals in high-achieving schools” are effective in numerous critical areas: safe and orderly school environment; vision and goals focused on high levels of student learning; high expectations for student achievement; self-confidence, responsibility, and perseverance; visibility and accessibility; positive and supportive school climate; communication and interaction; emotional–interpersonal support; parent–community outreach and involvement; rituals, ceremonies, and symbolic actions; shared leadership–decision making and staff empowerment; collaboration; instructional leadership; high levels of student learning; norm of continuous improvement; discussion of instructional issues; classroom observation and feedback to teachers; teacher autonomy; support of risk taking; professional development opportunities and resources; protection of instructional time; monitoring student progress and sharing findings; use of student data for program improvement; recognition of student and staff achievement; and effective role modeling (Cotton, 2003). As Cotton also noted, the research showed that highly

effective principals “avoid imposing tight administrative control over others in the school” (p. 72). Furthermore, effective principals do not describe their work in terms of “managing, directing, commanding, or regulating” (p. 72), because they do not allow their disciplinary actions to outweigh the efforts they take to support their staff members and students. Cotton asserted that principals have a substantial impact on student outcomes and that this influence is indirect in nature because it is accomplished through leading other school staff members (Cotton, 2003).

The impact of principal leadership. Leithwood et al. (2004) reviewed the research on principal leadership and concluded, “Leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school” (p. 5). They defined research in terms of three sets of practices that are essential in leading any organization: setting directions, developing people, and redesigning the organization. Leithwood et al. concluded that successful principals “contribute to student achievement indirectly through influence on other people or features of their organizations” (p. 13). The researchers added that leaders need to prioritize what they pay attention to, focusing on those items that make the most difference for student learning. They asserted that these items include teacher content knowledge, teacher professional community, school mission and goals, organizational culture, teacher involvement in decision making, and positive relationships with parents and community members (Leithwood et al., 2004).

Marzano et al. (2005) conducted a meta-analysis of 69 studies that involved almost 3000 schools and more than one million students; they found significant correlations between the leadership behaviors of principals and the academic

achievement of the students in their schools. Marzano et al. (2005) explained the implications of their research:

An increase in principal leadership from the 50th percentile to the 84th percentile is associated with a gain in the overall achievement of the school from the 50th percentile to the 60th percentile. Additionally, an increase in leadership behavior from the 50th percentile to the 99th percentile is associated with an increase in student achievement from the 50th percentile to the 72nd percentile. (p. 10)

Marzano et al. also identified 21 principal responsibilities and their correlation to student achievement. These leadership responsibilities, listed in order of their respective correlations with student learning, are the following: situational awareness; flexibility; discipline; outreach; monitoring and evaluating; culture; order; resources; knowledge of curriculum, instruction, and assessment; input; being a change agent; focus; contingent rewards; intellectual stimulation; communication; ideals or beliefs; involvement in curriculum, instruction, and assessment, visibility; serving as optimizer; affirmation; and relationships. These responsibilities are similar to those in Bandura's (1993) description of effective principals:

The quality of leadership is also an important contributor to the development and maintenance of effective schools. Strong principals excel in their ability to get their staff to work together with a strong sense of purpose and to believe in their capabilities to surmount obstacles to educational attainment. (p. 141)

In 2008, Leithwood et al. revisited the research on school leadership and published "seven strong claims," which they indicated were supported by empirical evidence. Two of the claims stated,

- School leadership is second only to classroom teaching as an influence on pupil learning.
- School leaders improve teaching and learning indirectly and most powerfully through their influence on staff motivation, staff commitment, and working conditions for staff. (p. 27)

The researchers supported these statements with evidence gleaned from multiple research projects and case studies. They reported that school leadership accounts for 5% to 7% of the differences in student achievement outcomes across schools, when other variables are controlled. Although this may seem to be a small impact, it accounts for 27% of the total variance explained by all school-level variables. The researchers claimed that principals affect student outcomes indirectly through their influence on teacher working conditions, teacher motivation and commitment, and teacher capacity (Leithwood et al., 2008). They asserted that effective school leaders exert this influence through four critical behaviors: building vision and setting direction, understanding and developing people, redesigning the organization, and managing the teaching and learning program.

Linking principal leadership and student results. Grissom and Loeb (2009) sought to “triangulate” principal effectiveness by combining survey data from principals, input from other parties (assistant principals, teachers, parents), and longitudinal student achievement results to determine if there were any definitive links between principal behavior and student results. First, the researchers collected survey data from almost 300 principals in Dade County Public Schools in Miami, Florida, asking them to rate themselves on specific tasks within five categories: instructional management, internal relations, organization management, administration, and external relations. Next, the researchers collected data from more than 400 assistant principals and 10,000 teachers in the schools, who were asked to rate the principals on the same tasks. Grissom and Loeb also incorporated parent feedback gathered through a school system survey. Finally, they compared all of these data with student achievement in the schools, as measured by the state’s accountability grading system. They found that principal skills in organization

management were the only variables that consistently predicted growth in student achievement. Grissom and Loeb argued that principals' organizational management skills are critical to the success of the instructional program at their schools; they also contended that many new principals are not adequately prepared for this aspect of the position (Grissom & Loeb, 2009).

Goddard, Neumerski, Goddard, Salloum, & Berebitsky (2010) examined whether or not the instructional support provided by principals predicted differences in the use of differentiated instruction in their schools. The researchers surveyed more than 600 teachers in 77 schools in Michigan, asking them to reflect on the prevalent classroom practices in their schools and the instructional support they received from their respective school principals. Survey items related to classroom practice included statements such as "Teachers in this school offer a wide range of assignments matched to students' needs and skill level." Items related to principal support included "I feel comfortable discussing instructional issues with our principal" and "The principal empowers teachers to make decisions that improve teaching and learning." The researchers found a positive relationship between principal support and instructional norms, determining that a 1.0 standard deviation increase in teachers' reports of their principals' level of instructional support was related to a .11 standard deviation increase in how teachers perceived the use of differentiated instruction in their schools (Goddard et al., 2010). They also found that principal support was a more significant factor than other school-level variables, including the racial-ethnic composition or socioeconomic status of the students in the school.

The research has indicated that school principals' actions have a significant, though indirect, effect on students and their learning. To maximize the positive effects of these actions, principals must operate at a high level, with a clear understanding of their schools and the larger context, as well as the courage and will to take the necessary steps and persist in the face of obstacles. This task is more difficult than ever, as modern principals face a myriad of unprecedented pressures and challenges.

Challenges facing principals. In the past decade, several influences have combined simultaneously to increase dramatically the challenges faced by those who choose to serve as school principals. One factor is the new accountability paradigm under No Child Left Behind (NCLB), which requires schools to make adequate yearly progress on standardized state tests or face sanctions, which include the removal of the principal (NCLB, 2001). Since NCLB was enacted, numerous researchers have examined its impact, including its effect on school principals. Studies have raised questions about the "threat and sanction approach" embodied in the law, asserting that this approach forces principals and schools into rigid responses rather than meaningful school reform (Daly, 2009). Furthermore, researchers have found that the pressures of NCLB place school principals in very difficult positions in which they are expected to produce rapid student achievement results at the same time that their power to implement significant reform in their schools is restricted (Sunderman et al., 2006).

In addition to federal and state accountability programs, principals face increasing challenges in the performance of their jobs on a daily basis. In their study of the pressures faced by urban school principals, West et al. (2010) documented more than three dozen separate sources of stress reported by the principals they interviewed. These

stressors included administrative tasks (school safety and security, inadequate budgets, completing teacher assessments, finding time to be in classrooms), political pressures (demands of superiors, micromanaging calls from school board, pressure from parents, fear of lawsuits), and personal challenges (lack of sleep; long work hours; spouse, child, or family demands; fear of losing job). West et al. further delineated the pressures into “sustained” pressures that have always been challenges in the principalship and “emerging” pressures, which are new to principals since 2000. Sustained pressures included extensive responsibilities, limited control, and lack of personal and professional time. Emerging pressures were identified as increased school academic performance pressure, communication technology developments, and new urban school political power dynamics (West et al., 2010). A simple scan of news articles and educational journals revealed additional issues that continue to pressurize the principalship: special education law and implementation, concerns about especially violent students or events, the pace of changes in technology, the rise of national standards for administrators, the move toward national curricular standards, issues involving social media such as Facebook, increasing needs of the students served (language, poverty, learning challenges), and immigration law and its impact on schools.

Concerns about principal preparation. As these new challenges have arisen, there has not been an accompanying revolution in the methods and structures used to prepare individuals for the challenges of the principalship. Numerous researchers have raised concerns about the adequacy of principal preparation programs throughout the country (Hallinger & Snidvongs, 2008; Hess & Kelly, 2005, 2007; Levine, 2005). In his 4-year study of university principal preparation programs, Levine (2005) found that

“education schools have, for the most part, continued to do business as usual...too many have chosen to ignore not only their own shortcomings, but also the extraordinary changes in the nation and the world” (p. 6). This conclusion was supported by Hess and Kelly, who reviewed more than 200 course syllabi from a cross-section of principal preparation programs throughout the United States and found that very little course work was devoted to the most critical tasks for a present-day principal. For example, they found that course sessions that focused on “accountability in the context of school management” accounted for only 2% of the course weeks outlined in the syllabi. Furthermore, less than 5% of the course sessions dealt with managing school improvement by using data, technology, or research (Hess & Kelly, 2005). It is understandable, then, that two thirds of principals surveyed by Public Agenda reported that leadership programs in graduate schools of education are ‘out of touch’ with what modern principals actually need to know and be able to do (Hess & Kelly, 2007). The state of principal preparation programs throughout the nation compelled the Wallace Foundation to issue a report entitled *Schools Can’t Wait: Accelerating the Redesign of University Principal Preparation Programs* (Fry, O’Neill, & Bottoms, 2006).

The risk of principal burnout and principal shortages. Several researchers have documented how the unique pressures of the principalship can take a physical, psychological, and emotional toll on principals, sometimes resulting in “principal burnout” and abandonment of the position (Friedman, 1997; Gramling-Vasquez, 2010; Stephenson & Bauer, 2010). Friedman studied principals and the different kinds of stressors (organization, task, relation) they face in their jobs. Using survey instruments to compare “high”- and “low”- burnout principals, he found that organization stressors,

those related to human resources issues and limited supports, were most predictive of principal exhaustion and burnout. Other articles have documented a common principal complaint: that they are typically logging 60- to 70-hour workweeks and still not completing their essential work (Cushing et al., 2003). Whitaker (1996) and others argued that the emotional exhaustion and depersonalization that can be caused by the pressures of the principalship need to be addressed through improved support systems, targeted professional development, and changes in preparation programs.

It is not surprising that several reports by state and national organizations have indicated a current shortage of educators interested in serving as principals, a problem that will likely worsen over the next two decades (Copland, 2001; Guterman, 2007; Hewitt & Stambuck, 2008). Hewitt and Stambuck reported on the gravity of the principal pool situation in Arkansas, where principal turnover is increasing while the number of teachers interested in becoming principals is decreasing. When asked why they were not interested in the principalship, teachers cited the pressures of the job, including accountability, the stress level, the time required, the challenge of dealing with societal problems, and the demands of parents and the community (Hewitt & Stambuck, 2008). The common perception was that principals are expected to accomplish a great deal with limited resources, including time, staff, and support. Copland noted, "We have reached the point where aggregate expectations for the principal are so exorbitant that they exceed the limits of what might be reasonably expected from one person" (Copland, 2001, p. 529).

Supporting principal development. Some critical questions emerged from the research about principal leadership, the current pressures on school principals, principal

burnout, and principal shortage: What can we do to ensure each school has an effective principal? What can we do to help equip modern principals to deal with the new challenges of the position? What can we do to help school principals persevere in their important work? Educators and policymakers are looking for the answers to these questions in new standards for educational leaders (NBPTS 2010), new tools for evaluating the performance of principals (Condon & Clifford, 2009), and improvements in training programs for aspiring administrators (Hess & Kelly, 2007). Some researchers, however, have been pointing to the research on social cognitive theory and self-efficacy beliefs as an answer to this crisis (Bandura, 2000; Leithwood et al., 2008; Tschannen-Moran & Gareis, 2005). They have contended that the self-efficacy beliefs of the individual principal play a major role in how well he or she carries out the mission in the face of all of the obstacles discussed here. The next section of the literature review provides an overview of the research conducted in the areas of social cognitive theory and self-efficacy beliefs.

Social Cognitive Theory and Self-Efficacy

One of the great intellectual and scientific pursuits of the 20th century was the study of human behavior: Why do people do what they do? A long line of behaviorist researchers explored this question. Albert Bandura, a psychologist based at Stanford University, was influenced by the work of early behaviorists, including Hull, Skinner, and Tolman, as well as Miller and Dollard. In addition, Bandura's thinking was impacted by the "cognitive revolution" that took place in the 1960s, spurred on by the cognitive psychology research of Piaget and the work of Chomsky in psycholinguistics (Crosbie-Burnett & Lewis, 1993). Bandura worked to combine the research on social psychology,

cognitive psychology, and behaviorism into a single theory that would explain human behavior and learning in a coherent manner. Bandura's early work, which he referred to as social learning theory, focused on how adults and children behave and the role that cognition plays in their behaviors (Bandura & Walters, 1963). As Bandura continued his research, he renamed his central work, calling it social cognitive theory (Bandura, 1986), which he envisioned as a theoretical framework for analyzing human motivation, thought, and action. Social cognitive theory is based on the concept that individuals have the ability to self-regulate cognitive processes and behaviors rather than simply react to events and the external environment around them and that they have some level of control over their thoughts, feelings, motivations, and actions (Pajares, 2003). Bandura's theory also contends that people can have an influence on the environment around them through their behavior (Bandura, 1997).

Triadic reciprocal causation. Bandura's critical theory that people can influence their environment through their behavior is reflected in his concept of triadic reciprocal causation, which is an explanation of how human agency occurs within a dynamic interplay among three components: behavior, internal personal factors (which may be cognitive, affective, or biological), and the external environment (Bandura, 1997). For example, a typical school principal is affected by his or her internal personal factors (beliefs about his or her effectiveness as a school leader), behaviors (actions he or she takes as leader of the faculty), and the external environment (the school culture and climate). Each of these components can affect the other two. If a principal experiences an increase in self-efficacy, that improved self-efficacy affects his leadership behaviors and has some impact on the school climate. On the other hand, a dramatic change in

school climate, due to a crisis or external pressure, can have a significant effect on a principal's beliefs and leadership actions. This thinking represents a departure from the work of early behaviorists, who believed that human behavior can be explained simply as stimulus-response events, with little influence attributed to personal factors. Bandura used a simple diagram (Figure 1) to show that in triadic reciprocal causality, personal factors (P), behavior (B), and external events (E) “all operate as interacting determinants that influence one another bidirectionally” (Bandura, 1997, p. 6). Bandura explained that the diagram should not be read to mean that all three factors are of equal strength. In fact, he stated that the relative strength of each determinant varies for different activities and different circumstances (Bandura, 1997).

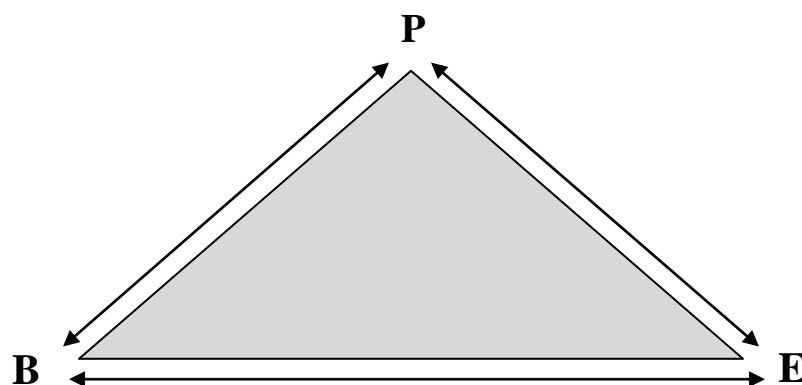


Figure 1. Triadic reciprocal causality: personal factors (P), behavior (B), and external events (E).

The impact of self-efficacy on behavior. As depicted in Figure 1, an individual's personal beliefs play a critical role in human agency. In social cognitive theory, Bandura (1997) argued, individuals' beliefs about their own self-efficacy have a great impact on their behavior. Bandura (1997) defined self-efficacy as the “beliefs in one's capabilities to organize and execute a course of action required to produce a given

attainment” (p. 3). He explained that, unless people believe they can produce the effects they want by their actions, they have little incentive to act. Individuals’ self-efficacy beliefs influence the choices they make, the challenges they are willing to face, the effort they exert in facing those challenges, and the persistence they demonstrate when the challenges are difficult (Bandura, 1986). In his theory, Bandura distinguished between efficacy beliefs, which focus on an individual’s assessment of his or her own capability to perform an action, and outcome expectancy, which focuses on an individual’s perception of whether or not the performed action will create the desired result. Bandura (1997) stated, “Perceived self-efficacy is a judgment of one’s ability to organize and execute given types of performances, whereas an outcome expectation is a judgment of the likely consequence such performances will produce” (p. 22). For example, a school principal can have an efficacy belief that he or she has the personal capability of observing classroom instruction and giving teachers feedback, and this belief will support taking the action of visiting the classroom, taking notes, and then sharing feedback with the observed teacher. The principal also can have an outcome expectancy that providing teachers with feedback will result in improved teacher performance. In one case, the focus is on the individual’s beliefs about his or her own capability to perform an action, and in the other, the focus is on beliefs about what that action will influence. This relationship is captured in Bandura’s diagram, depicted in Figure 2 (Bandura, 1997).

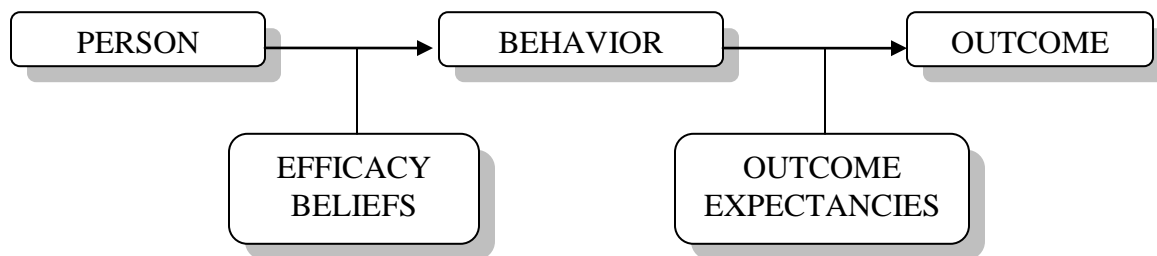


Figure 2. Efficacy beliefs and outcome expectancies influence the person, behavior, and outcome.

Four sources of self-efficacy. Bandura (1997) asserted that a person's self-efficacy beliefs derive from four sources of information: mastery experiences (also termed performance accomplishments), vicarious experiences (modeling), verbal persuasion (also termed social persuasion), and affective states (also referred to as emotional arousal). Individuals develop, review, and sustain beliefs about their own self-efficacy through their interpretation of the information received from these sources. Mastery experiences are the most powerful source of high self-efficacy. An individual is more likely to view a particular task or challenge with self-efficacy if he or she previously has experienced success or personal accomplishment with a similar task. With each successful experience, an individual's self-efficacy is enhanced. Bandura pointed out that the reverse is true, as well: if an individual repeatedly experiences failure with a particular task, his or her self-efficacy for the task is diminished each time (Bandura, 1977, 1997). For example, a school principal who has successfully conducted professional development sessions for staff will draw on that success when planning and implementing future training events. Conversely, a principal who experiences failure in the preparation and delivery of professional development will view future training events with less self-efficacy.

The second most powerful source of self-efficacy beliefs is vicarious experiences. In this construct, the individual does not experience success personally but rather observes another person being successful with the task. Through observation of another person's modeling success with the task, the person's self-efficacy beliefs are enhanced. Vicarious experiences are most powerful when the observer can identify with the model being observed. The effect of modeling is diminished if the observer believes that the model possesses some special skill or advantage that contributes to his or her success. In a school-based example, a principal who observes another administrator conduct an effective training session may experience increased self-efficacy by determining "I could do that just as well." This effect is diminished if the observer determines that the observed principal has unique skills or advantages, such as many more years of experience or a more receptive audience.

The third strongest source of personal efficacy beliefs, according to Bandura (1977), is verbal persuasion. In this construct, a person's self-efficacy is enhanced through the persuasive arguments of a trusted source. This source is most powerful when accompanied by modeling or mastery experiences. Verbal persuasion alone has limited success in an individual's overcoming past failures. For example, a school principal may have a mentor or coach who communicates confidence in the principal's ability to prepare and present effective professional development for staff. If the principal deeply trusts the mentor, the encouragement from the mentor may have some effect, but it is less effective than if, for example, the communication from the mentor is combined with a successful experience of delivering training.

Bandura (1977) identified the fourth source of self-efficacy beliefs as affective states. He argued that a person's being in a state of emotional arousal can have a significant effect on his or her self-efficacy beliefs. In most cases, a high state of arousal has a negative effect on self-efficacy beliefs. Emotional and stressful situations often lead to anxiety and poor performance. If an individual has had previous failure with a task, he or she may experience agitation and anxiety when faced with the task again. If a school principal plans and delivers a professional development session that fails miserably and provokes angry reaction from staff, he or she may experience anxiety and agitation when preparing the next session. This type of arousal can have a debilitating effect on the principal and cause him or her to avoid the situation if possible. Bandura (1982) asserted that this type of obstacle can be overcome by helping the person to develop stronger self-efficacy beliefs through carefully planned and executed experiences.

Characteristics associated with high self-efficacy and low self-efficacy. Based on information derived from mastery experiences, vicarious experiences, verbal persuasion, and emotional arousal, individuals develop their own self-efficacy beliefs about how they will perform a given task. These beliefs affect whether an individual will approach or avoid the task, how much effort he or she will exert to complete the task, the persistence he or she will invest to keep trying, and the individual's overall performance on the task. Research has shown self-efficacy beliefs to be a powerful predictor of individual performance (Bandura, 1997). Bandura (1993) summarized the research on perceived personal efficacy by describing persons with a low sense of efficacy and how they differ from persons with a strong sense of efficacy. People with a low sense of

efficacy avoid difficult tasks because they see these tasks as threatening. In addition, they have low aspirations and are weakly committed to the goals they set. When persons with low self-efficacy are faced with challenging tasks, they “focus on their personal deficiencies,” the obstacles they will face, and all adverse outcomes they can imagine. In the face of difficulty, they lessen their efforts and give up quickly. Following failure or setbacks, persons with low self-efficacy are “slow to recover their sense of efficacy.” They consider their failures to be the result of deficient ability; therefore, they are quick to lose confidence in their own capabilities. Finally, persons with low self-efficacy are very “vulnerable to stress and depression” (Bandura, 1993, p. 144). Conversely, Bandura (1993) explained that people with a strong sense of efficacy “approach difficult tasks as challenges to be mastered, rather than as threats to be avoided” (p. 144). They apply deep interest and focus to their activities. They set ambitious goals and keep their commitment to them. They “heighten and sustain their efforts in the face of failure,” and “attribute failure to insufficient effort or deficient knowledge and skills” that can be acquired (p. 144). Persons with a high sense of self-efficacy approach threatening situations with confidence that they can exercise control and rapidly recover their sense of self-efficacy after setbacks or failures. They have an outlook that “produces personal accomplishments, reduces stress, and lowers vulnerability to depression” (Bandura, 1993, p. 144). Clearly, efficacy beliefs contribute significantly to the level and quality of human behavior and productivity. Given that individuals with a strong sense of self-efficacy function at a high level, it is not surprising that researchers began to study how efficacy beliefs affect the performance of students, teachers, and principals in schools throughout the United States and other countries.

Self-Efficacy Research in Education

For two decades after Bandura (1977) published *Self-Efficacy: Toward a Unifying Theory of Behavioral Change*, research into how social cognitive theory and self-efficacy factor into the field of education was focused on three areas: (a) the relationship between student self-efficacy beliefs and their academic performance and achievement, (b) links between students' self-efficacy and their selection of college majors, and (c) study of the efficacy beliefs of teachers and how these beliefs are related to their work with students and with other teachers (Pajares, 1997). Although the research on students' self-efficacy and its impact on academic performance and college planning is very interesting, the focus of this study is the efficacy beliefs of principals; therefore, there is no discussion of student efficacy in this paper. Because principal efficacy is so tightly connected to the efficacy of teaching staff, this literature review explores the critical history and findings of the research on teacher efficacy.

Teacher self-efficacy. As Bandura stated (1997), self-efficacy consists of an individual's "beliefs in his capabilities to organize and execute a course of action required to produce a given attainment" (p. 3). Building on this definition, Tschannen-Moran, Woolfolk Hoy, and Hoy (1998) defined teacher efficacy as a "teacher's beliefs in his or her own capability to organize and execute course of action required to successfully accomplish a specific teaching task in a particular context" (p. 233). A high level of teacher efficacy has been linked to positive teacher behaviors, increased job satisfaction, greater teacher commitment, resistance to burnout, improved student attitudes, and increases in student achievement (Allinder, 1994; Ashton & Webb, 1986; Caprara et al. 2006; Guskey, 1988; Skaalvik & Skaalvik 2010; Soodak & Podell, 1993;

Tschannen-Moran & Hoy 2006; Tschannen-Moran & Woolfolk Hoy 2001; Viel-Ruma et al., 2010). Researchers also have found that teachers with a high sense of self-efficacy are less likely to refer students for special education services (Soodak & Podell, 1993).

Bandura (1997) stated,

Teachers with a high sense of instructional efficacy operate on the belief that difficult students are teachable through extra effort and appropriate techniques and that they can enlist family supports and overcome negating community influences through effective teaching. In contrast, teachers who have a low sense of instructional efficacy believe there is little they can do if students are unmotivated and that the influence teachers can exert on students' intellectual development is severely limited by unsupportive or oppositional influences from the home and neighborhood environment. (p. 240)

Bandura's statements about teacher efficacy and its impact on teaching and learning have been supported by numerous studies conducted over the past four decades. In a study of reading programs in the Los Angeles school district, Armor et al. (1976) found that teachers' feelings of efficacy in their instruction of students constituted a significant factor in student progress. Their research showed that teachers' sense of being able to "get through" to students helped to determine how much the children learned. The researchers were surprised to find teacher efficacy to be the driving factor in student performance whereas years of experience, college major, and college program appeared to have little influence. Berman and McLaughlin (1977), in their evaluation report on 100 Title III projects conducted under the 1965 Elementary and Secondary Education Act, noted that teachers' sense of efficacy was the most important characteristic found in successful change-agent projects that could be sustained.

Numerous researchers have attempted to determine if there are links between a teacher's sense of self-efficacy and a myriad of personal and school-level characteristics. The personal variables studied included gender, age, race, and years of teaching

experience; school-level variables included school size, school setting (urban, suburban, rural), school level (elementary, middle, high school), and socioeconomic status of students. Although individual studies found some minor relationships (Ross, 1994), there was no consistency across the research.

Studies have found that teachers' sense of efficacy has a direct effect on how they manage their time in the classroom and the quality of instructional experiences they provide for their students. Gibson and Dembo (1984) developed a teacher efficacy scale and used it to investigate how high- and low-efficacy teachers differed in their approach to classroom instruction. They found that teachers with a high sense of efficacy spent more time on academic activities, provided more guidance to students who struggled with the activities, and communicated praise to students when they made progress. Teachers with a low sense of efficacy, on the other hand, devoted more time to nonacademic activities and tended to give up on students who did not understand academic material on the first exposure. In addition, these teachers were more likely to criticize students for their failure to understand the instructional content.

The effects of teacher efficacy. Ashton, Webb, and Doda (1983) studied the impact of high-efficacy and low-efficacy teachers in a junior–middle school setting and reported that teachers with high efficacy were observed maintaining high academic standards, communicating high expectations for students, concentrating class time on meaningful academic instruction, and engaging students in a way that kept them on task. Several studies have found that teachers with a higher sense of self-efficacy are more likely to adopt and implement new effective instructional practices. In a study of elementary and secondary teachers, Guskey (1988) examined whether or not teachers

implemented strategies they learned in a professional development event focused on mastery learning. He found that teachers with a high sense of self-efficacy were most receptive to new ideas and strategies, whereas those with a low sense of efficacy were more resistant.

Soodak and Podell (1993) explored the relationship between teachers' efficacy beliefs and their decisions about whether or not to refer students for special education services. Their research confirmed a link between teachers' perception of their own effectiveness (efficacy) and their persistence in meeting the needs of students with learning challenges. Using a case study review method, the researchers found that teachers with a high sense of self-efficacy were more likely to recommend keeping the student in the general education setting and to try additional strategies, whereas those with lower self-efficacy were more likely to recommend placement in services outside the general education classroom (Soodak & Podell 1993).

Numerous studies have found a positive relationship between teachers with a high sense of self-efficacy and the academic achievement of their students (Ashton et al., 1983; Gibson & Dembo 1984; Haas, 2005; Ross, 1994; Tschannen-Moran & Woolfolk Hoy, 2001). Bruce, Esmonde, Ross, Dookie, and Beatty (2010) asserted that teachers with a high sense of teacher efficacy are more likely to attempt and persist with challenging instructional strategies, communicate high expectations for their students, and demonstrate effective classroom management techniques that engage and empower students. As a result, the learning environment promotes self-efficacy on the part of the students, which leads in turn to academic progress (Bruce et al., 2010). Allinder (1994) found that teachers with a stronger sense of self-efficacy exhibited more effective

instructional planning and were more organized in the learning strategies they employed than were those with weaker self-efficacy. Ross's (1994) review of dozens of studies on teacher efficacy found that personal teaching efficacy contributes to student achievement in reading, language arts, and social studies.

Measuring teacher efficacy. Teacher efficacy has proven to be a difficult construct to measure. There has been considerable debate among researchers about how the efficacy beliefs of teachers should be conceptualized and how they should be measured (Dellinger, Bobbett, Olivier, & Ellett, 2008; Guskey & Passaro, 1994; Skaalvik & Skaalvik 2010). Researchers have developed and employed numerous scales and instruments, including Gibson and Dembo's (1984) Teacher Efficacy Scale and Guskey's (1988) Responsibility for Student Achievement Scale.

Despite the challenges of measuring teacher efficacy, interest in the construct has expanded due to its relationship to improved student learning. More recently, an even more promising concept has received attention, as researchers have begun to explore how the efficacy beliefs of individual teachers are amplified when combined with the efficacy beliefs of other teachers within a positive school culture and learning environment.

Collective teacher efficacy. The study of collective teacher efficacy emerged as a logical extension of the research into individual teacher efficacy (Goddard & Skrla, 2006). Collective teacher efficacy refers to the shared belief by teachers in a school that the faculty as a whole can take the actions necessary to have a positive impact on student learning (Bandura, 2000; Goddard, Hoy, & Woolfolk, 2004). Teachers form their collective efficacy beliefs by performing two related tasks: (a) analyzing the teaching tasks that must be completed, and (b) assessing the capabilities of the faculty to complete

these tasks (Goddard et al., 2000). Bandura (1995) found “schools in which staff members collectively judge themselves capable of promoting academic success imbue their schools with a positive atmosphere for development” (p. 20).

The impact of collective teacher efficacy. High levels of collective teacher efficacy have been linked to higher levels of student achievement (Bandura, 1993; Goddard et al., 2000; Goddard & Skrla, 2006). Ashton and Webb (1986) found that teachers’ efficacy beliefs about their instruction were an accurate predictor of student gains in reading and math over the course of a school year. Goddard et al. conducted research in 47 elementary schools to determine if there was a relationship between the teachers’ level of collective efficacy and the learning results achieved by students. They found that a high level of collective efficacy among the staff members was a significant predictor of student achievement in both reading and mathematics (Goddard et al., 2000).

Bandura (1993) also argued that there is a link between collective efficacy of teachers and the academic progress of students. Indeed, he asserted there is a critical relationship involving teacher expectations for students and collective efficacy, particularly when teachers are working with students of color and students affected by poverty. In describing how teacher collective efficacy and perceived student educational needs interact in schools with a high percentage of minority students, students of low socioeconomic status, or both, Bandura (1993) posited, “adverse student body characteristics influence schools’ academic attainments more strongly by altering faculties’ beliefs about their collective efficacy to motivate and educate their students than through direct effects on school achievement” (p. 143). According to Bandura, when school staffs believe the educational program they provide can motivate and teach

all students, regardless of background or perceived obstacles, students will achieve at the highest level.

Principals' Influence on Teacher Efficacy

Principal leadership can have a powerful effect on the individual and collective efficacy of teachers in schools. Although some researchers have found that teachers do not base their self-efficacy beliefs on the support of administrators (Tschannen-Moran & Hoy, 2006), others have found a link between principal leadership and the efficacy of school staff (Coladarci & Breton, 1997; Hipp & Bredeson, 1995; Rosenholtz, Bassler, & Hoover-Dempsey, 1986; Ross, 1994). In his analysis of 88 studies examining the antecedents and consequences of teacher efficacy, Ross found a significant relationship between teacher efficacy and a number of factors that are controlled or influenced by school principals, including leadership responsiveness to teacher needs and the overall stress level in the school. Rosenholtz et al. studied the relationships between the actions of the school principals and levels of professional learning among the teachers. They found that several behaviors on the part of the school principal had a significant relationship with the level of professional learning experienced by the principal's faculty. These actions included principal collegiality with staff, principal efforts to recruit and orient good teachers, setting clear goals related to instruction, management of student behavior, implementation of clear evaluation practices, support of teacher collaboration, and coordination of instructional programs throughout the school.

Hipp and Bredeson (1995) found a significant relationship between certain principal behaviors and the level of teacher efficacy in the school. In their study of 10 middle schools in Wisconsin, the most significant relationships were found between

teacher efficacy and three specific leadership behaviors: (a) modeling behavior, (b) inspiring group purpose, and (c) providing contingent rewards. The researchers pointed out that these results indicate that principal actions, more than their words, have an impact on school staff and students (Hipp & Bredeson, 1995). Principals, due to the special nature of their role in the school, can have a great influence on the working conditions and organizational climate that support teachers and staff in their work with students. By making informed decisions that facilitate good instruction, teacher commitment, and positive climate, the principal not only supports the professionals on the school staff but also indirectly enhances student success in the classroom (Nettles & Herrington, 2007; Nir & Kranot, 2006).

Principal Self-Efficacy

The research on the self-efficacy beliefs of school principals grew naturally from the studies that examined teacher efficacy. A focus on principal efficacy and how it affects schools, teachers, and student achievement was a logical next step in the effort to provide effective schools for all students. This new research emphasis, however, required new approaches and methods. Leithwood et al. (2004) stated, “Research about the forms and effects of leadership is becoming increasingly sensitive to the context in which leaders work and how, in order to be successful, leaders need to respond flexibly to their contexts” (p. 22). Further, Leithwood et al. stated, “Research is urgently needed which unpacks, more specifically, how successful leaders create the conditions in their school which promote student learning” (p. 22).

The critical role of principals. School principals are the key change agents in their schools. Through their actions as supervisors, administrators, instructional leaders,

coaches, facilitators, professional developers, and mentors, they initiate change by raising expectations for students and staff. Without effective leadership from the principal, a school cannot achieve its fundamental academic mission (Tschannen-Moran & Gareis, 2004). The current climate of high accountability, high-stakes testing, reduced resources, and greater public scrutiny makes the job of principal more challenging than ever. As documented in the earlier sections of the literature review, an individual's self-efficacy beliefs play a critical role in his or her willingness to accept challenging assignments, to exert effort to perform difficult tasks, and to persevere through difficult circumstances (Bandura, 1982). Despite this critical role, there has been relatively little research conducted on the efficacy beliefs of school principals (Dimmock & Hattie, 1996; McCormick 2001; Santamaria, 2008; Tschannen-Moran & Gareis, 2005). The studies that have been completed, however, have pointed to promising links between high principal self-efficacy and positive leadership behaviors and effects, including change management, openness to collaborative decision making, confidence in dealing with obstacles, positive school climate, instructional leadership, teacher efficacy, and student achievement (Dimmock & Hattie, 1996; Leithwood & Jantzi, 2008; Smith et al., 2003; Tschannen-Moran & Gareis, 2005).

Defining principal self-efficacy. In alignment with his other definitions, Bandura viewed school principal efficacy as the judgment an individual principal makes about his or her capabilities to design and lead a particular course of action that will produce the desired student outcomes in his or her school (Tschannen-Moran & Gareis, 2004). McCormick (2001) added to the definition of principal efficacy by asserting that it is "a principal's self-perceived capability to perform the cognitive and behavioral

functions necessary to regulate group processes in relation to goal achievement” (p. 30).

Tschannen-Moran and Gareis (2004) described the differences between principals of varying levels of self-efficacy:

Confronted with problems, high efficacy principals do not interpret their inability to solve problems immediately as failure. They regulate their personal expectations to correspond to conditions, typically remaining confident and calm and keeping their sense of humor, even in difficult situations... By contrast, low efficacy principals have been found to perceive an inability to control the environment and tend to be less likely to identify appropriate strategies or modify unsuccessful ones. When confronted with failure, they rigidly persist in their original course of action. When challenged, they are more likely to blame others. (p. 574)

Bandura reinforced this concept by explaining that principals with low efficacy, when faced with obstacles, will reduce their efforts, give up, or settle for mediocre solutions. In contrast, principals with a strong sense of efficacy will redouble their efforts to attain the goal for staff and students (Bandura, 2000).

Bandura (1997) argued that “highly efficacious schools” usually have principals who not only perform the necessary administrative roles but also are educational leaders who seek to improve instruction for students by working around policies and regulations that might stifle good instruction and student progress. Schools characterized by low efficacy often have principals who primarily function as administrative managers and disciplinarians.

The effects of principal self-efficacy. The research into leader efficacy and its effects on the leader’s organization and results is still in its infancy. Leithwood and Jantzi (2008) set out to explore leader efficacy in schools and other settings, but they were able to identify only 22 studies completed between 1983 and 2005. Of those 22 studies, 15 examined the efficacy beliefs of principals and other K-12 school-based

populations (teachers, students, etc.), whereas 7 of the studies focused on other sample groups, including military cadets, soldiers, college students, business managers, and employees (Leithwood & Jantzi, 2008). In the earliest study highlighted by Leithwood and Jantzi, Hillman (1983) studied self-efficacy and expectations among students, teachers, and principals in 10 public elementary schools in Michigan. She did not find a correlation between high principal self-efficacy and whether or not the school was “high-achieving” on state tests. Nevertheless, Hillman did find that when student, teacher, and principal survey results indicated that more than one of the groups reported high expectations or self-efficacy, there was a greater likelihood that the school was performing at a high academic level. In the other studies reviewed by Leithwood and Jantzi, researchers explored a wide array of relationships with a variety of sample populations using several different survey instruments. Among the findings presented by these studies were relationships involving principal self-efficacy and the quality of programming for gifted and talented students (Lloyd-Zannini, as cited in Leithwood & Jantzi, 2008), principal self-efficacy and perfectionism (King, as cited in Leithwood & Jantzi, 2008), principal efficacy and teacher perceptions of principal influence (Modlin, as cited in Leithwood & Jantzi, 2008), principal self-efficacy and stress (Lynn, as cited in Leithwood & Jantzi, 2008), principal and teacher efficacy and school-oriented tasks (Imants & De Brabander, 1996), and a finding that principal self-efficacy beliefs played a role in how principals handled conflicts with teachers (Roberts, as cited in Leithwood & Jantzi, 2008).

More recently, several researchers have refocused their efforts to determine if there is a significant relationship between principal efficacy and student achievement.

This relationship is difficult to isolate because, as already noted, principal effects on student learning are largely indirect, mediated through the work of teachers and staff. Still, several researchers have pursued this link. In a recent study of elementary principals in Missouri, Watkins and Moak (2010) found that a principal's level of self-efficacy was significantly related to student achievement in communication arts and mathematics. Siegrist et al. (2009) studied the link between principal self-efficacy and student performance on high school graduation tests in Georgia. They determined that principal efficacy and student free- and reduced-price-lunch percentages were the two best predictors of student performance on the exams. Lehman (2007) studied more than 1,000 elementary principals in Wisconsin and found that principals' scores on the Instructional Leadership subscale of the Principal Self-Efficacy Scale were a significant predictor of student achievement in reading. Leithwood and Jantzi (2008) developed their own self-efficacy survey instrument and distributed it to 96 principals and 2,764 teachers in 180 schools in 45 districts across 9 states. When they compared the results of the principal self-efficacy survey with student achievement results in mathematics and reading over a 3-year period, they found that leader efficacy had a "weak, but significant" effect on the proportion of students meeting or exceeding the proficiency standard on state tests (Leithwood & Jantzi, 2008).

Several researchers have tried to determine if there is a link between principal self-efficacy and a variety of personal characteristics and school-level variables. A handful of studies have occasionally identified weak relationships between principal self-efficacy and the principal's race, gender, school level, or school poverty level (Lehman, 2007; Santamaria, 2008; Smith et al., 2003; Tschannen-Moran & Gareis, 2004, 2005);

however, these results have been inconsistent and inconclusive. The state of research findings in this area is captured in Leithwood and Jantzi's 2008 report, which found that leadership efficacy effects were not significantly moderated by any of the personal variables included in the study (leader's gender, experience, race, or ethnicity).

Measuring principal self-efficacy. In an effort to better understand the sources and consequences of principal self-efficacy, numerous researchers have attempted to design and test survey instruments. In 1996, Dimmock and Hattie presented a new scale for measuring principal efficacy beliefs: The Principal Self-Efficacy Scale (PRINSES) was developed as an instrument to measure principal efficacy beliefs, specifically in the context of school restructuring. In describing the process used to develop the scale, Dimmock and Hattie asserted that self-efficacy scales for principals have greater validity if they measure the relation of self-efficacy to the wide range of tasks that principals face. They also argued that the scale items should allow a principal to report a relative strength of efficacy perceptions, rather than just a presence or absence of self-efficacy beliefs. This work influenced future scales that were based on scenarios and Likert-scale responses. Although the PRINSES was an important benchmark in the measurement of principal efficacy, Dimmock and Hattie tested their scale on only a very small sampling of principals in Australia. The scale was later used with a larger sample when Smith et al. (2003) studied 284 principals from 12 states to examine the relationship between self-efficacy beliefs and instructional management practices. This larger sampling did not fully compensate for the weaknesses in the scale itself. In 2004, Tschannen-Moran and Gareis tested the scale with principals and assistant principals in Ohio and determined

that the PRINSES did not demonstrate the necessary stability and reliability to support its use in future studies (Tschannen-Moran & Gareis, 2004).

Tschannen-Moran and Gareis (2004) persisted in their pursuit of a reliable and valid scale for measuring principal self-efficacy by adapting Goddard's 2000 measure of collective teacher efficacy, which included 22 items and a 6-point scale. Again, Tschannen-Moran and Gareis reported disappointing results, finding that this adapted scale did not prove to be a valid and reliable measure of principal self-efficacy. Finally, Tschannen-Moran and Gareis developed a new measure based on the Teacher Self-Efficacy Scale (TSES), which Tschannen-Moran and Woolfolk Hoy had debuted in 2001. The TSES sought to capture teachers' assessment of both their competency and the difficulty of the specific teaching task using a 9-point Likert scale and multiple items. Tschannen-Moran and Gareis subjected their new scale, the Principal Self-Efficacy Scale (PSES), to expert review and a field test. They established validity by comparing results with a work alienation scale developed by Forsyth and Hoy. Then they distributed the PSES to 544 principals across Virginia. After reviewing initial results, they reduced the original scale from 50 items to 18 items that were organized according to three subscales: leadership for management, instructional leadership, and moral leadership. Although they asserted that the PSES was a reliable and valid measurement tool, Tschannen-Moran and Gareis concluded their 2004 study by stating that the instrument should be subjected to additional testing. Since publication of the PSES, it has been used in multiple studies and dissertations and is recognized in the field as a reliable and valid measure of principal self-efficacy.

Although there has been significant progress in the past 10 years in the study of principal efficacy, due to the work of researchers such as Bandura, Tschannen-Moran, and Leithwood, additional research is still needed. In particular, the links between principal efficacy and teacher efficacy, as well as principal efficacy and student achievement, need to be studied in a variety of contexts and on a larger scale. There is also a need to better understand the sources of self-efficacy beliefs for principals and how leadership development and training programs can contribute to greater self-efficacy among school leaders. This study will add to the collective knowledge about these issues.

Developing principal self-efficacy. As the research evidence indicating that principal self-efficacy is, indeed, related to school effectiveness and student achievement has begun to build, more attention has been focused on how to develop high personal self-efficacy in principals (Leithwood & Macall, 2008; Smith et al. 2003; Tschannen-Moran & Gareis, 2005). Many of the recommendations in these studies reflect Bandura's research about the four sources of efficacy beliefs. As Bandura noted, mastery experiences are the most powerful source of efficacy beliefs. Smith et al. (2003) argued that principals should be provided with professional development that allows them to experience success in grappling with real-life scenarios, asserting that these success experiences would increase the self-efficacy of the participants.

Versland (2009) studied 538 school principals in Montana to determine if there was a connection between principals' self-efficacy beliefs and the leadership development programs that had prepared them for the principalship. She found that programs providing aspiring principals with authentic learning experiences, opportunities

for relationship building, motivation, and leadership experiences were more likely to build the self-efficacy of their participants. She recommended infusing leadership development programs with experiences to build self-efficacy, including mastery experiences that involve working with other people and internship programs that provide authentic experiences (Versland, 2009). Tschannen-Moran and Gareis (2005) found that principals' efficacy was closely related to the quality and utility of the college or system program that prepared them to take on the role of school leader. Support from the principals' superiors was also important, with many principals indicating that their perceptions of their own effectiveness were, at least partially, predicated on the support they received from the superintendent and their system's central office (Tschannen-Moran & Gareis, 2005). Watkins and Moak (2010) argued that "supporting self-efficacy among building leaders is critical" (p. 43) and recommended that principal efficacy be nurtured through continuing education programs, provision of trusted mentors, and facilitation of professional community membership. Leithwood and Jantzi (2008) recommended that school districts support leader efficacy by (a) emphasizing the priority they attach to student achievement and instruction, (b) providing targeted and phased focus for school improvement, and (c) building cooperative working relationships with schools.

Guiding Conceptual Framework

The guiding conceptual framework displayed in Figure 3 was designed by the researcher to capture how the self-efficacy beliefs of principals are formed and how these beliefs subsequently lead to decisions, actions, and behaviors that affect teachers and, in turn, students. The first portion of the framework depicts the four sources of principal

efficacy, according to Bandura: mastery experiences, vicarious experiences, verbal persuasion, and affective states (Bandura, 1997). Principals receive input that informs their efficacy beliefs on a daily basis throughout their careers. Primary sources of information can include their leadership development experiences, their principal preparation programs, feedback from their supervisors, communication with peers, and input from teachers, students, and parents. As principals process this information, it affects their perceived self-efficacy in the variety of tasks and responsibilities they have as principals. Tschannen-Moran and Gareis (2004) delineated these responsibilities into three categories: instructional leadership, management leadership, and moral leadership.

As principals' efficacy beliefs about their ability to provide moral, instructional, and management leadership are developed and reinforced, these beliefs have a powerful impact on their decisions, actions, and behaviors. Principals with a high sense of self-efficacy encounter challenges and see them as opportunities to excel and make a difference. Principals with low self-efficacy avoid facing challenges if possible. For example, a principal with a high sense of self-efficacy in the area of instruction will likely visit classrooms, engage in conversations with teachers and teams about the craft of teaching, and study curriculum documents, initiatives, and strategies. A principal with a low sense of self-efficacy in the area of instruction may try to avoid engaging in instructional conversations because of the fear that he or she might be seen as uninformed about curriculum and instruction. In short, an individual principal's self-efficacy beliefs have a significant impact on how the principal chooses to use his or her time and which challenges he or she faces. These principal actions, in turn, provide information that affects teachers, students, and entire schools.

Principal decisions and actions related to a variety of items, including school vision, focus, priorities, school organization, schedules, and professional development, are a powerful source of information for teachers and other constituents as they build their own efficacy. The principal is in a unique position to provide teachers with mastery experiences, vicarious experiences, and verbal persuasion. In addition, the principal's actions can produce positive or negative affective states for members of the faculty. The principal with a high sense of self-efficacy in instruction, who visits classrooms and dialogues with teachers about instruction, is more likely to provide teachers with meaningful support of curriculum implementation than a principal who has low self-efficacy in instruction and avoids dealing with it. Clearly, principals make dozens of decisions every day that can positively or negatively affect the individual and collective efficacy beliefs of teachers. These individual and collective beliefs of teachers then have an effect on their own decisions, actions, and behaviors. Teachers with a high sense of self-efficacy devote more time to instructional planning, provide a more rigorous instructional program, and are more likely to persevere with students who are struggling with lesson content. The research also has shown that the collective efficacy beliefs of teachers have a powerful effect on student outcomes. Finally, the guiding conceptual framework also captures how the principal's teachers and students can, in turn, serve as sources for the administrator's self-efficacy. In summary, the guiding conceptual framework captures how providing principals with experiences to build their self-efficacy results in positive decisions and actions that, in turn, can have a positive effect on teachers, students, and whole schools. In addition, these positive effects can then serve as sources of information that subsequently build the efficacy beliefs of the principal,

thereby forming a positive cycle of efficacy and action that benefits all involved with the school. Although the principal's effect on student achievement is indirect and mediated through teachers, it is still significant, and this positive effect begins with the self-efficacy beliefs of the individual principal.

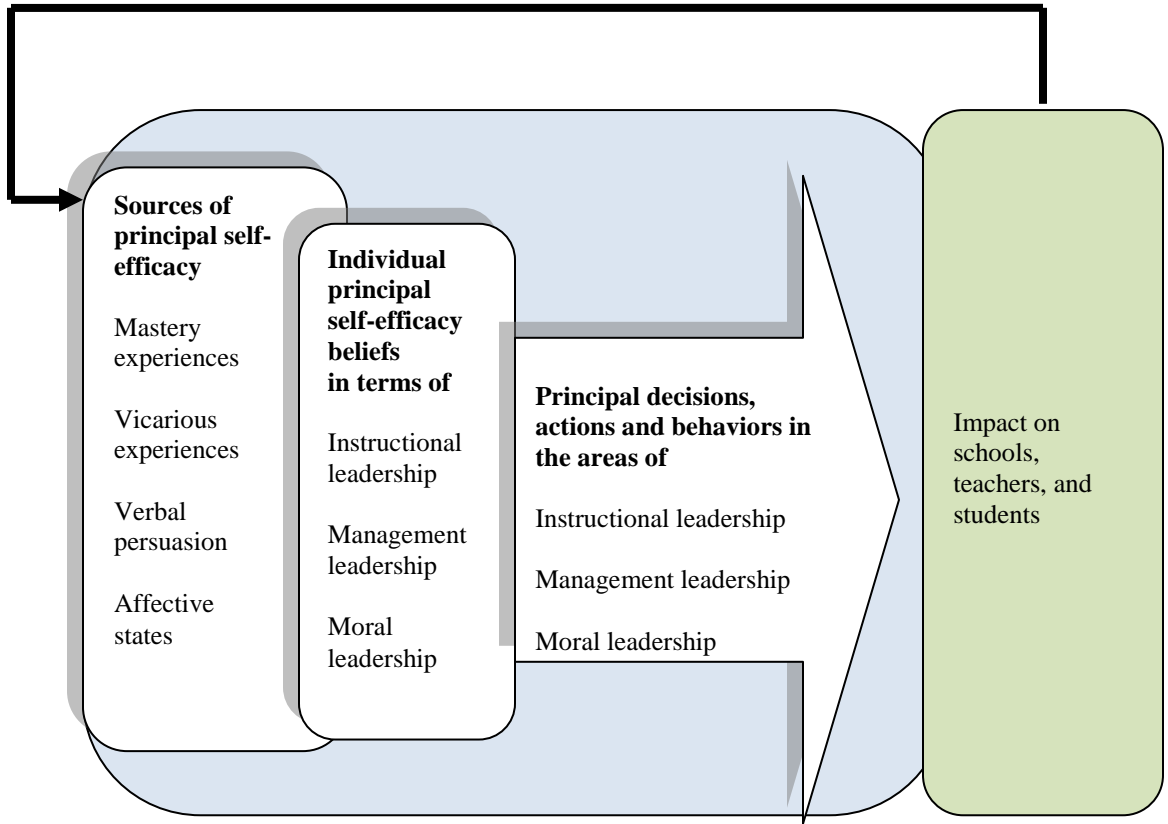


Figure 3. Guiding conceptual framework.

Chapter Three: Design and Methodology

Overview

The purpose of this study was to examine the perceived self-efficacy beliefs of elementary principals and to explore the sources of those beliefs. In addition, the researcher investigated principals' perceptions of their training and preparation for the principalship to determine the relationship between these experiences and the principals' levels of self-efficacy. Individual and school-level variables, including race or ethnicity, gender, years of experience as a principal, years as principal of the current school, school size, and socioeconomic status of students, were included to ascertain whether or not these factors have a relationship to the self-efficacy beliefs of principals. Through investigation of elementary principals' self-efficacy beliefs and the relationship of these beliefs to a variety of variables, the study will provide valuable data that can inform principal training and support programs and help to prepare new school leaders for the many challenges of their positions.

This chapter presents information about the methodology of the study, including the research rationale and approach, discussion of the sample population, description of survey instrumentation, strategies used in conducting the quantitative phase of the study (survey instrument), processes used to implement the qualitative phase of the study (semistructured interviews), methods of data analysis, and an explanation of ethical issues and the personal involvement of the researcher.

Research Rationale and Approach

A mixed-methods approach was used in this study to achieve a complete and comprehensive understanding of the data that were collected. As Creswell and Plano

Clark (2007) stated, “the central premise of mixed method research is that the use of quantitative and qualitative approaches, in combination, provides a better understanding of research problems than either approach alone” (p. 5). Over the past decade, more and more researchers in the social sciences are employing a mixed-methods approach in conducting their research (Creswell & Plano Clark, 2011). A mixed-methods approach was most appropriate for this study because the strategic collection of quantitative and qualitative data provided the best opportunity to reach a deep understanding of the research problem.

As a specific mixed-methods research strategy, the researcher employed what Creswell and Plano Clark (2011) referred to as a “participant-selection variant” of the “explanatory sequential design (p. 86). Creswell and Plano Clark described the explanatory sequential design as a two-phase strategy in which the researcher first collects quantitative data to explore a topic before moving on to a second phase, which is qualitative in nature. In most explanatory sequential design studies, the quantitative strand is the highest priority and the qualitative strand is implemented to explain the initial quantitative results. For example, a researcher studying adolescents’ tobacco use administers surveys (quantitative data) to identify a relationship between tobacco use and certain teen activities. The researcher then follows up on this quantitative finding by conducting interviews or focus groups (qualitative data) in an attempt to explain this relationship. The participant-selection variant of the explanatory sequential design differs in its priorities and in the purpose of the collected quantitative data. In the participant-selection variant of this design, the highest priority of the study is the qualitative strand, since the initial collection of quantitative data is conducted primarily to

identify and select the best participants for the qualitative phase of the study. For example, a researcher examining adolescents' tobacco use might employ a survey instrument to identify adolescents in the top 10% of tobacco users for their age. Having identified these individuals through the survey, the researcher then conducts interviews with the identified teens to better understand their excessive use of tobacco products.

For the purposes of this study, the participant-selection variant of the explanatory sequential design allowed the researcher to use student achievement data and a reliable survey instrument to identify elementary school principals who (a) have high-achieving schools and (b) report a high level of personal self-efficacy. By virtue of these characteristics, these identified individuals were ideal participants for the qualitative phase of the study. The use of this design ensured that the participants in the in-depth interviews are principals whose schools have demonstrated exceptional student achievement and who report a high level of self-efficacy beliefs. The collection of qualitative data from this identified group provided rich information about the sources and effects of principal self-efficacy. This information will help to inform the planning and implementation of principal preparation programs.

In this mixed-methods study of the self-efficacy beliefs of elementary principals, the first phase of the research was quantitative in nature. State test results were used to identify high-achieving elementary schools. Next, the principals of those schools were asked to complete a survey instrument regarding their perception of their own self-efficacy in several areas. In addition, participating principals were asked to provide demographic information regarding personal characteristics and school-level variables. The survey results were examined to look for relationships between principal self-

efficacy and several personal and demographic variables. In addition, the survey results were reviewed for the purpose of identifying a smaller sample of principals to participate in the second phase of the study. The second phase of the study was qualitative in nature and featured a series of interviews conducted with a smaller sample of principals.

Principals were selected for the interview phase of the study based on several factors, including their reported levels of self-efficacy, their personal characteristics, and the demographics of their schools.

Study Sample Population

The targeted study sample was drawn from the elementary school principals working in District A, a large suburban school district in the mid-Atlantic region of the United States. This sample was selected for several reasons. First, the school system is large, with more than 140,000 students and 200 schools, including 131 elementary schools. As the researcher was using a participant-selection variant of the explanatory sequential design, it was important to begin with a large sample, because each phase of the study significantly reduced the size of the sample. The beginning group of 131 principals was reduced to 40 based on the level of student achievement on state tests. This group was further reduced by the number of principals who chose to return the survey instrument (36). This number was further reduced when the returned surveys were reviewed to identify a smaller group of principals who reported a high level of self-efficacy and represented a diverse population. Therefore, to have a valid sample from which to choose for the qualitative phase of the study, it was necessary to begin with a large sample. District A served that purpose. Second, this particular school district provided an opportunity for the researcher to collect data from a large group of schools

that are diverse in terms of student population, racial and ethnic demographics, socioeconomic levels, and school size. As a result, the data collected from these schools provided an opportunity to examine the links between principal self-efficacy with several school-level variables. Next, the beginning sample group of principals was diverse in terms of personal factors, including race or ethnicity, gender, and years of experience as a principal. As a result, even though the sample was reduced during the course of the study, the data collected from individual principals provided an opportunity for the researcher to investigate the links between the efficacy beliefs of principals and a variety of personal demographics. Finally, and most importantly, the district selected for the sample has a long history of structured professional development and preparation for school principals, and therefore provided a unique opportunity to examine the links between structured leadership development and the self-efficacy beliefs of persons who participate in the program. For all of these reasons, implementation of the study with this sample population adds to the research literature and contributes to ongoing investigations into the links between principal self-efficacy and several critical factors, including personal characteristics, professional development experiences, school-level variables, and student achievement.

Survey Instruments

As described in the literature review, the measurement of principal self-efficacy has been a challenge for researchers. Numerous scales have been developed, implemented, tested, and reviewed (Dimmock & Hattie, 1996; Smith et al., 2003; Tschannen-Moran & Gareis, 2004). Since 2004, the Principal Self-Efficacy Scale

(PSES), first developed by Tschannen-Moran and Gareis, has been widely used as a measure of principal self-efficacy.

From 2000 to 2003, Tschannen-Moran conducted several studies of teacher efficacy and its measurement. In 2004, Tschannen-Moran turned her attention from teacher efficacy to principal efficacy, asserting, “In this era of accountability and significant school reform, efforts to improve schools increasingly look to principals to spearhead change efforts at the school level” and “One promising, but largely unexplored avenue to understanding principal motivation and behavior is principals’ sense of self-efficacy” (p. 573). Working with Gareis, Tschannen-Moran set out to identify a valid and reliable scale to measure the efficacy beliefs of school principals. When the available scales were found to be ineffective, the researchers decided to develop a scale of their own. Using the Teacher Self-Efficacy Scale as the foundation, Tschannen-Moran and Gareis modified the items so that they would be appropriate for measuring principal self-efficacy. At first, they generated more than 50 items for the scale. The prospective items were based on the professional standards outlined in the Interstate School Leaders Licensure Consortium (ISLLC). Sample items included the following: In your current role as principal, to what extent can you:

- Facilitate student learning in your school?
- Generate enthusiasm for a shared vision for the school?
- Foster productive communication with parents?
- Handle the time demands of the job?

The researchers conducted a number of field tests, sought feedback on the scale from panels of experts, and performed reliability tests by comparing results with other

established scales, including the work alienation scale developed by Forsyth and Hoy (1978). The scale also included 21 questions related to school characteristics (level, context, number of students, proportion of students who received free or reduced-price meals, etc.), quality of supports (facilities, central office help, support from the superintendent, etc.), and personal characteristics (gender, race, age, number of years as a principal, etc.). Next, the researchers conducted a larger field test, involving more than 500 public school principals throughout the State of Virginia. Review of these results through a principal axis factor analysis led the researchers to reduce the number of items from 50 to 18. Within the 18 items that remained, three subsets emerged from the data: 6 items related to self-efficacy to complete the management aspects of the principalship, 6 items related to instructional aspects of school leadership, and 6 items centered on self-efficacy for moral leadership. The final Principal Self-Efficacy Scale (Appendix A) can produce an overall self-efficacy score as well as subscale scores for each area of leadership (Tschannen-Moran and Gareis 2004). The researcher contacted the scale developers and received permission to use the scale in this study.

Participants were asked to provide responses to selected demographic questions (Appendix A). The questions concerning personal demographics asked participants to provide information about their gender, race or ethnicity, number of years of experience as a principal, and number of years as principal at current school. The questions concerning school characteristics asked participants to provide information about the number of students enrolled at the school and the approximate percentage of students qualifying for free or reduced-price meals.

Identification of the sample for the quantitative phase of the study. The identification of principals for participation in this study began with an analysis of student achievement data. The researcher accessed information posted on the state department of education Web site regarding the performance of schools on state tests in reading and mathematics for students in Grades 3 through 5. The researcher collected the 2011 aggregate scores for all 125 elementary schools in District A that had administered the state tests. (Note: Six elementary schools in District A enrolled only students in kindergarten through Grade 2 and, therefore, did not administer the state tests for Grades 3 through 5. These schools and their principals were not included in this study.) Reading and mathematics scores for students in Grades 3 through 5 were combined into one composite score that reflected the percentage of students in each school that demonstrated performance at the proficient or advanced level on the state tests for 2011. The researcher created a database and ranked all schools by the percentage of students in Grades 3 through 5 demonstrating proficiency on the state tests.

Next the researcher accessed publicly available information about the percentage of students at each school that qualified for free or reduced-price meals (FARMS) and added this information to the database. The researcher then divided the schools into five quintiles based on the percentage of students qualifying for FARMS and ranked the schools by their combined reading and mathematics scores on the state test. This process created a ranked list of 25 schools in each quintile. In selecting the principals to be surveyed for Phase 1 of the study, the researcher decided to limit the sample to those who had been principals at their respective schools for at least 3 years to focus on school leaders who had been in their schools for a long enough period to enact change and

influence student learning. The researcher reviewed District A's Board of Education (BOE) records for the names of the principals in each of the schools and the date when each principal had been appointed to the post by the BOE. This information was used to determine which principals had been leading their schools for at least 3 school years. Review of these data revealed that, of the 125 schools that administered the state test, 97 schools (77.6%) had principals who had been leading their respective schools for at least 3 years. The remainder, 28 schools (22.4%), had principals who had not completed 3 years in their current assignments. These 28 schools were eliminated from consideration for the sample, leaving 97 schools in five FARMS quintiles to be considered. The researcher selected the top eight schools from each quintile, based on combined reading and math scores on the state test, to be included in Phase 1 of the study. By employing this sequence of steps, the researcher was able to identify a quality sample of 40 school leaders who had served as principals of their respective schools for at least 3 years and whose schools had demonstrated high levels of academic performance on state tests in reading and mathematics in comparison to similar schools.

Distribution of surveys in the quantitative phase of the study. The researcher opened an account on Survey Monkey.com and created an online survey that incorporated demographic questions (race–ethnicity, number of years as a principal, number of years as principal of current school, approximate school enrollment, approximate FARMS percentage of student body) and the 18 items of the Principal Self-Efficacy Scale developed by Tschannen-Moran and Gareis. To test the functionality and usability of the online survey, the researcher distributed it to a test group of 10 school administrators who were not eligible to participate in the study. The test group responded

with feedback, indicating that the survey was easy to understand and complete. Most test group participants reported that it took them less than 10 minutes to complete the survey. Several test group participants made a suggestion about the formatting of the 18 PSES items, indicating that the heading for the answers (*A great deal, Not at all, etc.*) was not visible as the survey takers completed the last few items. In response, the researcher divided the 18 items into three sections so that the scale was more visible.

Once the format of the online survey was completed, the researcher prepared and sent a mailing to each of the 40 school principals selected for participation in Phase 1 of the study. The mailing included a cover letter (Appendix A) and consent form (Appendix B). The cover letter included a hyperlink that the principals could use to access the online survey at SurveyMonkey.com. A follow-up e-mail message sent 3 days later provided principals with the hyperlink in electronic format so that they could click on the link in the message to access the survey. Within 10 days, 36 of the principals had returned the consent form for the study and had completed the online survey, thereby generating a very positive response rate of 90%. The researcher used a statistical software package to analyze the survey results. These findings are discussed in chapter four. In addition, the researcher used the survey results to identify a smaller group of principals for participation in the qualitative phase of the study: semistructured interviews.

Conducting Interviews

Once the principals selected for the quantitative phase of the study had returned their completed surveys, the researcher analyzed the survey data to identify principals for the qualitative phase of the study. This analysis involved reviewing individual principal

responses to the survey, comparing means on the PSES, and studying demographic factors. The full analysis process, which is described in detail in chapter four, identified a sample of six principals who reported high levels of self-efficacy on the PSES and who represented diversity in terms of race, gender, school FARMS percentage, and number of years of experience as a principal. The interviews, each of which was scheduled for 60 to 75 minutes, included a variety of items designed to address the research questions of the study. Question categories included general self-efficacy, personal experiences, education experiences, and leadership experiences. In addition, specific questions targeted the four sources of efficacy, as outlined by Bandura, and probed for participant responses about how they have experienced each source. Sample questions are provided in Table 1. The full list of interview questions is provided in Appendix C. The interviews were semistructured in nature; each question was open-ended, with no predetermined response. Interviews were recorded to ensure accuracy and the researcher used the interview protocol to take notes during the interviews as well. The researcher transcribed the interview responses and prepared the transcripts for coding and analysis.

Table 1. *Sample Interview Topics and Questions*

Question topic	Examples
General self-efficacy	Think back to when you first started the process of becoming a school administrator. How did you feel about your ability to be a successful principal?
Educational experiences	What were some of the experiences that you had as a teacher or educator that caused you to feel that way?
Personal experiences	Did you have experiences outside education that caused you to feel that way? What were they?
Leadership experiences	Please tell me about your assignment and activities during your time as an Assistant Principal I.
Sources of efficacy: Mastery experiences	Please tell me about a time, that you were very successful with a task or responsibility—something you were proud of.
Sources of efficacy: Vicarious experiences	Please tell me about a time that someone (a supervisor, a peer, a coach) modeled a task or a skill for you. What did you gain from that experience?
Sources of efficacy: Verbal persuasion	Please tell me about a time that someone (a supervisor, peer, coach) influenced you through a conversation. What was the conversation about? What did you gain from the experience?
Sources of efficacy: Affective states	Please tell me about a time during the program that you had an exhilarating or very positive experience. What was the situation?
General self-efficacy	Tell me about one of your worst days as a principal.

Data Analysis

In conducting a mixed-methods study, the researcher needs to use specific approaches for collection and analysis of data for the quantitative and qualitative components of the research.

In analyzing the quantitative data collected in the study, the researcher used a statistical software package to generate descriptive and inferential statistics. Survey data

was analyzed to determine means and correlations. For example, the results of the Principal Self-Efficacy Scale were analyzed to determine mean scores for participating school principals in terms of the entire scale and each of the subscales (instructional leadership, management leadership, and moral leadership). In addition, data was analyzed to determine if there were any significant relationships between principals' scores on the PSES and the personal or school characteristics that they reported. A full discussion of these analyses is included in chapter four. Analysis of these data will add to the literature about principal efficacy and its links to race, gender, and years of experience as a principal, as well as school size and student demographics. The guiding conceptual framework developed by the researcher and shared in chapter two of the study was used to support analysis of the collected data. As previously noted, the quantitative data were used to identify a smaller sample of principals for the qualitative phase of the study.

In analyzing the qualitative data collected in the study, the researcher recorded, transcribed, and coded the data obtained through the interview process. The researcher organized the data into categories that were aligned with the research questions and the guiding conceptual framework. He gave particular attention to interview responses that addressed general self-efficacy, the experiences of the participants, and the four sources of efficacy beliefs, as well as comments detailing professional development experiences that may have affected efficacy beliefs. The researcher continued the analysis by identifying themes or patterns that emerged from the data. A full discussion of the qualitative data is included in chapter four.

Ethical Issues and Personal Involvement

The researcher conducted this study in a school district in which he is currently employed as a consulting principal, a central office position devoted to building the leadership capacity of novice principals and principals who have been identified as underperforming. Previously, the researcher was employed by the system as an elementary principal, a target population for this study. Although the researcher is a personal acquaintance of many of the principals who will participate in the study, he is not in a supervisory role over any of the participants. Principals who are currently being coached by the researcher were excluded from the study to avoid the possibility of influence or bias.

The researcher made it clear to all participants that the data collected through survey instruments and interviews will be used to better understand the efficacy beliefs of elementary principals and the sources of those beliefs. None of the collected information is identified with a particular individual or a specific school. Although direct quotations from the interview sessions are cited in the study's findings, no quotes were linked to an individual or school. References to specific schools or persons have been omitted. The researcher obtained informed consent from all participants. In addition, all participants were provided with detailed information about the purpose of the research and their role in the study. The researcher emphasized his commitment to the confidentiality of the participants.

Summary

The researcher used a mixed-methods approach and a participant-selection variant of an explanatory sequential design to study a sample of principals of high-achieving

elementary schools in a large suburban school district with a structured leadership development program. The study focused on principals' perceptions of their self-efficacy beliefs and the sources of those beliefs. Quantitative data were collected through the use of the Principal Self-Efficacy Scale, which was distributed to 40 principals. Qualitative data were collected by conducting semistructured interviews with a subsample of six principals who had completed the survey. The quantitative and qualitative data that were collected add to the collective knowledge about the self-efficacy beliefs of principals and thereby support administrator training and school improvement efforts. The next chapter presents the quantitative and qualitative findings of the study.

Chapter Four: Findings

Overview

School principals have a significant impact on the academic achievement of their students (Cotton, 2003; Hallinger & Heck, 1996; Leithwood et al., 2004; Marzano et al., 2005). This important responsibility is magnified by the fact that contemporary principals have a job that is increasingly complex and demanding (Copland, 2001; Daly, 2009; Hess & Kelly, 2005; West et al., 2010). Recently, researchers and educators have voiced concern over whether current programs for principal preparation and leadership development are sufficient to prepare school leaders for their challenging jobs (Hallinger & Snidvongs, 2008; Hess & Kelly, 2005, 2007; Versland, 2009). When individuals are dealing with demanding circumstances, such as those encountered in a stressful job with high accountability, the self-efficacy beliefs of the individuals involved are a key factor in performance and success (Bandura, 1977, 1995, 1997; Pajares, 1997). Recent research has found a relationship between the self-efficacy beliefs of the principal and certain types of student achievement (Lehman, 2007; Leithwood & Jantzi, 2008; Siegrist et al., 2009; Watkins & Moak, 2010).

This study focused on the perceptions and sources of the self-efficacy beliefs of elementary school principals whose schools had demonstrated high levels of student achievement in comparison to similar schools. This chapter presents the quantitative and qualitative data analysis and findings for this mixed-methods study in six sections: (a) introduction; (b) description of the procedures used to design and implement the quantitative phase of the study, which involved distribution of a survey; (c) presentation of the quantitative data and statistical analysis of survey results; (d) description of the

qualitative phase of the study, which involved conducting interviews with principals; (e) presentation of the qualitative data analysis, including themes that emerged during the interviews; and (f) a summary of the chapter.

The study was conducted in two phases. In Phase 1 of the study, high-achieving schools in District A were identified through an analysis of student achievement on state tests in reading and mathematics. Then the principals of those schools were asked to complete the Principal Self-Efficacy Scale (PSES) (Tschannen-Moran & Gareis, 2004). The researcher analyzed the survey results and selected a smaller group of principals to participate in Phase 2 of the study, a semistructured interview. The interviews were intended to examine the principals' perceptions of their self-efficacy beliefs and the experiences that might have contributed to those beliefs. The qualitative and quantitative phases of the study were conducted to examine the following research questions:

1. What perceptions do principals of high-achieving elementary schools have about their self-efficacy as it relates to the tasks and skills that are required of principals in today's public schools?
2. What relationship is there, if any, between principals' perceived self-efficacy beliefs and personal factors (gender, race or ethnicity, years as a principal, years as principal at current school) and demographic factors (school size, percentage of students qualified for free or reduced-price meals)?
3. What perceptions do principals of high-achieving elementary schools have about the sources of their self-efficacy beliefs?

4. What perceptions do principals of high-achieving elementary schools have about how their self-efficacy beliefs have been affected by professional development experiences and leadership development programs?

The guiding conceptual framework described in chapter two of the study is used in this chapter to analyze the data collected in both phases of the study. The framework helps to explain how principals receive and interpret information (mastery experiences, vicarious experiences, verbal persuasion, affective states) that influences their self-efficacy beliefs. These beliefs help principals to interpret their capabilities as they approach instructional, managerial, and moral tasks and responsibilities. These beliefs then influence the actions they take as leaders of the instructional program, school management, and the moral climate of the school community. These actions, in turn, have an effect on the school, teachers, and students.

Quantitative Data

Demographics of respondents. In conducting the study, the researcher utilized a participant selection variant of the sequential explanatory design. This type of design is used when the researcher employs a quantitative strategy (survey) to identify appropriate candidates for the qualitative phase of the study (interviews). Accordingly, the first item on the online survey asked each respondent to enter his or her first and last names. It was necessary to collect this information to analyze survey responses and then select participants for the second phase of the study. The cover letter and consent form sent to principals ensured participants that their identities and the names of their schools would be kept confidential and protected through implementation of security procedures.

The first section of the online survey asked respondents to share information about themselves and their schools. Data regarding the personal characteristics and school demographics of the 36 survey respondents are displayed in Table 2. The majority (26, 72.2%) of the respondents were female; 10 (27.8%) were male. The respondents were predominantly Caucasian; specifically, 29 principals (80.6%) identified themselves as Caucasian. Four respondents (11.1%) were African American, and three (8.3%) identified themselves as Asian American. Respondents ranged in number of years as principal from 3-5 years to more than 20 years; however, the largest group (41.7%) had been principals between 6 and 10 years. In terms of years as principal in the current school, responses ranged from 3-5 years to more than 20 years as well. The majority of respondents (52.8%) had been principals in their current schools between 6 and 10 years. Respondents reported approximate school enrollments as low as “less than 300 students” and as high as “more than 750 students.” The largest percentage (36.1%) led schools with enrollments between 301 and 450 students. In terms of the percentage of students qualifying for free or reduced-price meals, principals completing the survey reported percentages ranging from below 10% to more than 70%. The highest percentage (22.2%) led schools with a FARMS percentage between 11% and 20%. Table 2 depicts the demographic characteristic of the principals participating in this study.

Table 2. *Demographic Characteristics of Principals Completing Principal Self-efficacy Scale*

Demographic Characteristic	<i>n</i>	%
Gender		
Female	26	72.2
Male	10	27.8
Race–Ethnicity		
African American	4	11.1
Asian American	3	8.3
Caucasian	29	80.6
Years as a principal		
3 to 5	2	5.6
6 to 10	15	41.7
11 to 15	8	22.2
16 to 20	5	13.9
More than 20	4	11.1
Not reported	2	5.6
Years as principal in current school		
3 to 5	7	19.4
6 to 10	19	52.8
11 to 15	7	19.4
16 to 20	2	5.6
More than 20	1	2.8
School enrollment		
Less than 300	1	2.8
301 to 450	13	36.1
451 to 600	11	30.6
601 to 750	8	22.2
More than 750	3	8.3
Free or reduced-price meal eligibility		
Less than 10%	7	19.4
11 to 20%	8	22.2
21 to 30%	3	8.3
31 to 40%	4	11.1
41 to 50%	5	13.9
51 to 60%	1	2.8
61 to 70%	2	5.6
More than 70%	6	16.7

Following the demographic questions, the 18 items of the Principal Self-efficacy Scale (PSES), which was developed by Tschannen-Moran and Gareis (2004), were presented to the participants. Each item asked the principal to consider the combination of his or her current ability, resources, and opportunities in reviewing statements describing tasks associated with the principalship. For example, the first item asked, “In your current role as principal, to what extent can you... facilitate student learning in your school?” Respondents indicated their respective opinions about each of the items by clicking on one of nine responses, ranging from *None at all* (1) to *A great deal* (9), with *Some degree* (5) representing the midpoint.

Each of the items on the Principal Self-Efficacy Scale is designed to explore one of three areas of principal leadership: instructional leadership, managerial leadership, or moral leadership. Each area is addressed by six survey items. The items designed to explore instructional leadership are as follows:

- facilitate student learning in your school?
- generate enthusiasm for a shared vision for the school?
- manage change in your school?
- create a positive learning environment in your school?
- raise student achievement on standardized tests?
- motivate teachers?

Items related to managerial leadership are the following:

- handle the time demands of the job?
- maintain control of your own daily schedule?

- shape the operational policies and procedures that are necessary to manage your school?
- handle the paperwork required of the job?
- cope with the stress of the job?
- prioritize among competing demands of the job?

Items related to the principal's role in moral leadership are the following:

- promote school spirit among a large majority of the student population?
- promote a positive image of your school with the media?
- promote the prevailing values of the community in your school?
- handle effectively the discipline of students in your school?
- promote acceptable behavior among students?
- promote ethical behavior among school personnel?

Tschannen-Moran and Gareis (2004) used factor analysis and Cronbach's alpha to determine the reliability of the entire 18-item scale and the three six-item subscales.

Reliability information is presented in Table 3.

Table 3. *Reliability Coefficients for the Principal Self-Efficacy Scale* (Tschannen-Moran & Gareis, 2004)

	Instructional leadership	Managerial leadership	Moral leadership	Total scale
Alpha Coefficient	.86	.87	.83	.91

For this study of the perceived self-efficacy of high-achieving elementary principals, the researcher analyzed principals' scores on the total scale and on each of the subscales. SPSS version 16 was used to calculate inferential and descriptive statistics.

Cronbach's alpha was used to compute the reliability estimates for the sample of 36 principals in this study. A measure is considered to have acceptable reliability and internal consistency if the alpha score is higher than .70 and lower than .90. Alpha coefficient analysis for this study sample indicated that the reliability of the total scale and the subscales ranged from "good" to "excellent." (See Table 4.)

Table 4. *Reliability Coefficients Computed for the Study Participants Taking the Principal Self-Efficacy Scale*

	Instructional leadership	Managerial leadership	Moral leadership	Total scale
Alpha Coefficient	.75	.85	.72	.84

SPSS was used to calculate inferential and descriptive statistics to answer the first two research questions for the study:

1. What perceptions do principals of high-achieving elementary schools have about their self-efficacy as it relates to the tasks and skills that are required of principals in today's public schools?
2. What relationship is there, if any, between principals' perceived self-efficacy beliefs and personal factors (gender, race or ethnicity, years as a principal, years as principal at current school) and demographic factors (school size, percentage of students qualified for free or reduced-price meals)?

To answer Research Question 1, means and standard deviations were calculated for the total self-efficacy scale and for the subscales that measure efficacy in instructional leadership, managerial leadership, and moral leadership. To answer Research Question 2, inferential and descriptive statistics, including *t*-tests and analysis of variance, were

calculated to compare groups and determine if there were any significant relationships between scale scores and demographic variables.

The composite mean score for the principals participating in Phase 1 of the study ($N=36$) was 137.67. The highest mean score for the subscales was in moral leadership ($M = 47.17$), followed by instructional leadership ($M = 46.78$) and managerial leadership ($M = 43.72$). These data are depicted in Table 5.

Table 5. Means, Standard Deviations, and Ranges for Total PSES and Subscales

Scale	Mean	Standard deviation	Range
Total scale	137.67	11.19	116-160
Instructional	46.78	3.80	38-53
Managerial	43.72	6.28	27-54
Moral	47.17	4.64	37-54

Statistical data for the PSES according to demographic characteristics are presented in Tables 6 through 10.

Table 6. Mean Level Differences in PSES Scores by Gender

Subscale	Mean (Standard deviation)		<i>t</i> -test results
	Men ($n = 10$)	Women ($n = 26$)	
Instructional	46.60 (3.69)	46.84 (3.91)	$t(34) = .17, p = .87$
Managerial	44.20 (5.33)	43.54 (6.70)	$t(34) = -.28, p = .78$
Moral	47.50 (5.02)	47.04 (4.58)	$t(34) = -.26, p = .79$
Total	138.30 (10.84)	137.42 (11.53)	$t(34) = -.21, p = .84$

As depicted in Table 6, male principals scored slightly higher than female principals on the composite scale and the subscales for managerial and moral leadership; however, *t*-tests determined that the results were not significantly different.

Table 7. *Mean Level Differences in PSES Subscale Scores by a Dichotomous Measure of Length of Time as a Principal (10 or fewer years versus 11 or more years)*

Subscale	Mean (Standard deviation)		<i>t</i> -test results
	≤ 10 (<i>n</i> = 17)	≥ 11 (<i>n</i> = 17)	
Instructional	46.53 (4.00)	47.29 (1.05)	<i>t</i> (32) = -.57, <i>p</i> = .57
Managerial	42.47 (6.52)	45.00 (6.33)	<i>t</i> (32) = -1.15, <i>p</i> = .26
Moral	47.41 (4.18)	47.88 (4.48)	<i>t</i> (32) = -.32, <i>p</i> = .75
Total	136.41 (12.15)	140.18 (10.20)	<i>t</i> (32) = -.98, <i>p</i> = .34

As shown in Table 7, principals with 11 or more years of experience as principal scored higher than principals with less experience on the composite scale and each of the subscales; however, *t*-tests determined that the results were not significantly different.

Table 8. *Mean Level Differences in PSES Subscale Scores by a Dichotomous Measure of Length of Time at Current School (10 or fewer years versus 11 or more years)*

Subscale	Mean (Standard deviation)		<i>t</i> -test results
	≤ 10 (<i>n</i> = 26)	≥ 11 (<i>n</i> = 10)	
Instructional	46.50 (4.19)	47.50 (2.59)	<i>t</i> (26.52) = -.70, <i>p</i> = .49
Managerial	43.81 (6.04)	43.50 (7.21)	<i>t</i> (34) = -.13, <i>p</i> = .90
Moral	47.69 (4.86)	45.80 (3.88)	<i>t</i> (34) = 1.10, <i>p</i> = .28
Total	138.00 (12.09)	136.80 (8.97)	<i>t</i> (34) = .28, <i>p</i> = .78

A different trend is shown in Table 8: Principals with fewer years of experience at their current schools generated higher mean scores for the composite scale and the managerial and moral subscales, whereas the more experienced principals scored higher on the instructional scale. Again, *t*-tests indicated nonsignificant differences.

Table 9. *Mean Level Differences in PSES Subscale Scores by a Dichotomous Measure of School Enrollment (450 or fewer versus 451 or more)*

Subscale	Mean (Standard deviation)		<i>t</i> -test results
	≤ 450 (<i>n</i> = 14)	≥ 451 (<i>n</i> = 22)	
Instructional	45.42 (3.78)	47.64 (3.65)	<i>t</i> (34) = -1.75, <i>p</i> = .09
Managerial	42.86 (7.05)	44.27 (5.85)	<i>t</i> (34) = -.65, <i>p</i> = .52
Moral	47.29 (3.83)	47.09 (5.17)	<i>t</i> (34) = .12, <i>p</i> = .90
Total	135.57 (8.91)	139.00 (12.45)	<i>t</i> (34) = -.89, <i>p</i> = .38

As shown in Table 9, principals in schools with student enrollments of 451 or more students scored higher than principals with lower school enrollments on the total scale and the subscales for managerial and instructional leadership. Principals of smaller schools generated a higher mean on the scale measuring efficacy for moral leadership tasks. *T*-tests determined that the differences were not statistically significant.

Table 10. *Mean Level Differences in PSES Subscale Scores by a Discrete Measure of Percentage of Students Receiving Free or Reduced-Price Lunch (30% or less, 31% to 60%, or 61% or more)*

Subscale	Mean (Standard deviation)			<i>t</i> -test results
	≤ 30% (<i>n</i> = 18)	31% to 60% (<i>n</i> = 10)	≥ 61% (<i>n</i> = 8)	
Instructional	47.44 (4.19)	47.20 (2.90)	44.75 (3.58)	$F(2, 33) = 1.52, p = .23$
Managerial	45.83 (6.28)	40.90 (6.01)	42.50 (5.53)	$F(2, 33) = 2.34, p = .11$
Moral	48.56 (4.24)	46.60 (5.52)	44.75 (3.54)	$F(2, 33) = 2.09, p = .14$
Total	141.83(11.08)	134.70 (10.22)	132.00 (10.01)	$F(2, 33) = 2.91, p = .07$

As depicted in Table 10, principals of schools with lower percentages of students qualifying for free or reduced-price meals (FARMS) scored higher on the total scale and each of the subscales than did principals with a higher percentage of FARMS students; however, *t*-tests determined that the differences were not statistically significant.

The quantitative data, though not statistically significant, produced some interesting findings that are discussed fully in chapter five. In addition, the quantitative data in this study served the important purpose of informing the qualitative phase of the study.

Qualitative Data

Selection of interview participants. For this mixed-method study, the researcher employed a participant selection variant of the sequential explanatory design. In this type of design, the quantitative phase of the study, in this case the use of a survey, is implemented to identify a high-quality sample of participants for the qualitative portion of the study. The second phase of this study involved conducting semistructured interviews with a smaller sampling of principals. The researcher analyzed the results to

identify principals who reported a high degree of self-efficacy in comparison to the other principals who had returned the survey. In addition, the researcher sought to identify a sample of principals that would reflect diversity in terms of gender, race–ethnicity, number of years as a principal, number of years as principal of their current school, school enrollment size, and socioeconomic profile of the student body.

For the 36 Principal Self-Efficacy Scales returned by principals, the total score on the scale ranged from 116 to 160. The mean was 137.67 and the standard deviation for the scale was 11.19. The researcher contacted one of the developers of the PSES to inquire about standards for high self-efficacy. In other words, what score on the PSES would identify someone as a principal reporting a high degree of self-efficacy? Dr. Tschannen-Moran responded to the researcher’s query by stating,

Because I use the PSES for research purposes rather than in a clinical setting, I haven’t delineated high, medium, and low levels. The best way to determine those kinds of levels would be to use the mean and standard deviation. Those principals whose scores are one standard deviation or more above the mean are in the top 16% of principals and those with scores one standard deviation or more below the mean are in the lowest 16% of principals. (M. Tschannen-Moran, personal communication, January 6, 2012)

A total of seven respondents in this study scored at least one standard deviation above the mean (148) on the scale. The researcher considered the use of these seven principals as the sample for the qualitative phase of the study, but, as a group, these respondents did not reflect the diversity desired in the sample. The top four scorers reflected some degree of diversity in terms of gender, race–ethnicity, number of years as a principal, and years as principal at current school; however, this sampling lacked diversity in terms of free or reduced-price meals percentages. In addition, this sample did not include any African American principals. To diversify the sample and collect

reflections from a variety of principals, the researcher expanded the sample beyond those who had scored one standard deviation above the mean. Two additional principals were selected to participate in the interview phase of the study. The addition of these principals, who both scored above the mean on the PSES, increased the diversity of the sample in terms of race, FARMS percentage, and number of years as a principal. Table 11 displays the characteristics of the principals selected for the qualitative phase of the study. Principal are identified by pseudonym, rather than name, to protect their confidentiality.

Table 11. *Demographic Characteristics of Participating Principals*

Name	Gender	Race– Ethnicity	Number of years as a principal	School enrollment	Percentage of students qualifying for free or reduced- price meals
Edie	Female	Caucasian	More than 20	601-750	21%-30%
Paula	Female	Caucasian	3-5	451-600	31%-40%
Len	Male	Caucasian	16-20	More than 750	11%-20%
Julie	Female	Asian American	6-10	451-600	0%-10%
Lynn	Female	African American	6-10	451-600	61%-70%
David	Male	Caucasian	16-20	601-750	40%-50%

The researcher contacted each of the principals selected for the qualitative phase of the study and requested his or her consent to participate in a single semistructured interview that would last between 60 and 75 minutes. Prospective participants were informed that they were being requested for this part of the study because they had reported high levels of self-efficacy on the PSES. They were also told that the interview

would include questions about the sources of their efficacy beliefs and questions about their leadership development and principal preparation experiences. All six candidates that were contacted agreed to participate in the interview. The interviews were scheduled and conducted within a timeframe of approximately 3 weeks in January 2012. Interviews were conducted behind closed doors in locations that were convenient for the participants. In five of the six cases, this location was the school building. The sixth interview was conducted in the office of the researcher. The researcher employed a written interview protocol to conduct the interviews (Appendix C). Interviews were recorded through use of a computer tablet application. The researcher also recorded written notes during the interviews and transcribed approximately 7 hours of interview audio recordings.

The semistructured interviews were conducted to gain insight about Research Questions 3 and 4:

3. What perceptions do principals of high-achieving elementary schools have about the sources of their self-efficacy beliefs?
4. What perceptions do principals of high-achieving elementary schools have about how their self-efficacy beliefs have been affected by professional development experiences and leadership development programs?

Sample interview questions related to the third research question included the following:

- Think back to when you first started the process of becoming a school administrator. How did you feel about your ability to be a successful

principal? What were some of the experiences that you had as a teacher or educator that caused you to feel that way?

- Please tell me about a time that you were very successful with a task or responsibility—something you were proud of.... What do you think led to your success in these tasks?

Sample interview questions related to the fourth research question included the following:

- Please tell me about your assignment and activities during your time as a 1st-year principal.
- As you reflect on [your experiences in leadership development], what were some of the most valuable experiences you had? What were some of the least valuable?

The researcher conducted a thorough review of the audio recordings and the transcripts for the interviews. During this process, the researcher examined the data to identify any themes or patterns that emerged from the interviews. In analyzing, coding, and interpreting the data, the researcher implemented strategies recommended by Creswell and Plano Clark (2007).

The researcher developed and employed a coding system to help identify themes and patterns in the interview responses. Special attention was given to responses as they related to the four sources of self-efficacy, references to leadership development and principal preparation experiences, and connections to instructional, managerial, and moral leadership. The coding system is depicted in Table 12.

Table 12. *Coding System*

Sources of self-efficacy		Leadership development experiences		Types of leadership	
Source	Code	Experience	Code	Type	Code
Mastery experiences	ME	Pre-administration	PA	Instructional	IN
Vicarious experiences	VE	Developing administrator	DA	Managerial	MG
Verbal persuasion	VP	1 st -year principal	FY	Moral	MO
Affective states	AS	Experienced principal	EP		

In addition, the researcher created codes for subthemes within instructional, managerial, and moral leadership. Subtheme codes are depicted in Table 13.

Table 13. *Subtheme Codes*

Instructional leadership (IN)	Managerial leadership (MA)	Moral leadership (ML)
Supporting student learning – IN-SL	Managing time demands – MG-TD	Promoting school spirit – MO-SS
Motivating teachers – IN-MT	Managing stress – MG-ST	Promoting positive image with media – MO-MI
Creating a positive learning environment – IN-LE	Creating and implementing operational policies and procedures – MG-PP	Promoting community values – MO-CV
Sharing a vision – IN-VI	Managing paperwork – MG-PW	Managing student discipline and behavior – MO-SD
Managing change – IN-CH	Prioritizing – MG-PR	Promoting ethical staff behavior – MO-SB

Additional theme elements that emerged from the interviews included (a) focus on students, (b) knowledge of instruction and feedback to teachers, (c) the importance of high-quality staff, (d) relationships, and (e) overcoming adversity.

By employing this coding system with the transcribed interviews, the researcher was able to identify patterns and themes in the responses provided by the interview participants. These themes and patterns provide some insights into the sources of the self-efficacy beliefs of principals, the impact of their professional development experiences, and ways in which self-efficacy beliefs can be supported and even enhanced through carefully constructed leadership development experiences.

The next section of this chapter provides review of principals' responses during the semistructured interviews. Responses are analyzed in terms of how they provide information to answer Research Questions 3 and 4. Discussion of the principals' comments is presented in four parts: (a) brief background information about each of the interview participants, (b) how the responses reflect principals' perceptions of their own self-efficacy beliefs and the sources of those beliefs, (c) how the responses reflect principals' perceptions of their leadership development experiences and how those activities affected their self-efficacy, and (d) description and discussion of additional themes that emerged from review of the principals' responses.

Qualitative Data

Principals' perceptions about the sources of their self-efficacy beliefs.

Background information about the participants. The researcher used the results of the Principals Self-efficacy Scale to identify a group of six principals who reported a high degree of self-efficacy and who, as a group, represented diversity in terms of gender, race, years as a principal, size of school, and FARMs percentage of the student body. To protect his or her anonymity, each principal was assigned a pseudonym. The following is a listing of pseudonyms as well as brief background information about each principal:

- (Edie), a white female, age 55-60, had served as principal in two different schools in District A. She came to District A with experience as a school administrator. Her background experiences included work as a classroom teacher in several different states.
- (Paula), a white female, age 40-44, was serving at her current school in her first assignment as principal. Her background included experiences in several states and work as a special educator.
- (Len), a white male, age 50-55, had served as principal in two different schools in District A. His background included experience as a physical education teacher. He also had owned and managed a business before his entry into education.
- (Julie), an Asian American female, age 45-50, was serving at her current school in her first assignment as principal. Her background included teaching at the elementary and middle school levels as well as time teaching overseas.
- (Lynn), an African American female, age 50-55, was serving at her current school in her first assignment as principal. Her background included experience teaching in several elementary and middle schools.
- (David), a white male, age 60-65, had served as principal in two different schools in District A. His background included work as a physical education teacher, an assignment as a consulting teacher, and experience in two states.

As each of these principals participated in the semistructured interview with the researcher, each shared mastery experiences, vicarious experiences, verbal persuasion

they had received, and affective states they had endured and how those experiences had shaped their self-efficacy beliefs.

Bandura defined self-efficacy as “beliefs in one’s own capabilities to organize and execute courses of action to produce given attainments”; he asserted that “beliefs of personal efficacy constitute the key factor of human agency” (Bandura, 1997, p. 3). He explained that if individuals believe they have no power to produce results, they have little incentive to take action. Consequently, self-efficacy beliefs have a significant effect on the choices that people make, the challenges they are willing to face, the effort they exert in facing challenges, and the persistence they demonstrate when challenges are particularly difficult (Bandura, 1986). Individuals develop, maintain, and update their self-efficacy beliefs through a constant process of intake, interpretation, and evaluation of four primary sources of information. Bandura identified these sources as

enactive mastery experiences that serve as indicators of capability, vicarious experiences that alter efficacy beliefs through transmission of competencies and comparison with the attainments of others, verbal persuasion and allied types of social influences that one possesses certain capabilities, and physiological and affective states from which people partly judge their capableness, strength, and vulnerability to dysfunction. (Bandura, 1997, p. 79)

Mastery experiences. Mastery experiences are the most powerful source of self-efficacy beliefs because “they provide the most authentic evidence of whether one can muster whatever it takes to succeed. Successes build a robust belief in one’s self-efficacy” (Bandura, 1997, p. 80). During the interviews, the six principals shared multiple examples of mastery experiences and how those experiences affected their sense of self-efficacy. These mastery experiences ranged from their time as classroom teachers through their development as administrators, and into their years as school principals. These success stories also reflected mastery in all three leadership domains identified by

Tschannen-Moran and Gareis in the Principal Self-Efficacy Scale (instructional, managerial, moral).

Each of the interviewed principals indicated that they had been very successful as teachers in the classroom. Their comments reflected the mastery experiences they had in working directly with students:

- Lynn: I started as a teacher at [one elementary school], then opened [a new elementary school]. I felt that that was a great opportunity; at that time very few teachers had the opportunity to open a brand new school. After [that elementary experience], I wanted to see how middle school was, because I wanted to have a wide range of experiences and I wanted to see teaching from all different lenses. I went to [my first middle school], and I was a teacher of science and reading. Then I went to [another middle school] because they were just getting ready to take on a sixth-grade team. They needed a brand new interdisciplinary resource teacher to open. Again, it was opening something new and that was a wonderful experience.... So [as a resource teacher] I paved the way to bring in a new sixth-grade team to the middle school. In that role, I had to observe teachers; I had to deal with referrals, then I would follow up with the AP. Anything that she would delegate to me, I would handle it. We planned evening meetings together because this was a new experience for the parents.
- David: I didn't realize it was unusual, but my principal and assistant principal pointed out (it was unusual) for a physical education teacher to be involved in the curriculum aspects, school leadership, school decisions, etc. A lot of times the specialists were left out; I wanted to be a part of that. I wanted to know more about what went on in classrooms and so forth. I did work with the classroom teachers and some of the other specialists to develop programs for the kids that matched up with what they were doing in the classrooms. And being successful at it, I guess I saw myself doing good things for some kids [and thought], how could I move to doing positive things for a lot of kids?
- Paula: I had a really great principal at [my first District A school].... She just had a really great view of curriculum, and we had a special ed self-contained model LAD program that she didn't agree with [the self-contained model]. Neither did I. That wasn't my philosophy, and she really gave me some leeway to help redesign it with the staff that we had and working with the teachers. So I learned the curriculum—that was really helpful being in a new county—that helped me going into the AP year.

Several of the principals also shared how their feelings of self-efficacy had been enhanced by mastery experiences outside education:

- Len: Before I was a teacher I owned a business, and the management piece of dealing with people and stressful situations, that type of thing, I believe was really helpful.
- Julie: I was a director of a preschool. It was one owner. They couldn't get the license because they didn't have the early childhood piece and that's where I came into play. So they had five different sites, so I was the director that managed the five sites.
- David: I coached gymnastics for 30 years. I was very successful, I won multiple, and I do mean multiple, state championships—kids individually and kids as a team. The organization, the planning, the drive, the determination, all those things to be successful and it was, again, working with kids; even if it was a different thing, it was that whole teaching aspect and how you had to encourage one kid one way and another kid another way and it transferred—working with parents, too.

A number of the mastery experience recollections shared by the interview participants were tales of learning “on the job” early in their leadership careers. In other words, situations presented themselves and the individuals responded by giving their best effort and learning through the process.

- Lynn: [As acting principal], I just took one day at a time. And when I became principal, the first thing I had to do was get preservice together. So I got the team together and we determined what we needed for preservice, handled preservice; the whole week went smooth, got ready for opening. Went through all the checklists they give new principals: make sure you do this, the summer letter, you know, all those things. And again, I had no experience in any of this so I was just learning as I was doing. And my major goal was just to try to keep everybody calm and to steer the ship.
- Edie: I [was] looking at the schedule [in my first school as principal]; it was really driven by the arts. Some of the teachers complained that it really didn't allow for a continuous reading block in some cases and it seemed to be disjointed. My mistake in that was I went home, put the kids on hold, and said “OK, I've got this project” and I took it on. I used sticky notes and thought I had really mastered this. I got my reading block, I have math, and I set it up. Of course my mistake was that I didn't get any input. So it didn't work for anyone! And I just learned a very valuable lesson that you never just

take things on like that because it doesn't really serve anyone very well. And then together we worked through it.

- Paula: My first year as an AP, we had an administrative secretary who had put us \$12,000 in the hole. I learned very quickly because she was out on leave and we had an acting admin secretary and she was like a little drill sergeant: "You are going to learn how the books are kept." She sat me down, and she told me everything about the accounts and the American Express and the receipting, because she's like [tapping on the desk], "you need to know this You are the person that is in charge of everything." I had other APs who wondered, "How do you know this stuff?"
- Len: I think 9-11 was one of my worst days. We were out of the building and when we got back, there was just great panic. I remember trying to calm the parents. I was saying to them, "Your children are fine, don't go and pull them out, it's going to make other children really scared," and some of the parents were just, "No, I am taking my child," and they would burst in and go get them and I would say, "You can't go down the hallway. Let us call for them to come down to the office." They were scared to death, those parents. That was a bad day. The sniper was Year 2. That was bad, too. That was a bad day. What I learned on 9-11 was that I didn't manage that [crisis situation] real well. Because I don't think anyone had anything in place, because nothing like that had ever happened, but during the sniper [incident] here, we were making sure that we had somebody at the door, monitoring people coming in and out, and making sure that kids were safe and that type of thing; I really didn't have a plan for that. I learned a lot through that. And the whole staff was coming up with all these ideas. So not only we sat down and put all these ideas together and asked, "Did it all make sense?" So we learned a lot from that. And then we had the bomb scare here and had to evacuate the building. And that wasn't the most terrible day for me because I had an intern at the time, so I just drove over here and made sure everyone was out of the building and did a ConnectEd message.... But because of those other two things, we were really ready prepared with all of our things in place.
- Paula: People see how I know how to hire building service, etc., and they ask how I know how to do that. I tell them, "When I was an AP1, we lost our attendance secretary, we had to hire an administrative secretary, we had a really bad building service worker, and [I] learned all about that process." My first 2 years as an administrator I was given some worst-case scenarios. And I had to figure it out and I have done what an attendance secretary does and I have done what an administrative secretary does; the only thing I don't know how to do well is payroll. I know how to receipt all the money. I know how to go to the bank. I can do all of that because I had to do it.

Several of the mastery experiences cited by the principals were success stories that also had an element of struggle. It became clear that the participants derived great satisfaction from overcoming obstacles to reach their goals. In this way, they reflected Bandura's assertion: "If people experience only easy successes, they come to expect quick results and are easily discouraged by failure. A resilient sense of efficacy requires experience in overcoming obstacles through perseverant effort" (Bandura, 1997, p. 80):

- Paula: My first school [had] 1000 kids, 70% ESOL, and FARMS in [Virginia]. It was a really tough school. Had to learn the whole second language learners piece, coming from Michigan, lily white. I was pushed and by 2nd year I was in charge of the meetings. I was pushed into situations that helped me to see the big picture without knowing what I was being pushed into. But by the end of my 3rd year, I realized I liked the big picture. I think that's the something that my principal saw in me. I could see the big picture. I could see how something would impact all grade levels and I liked it. And I wanted more of it.
- Len: I learned everything [during my principal intern year]. That was a different situation, too, because we were in a holding school while the new school was being built, so just going in, the first thing I was assigned was figuring out how we were going to get all these buses into the holding site, busing all of our students from a farther distance. From having people from maintenance come to paint lines diagonally so that we could fit all the buses. [The principal] liked to have the kids line up outside so at the old school there was a way they did that, so I went out and I painted lines myself on a weekend, where classes would line up with teachers' names and everything—so just to plan that, how do we transition from home school to this holding school?
- David: [My 1st year as a principal] was an interesting experience because it was my first experience with an ED (emotionally disabled) program. I will tell you, at the end of 6 years, it is the program that I miss the most because it was challenging, but at the same time I had fabulous teachers and the kids. You could just see how they grew. If you had a kid that started as a kindergartner in the ED program, almost completely self-contained, and by the time he was a 5th grader he was fully included in the general education classroom for the whole day. He could have gone back to his home school; he didn't want to.
- Lynn: The lunchroom was a huge problem when I first came [to the school] as AP. No one wanted to go into the lunchroom. And I reorganized it, set up a

behavior modification system where the children had to earn 15 or more stars to buy a snack on Friday, so that was an incentive for them. I assigned table captains at each table, really just organized it. The floors were spotless, the tables were spotless. The cafeteria became a happy place.

- Len: We started [acceleration in math instruction] with one class and it didn't go well. The teacher's expectations were so high that the kids weren't doing well. She was a tough teacher, one of the best, but tough. So it put a bad taste in parents' mouths and staff was also looking at it and saying it failed. But then the next year, I put a different teacher in there who was really patient with kids and it went really well. And then we started adding teachers. So now at every grade level we have six teachers and three classes are accelerated.
- Paula: [One challenge was] helping teachers be able to look at a kid, look at a problem and help them get to the root cause. Looking past [the fact that] they don't have a parent at home, they don't do homework, etc., but asking why and coming up with a strategy that's feasible. What can you do within the 6.5 hours the kid is with you that can make a difference? Individual contracts. I had a kid at [my first school] that used to tear up the classroom. Kids would have to leave the classroom and the teacher would have no idea what to do, and so we would have to look at why was he doing it and we had to look at the background and what was he getting from home. And we got him invested and by the end of the year he was much more of a success story, but, and I guess this is part of my special ed background, it was getting the teachers to stop saying it was the kid's problem. Yeah, there is a problem, but where is it coming from?
- Julie: [At my first school as principal], we did case studies and the equity study so the last year we wanted to do something different. Everybody on the leadership team picked a minority student to do a case study over the course of the year and then share success stories. So my student, my 1st year at [my current school], an African American parent with a little boy, and she was always told that her son was doing fine. Well, he was #96 out of 96. He was passing kindergarten, he met benchmark, but when mother asked why he wasn't in the advanced class, I told her he can't, because of this. I was told he was fine. He is, but in the whole scheme of things, this is where he is. She was shocked and surprised and felt very betrayed, so we built a relationship with her over the 5 years and when he left last year, he was in Math B and doing very well. Did we support him? Yes, but in the end, he did that himself. I had to have a talk with every team about why we make the decisions we make. Kids, when you give them the opportunity and expect that they would and provide the support to them and make sure it happens, 99% of the time it does and then it makes me laugh and crack up 'cause I am like, "See!" Every time that happens, when the kids prove themselves, it

cracks me up. When kids do it that people thought couldn't do it, it cracks me up. Then staff members look at me and go, "All right, you were right."

- Lynn: One of my best days was when I was able to get my staffing together after we were cut from Title I, and we have a lot of good teachers in focus positions and I was able to save everybody's job by figuring it out.

Several principals related stories of working with teachers to help them improve their craft. Seeing the teachers make strides in their classroom management and delivery of instruction was a mastery experience for the principals:

- Paula: I had a brand new teacher, second career, still in her 20s, CITE program, and she happened to be an ESOL student herself at one time; she was from Russia. But what was crazy to me was she believed a lot of what her team was saying to her. So we were trying to help, her consulting teacher is helping, the regular stuff, but the way she was talking to kids was really surprising to me. I realized it was probably the way she was brought up, and how she was taught as a student, the Russian piece of it, was very much about the curriculum, strict instruction. She didn't really realize the way she was talking to kids. But her teammates were trying to throw her under the bus and they were pitting administration against her, and finally she said something to the SDT, saying, "I don't know who to believe. [The principal] says this and you are helping me to do this, but they're telling me to do this." I had to have a really frank discussion with her. So I had this really big heart-to-heart with her, which was hard, because she needed to maintain being part of a team, but I told her, the only people you should be listening to are me, SDT, the CT, and the AP period. I don't want you to be fired; I want you to be successful. And she listened and started to open up. From December until the end of the year it was this 180 like I had never seen, and she did a really great job.... I was so proud of her because of how her scores went up. When I looked at the data for the first two units, I was like, oh my, we're in trouble, but then academically the kids just started shooting up. I was so proud.
- Len: When I was an AP [I worked] with a teacher who the principal was having a really difficult time with. The principal was trying to help the teacher understand that she was harsh on kids; and she was a good teacher, but the kids didn't like her because she was so harsh with them. I remember the principal gave me this teacher as a project, and the project was if you can get rid of her that would be fantastic, but that wasn't what we needed to do. But I remember I did a formal observation, and I sat down with her and I was really honest with her and I gave her specific examples, and she didn't take it as you're not right. She took it as "I appreciate that feedback, I can see what you are saying, I understand what you saw, and I do need to change," and that made me feel real good. Because I didn't get the excuses. And she did

change. And we had a really good relationship. She didn't take it as a negative thing, and I didn't present it as "you need to stop teaching." I presented it as "here is an area that you need to improve."

Principals also reported success stories of making progress with groups of teachers, including leadership teams.

- Julie: At [my first school] in the 1st year, I had the benefit of having a core team that knew different parts of the building and I trusted them right away. I don't know why I trusted them; I guess it was because they were very knowledgeable. When I came in and met with them you could tell they knew their stuff, the reading specialist, SDT, counselor, etc. At the beginning of the year, I would propose an idea, and they would say, "Oh, don't do that. That will make people mad. By the end it was, like, "Wow, we never thought of doing it that way!"

Many individuals achieve mastery experiences by overcoming challenges. It was very interesting that four of the six principals experienced a similar challenge during their years as a developing school administrator. In each case, the individual's immediate supervisor unexpectedly left the school building for an extended period of time due to health issues, childbirth, or personal issues. In most cases, this change left the developing principal without his or her primary trainer. It also left the developing administrator with additional responsibilities:

- Paula: I learned a lot [in my 1st year as an assistant principal] because my administrator had triplets in the middle of the year. I loved her; she was all about instruction. But she left me in the middle of my AP1 year and I was thrust into everything, K-2 Title I school, 10 teachers at every grade level, 6 ESOL teachers, etc. The acting principal, she was about instruction, too, but she allowed me to take a lot of ownership. She was a great mentor. She was with me my AP1 year and then [the principal] came back. It was instructional! I learned a lot that 1st year.
- Lynn: I went from being assistant principal to being acting principal. I didn't really have an intern year. It wasn't my desire to become a principal. It just happened. The principal had to go on medical leave for the summer—60 days—and she said, "Would you be the acting principal while I am away?" And I said, "Sure, but are you coming back? Because I am very happy being an assistant principal." And she said, "Yes." When she returned, she had an accident in the school and since I was already in the acting principal position,

she never came back and they wanted me to stay. I felt a sense of obligation and being a team player, I agreed.

- Len: [At my first school as an assistant principal], there was also an intern at the time, so there was that dynamic of the principal, the intern, and myself. Because of that I missed out on some of the decision making, because the principal and the intern were working closer together and they already had a relationship, too. Then the principal was out [for personal reasons] almost the whole year... might have been there 20 days out of the school year.
- Julie: I got hired (unexpectedly) during the summer, and my early years as an AP were very different than most because the principal went on leave right away, so I didn't really start the year out with her. So [I] met with her over the summer for a couple of weeks; she left for surgery.... I remember going into my office the 1st day and thinking, "Now what do I do?" Because the principal was not there to tell me, "This is what my school [is] about."

In summary, the principals interviewed for the study had clear recollections of how the mastery experiences they had collected during their time as teachers, developing administrators, novice principals, and experienced principals continued to build their self-efficacy beliefs. They had experienced mastery working directly with students in the classroom and in their activities outside education. These mastery experiences involved a variety of school leadership tasks, including instructional supervision, managerial responsibilities, and moral leadership. The principals faced the challenges of their early work as administrators and overcame obstacles, including serious interruptions in their training support, to grow in skills, knowledge, and leadership. The fact that these principals did not give up, but rather expended extra effort and sustained this effort long enough to be successful, is another indicator of their efficacy beliefs (Bandura, 1977). This type of success occurs because people with a strong sense of efficacy "approach difficult tasks as challenges to be mastered, rather than threats to be avoided" (Bandura, 1993, p. 144).

Vicarious experiences. The interviews also revealed that principals' self-efficacy beliefs were formed and strengthened by experiences through which they observed other people having success with specific tasks. Bandura (1997) stated, "People do not rely on enactive experience as the sole source of information about their capabilities. Efficacy appraisals are partly influenced by vicarious experiences mediated through modeled attainments.... People must appraise their capabilities in relation to the attainments of others" (p. 86). In terms of individual self-efficacy beliefs, vicarious experiences are not as influential as mastery experiences, but they still can have a substantial impact: "Even those who are highly self-assured will raise their efficacy beliefs if models teach them even better ways of doing things" (Bandura, 1997, p. 86).

Several principals recounted the value of observing individuals as models of leadership styles:

- Julie: I have seen different leadership styles, and, not that I wanted to be a principal in the early years of my teaching career, but I think there are things that good principals do in terms of communicating and being organized, having a system and structure in school.... I saw good models and not so good models.
- Edie: I had excellent role models in two of the administrators that really shaped me as a teacher. They also encouraged me to be part of our leadership program, our supervisory program and their confidence helped me.... The way that they led the school, the style, they encouraged participation, they were willing to listen, they enjoyed and entertained new ideas, so they were very innovative and clear thinking in what they were hoping to achieve. They were great role models for me.

Nevertheless, Bandura explained that building self-efficacy through vicarious experiences involves more than simple proximity to modeled behaviors: "Altering efficacy beliefs through vicarious influence is not simply a matter of exposing people to models" (Bandura, 1997, p. 90). The full impact of information provided by models is delivered through several processes involving attention to the model, remembering what

was observed, evaluating the model, and being motivated to act on the model (Bandura, 1997). Several principals recounted experiences in which they were able to observe the modeling of a task and then engage in reflection about the observation with the model:

- David: I sat and observed how [my principal trainer] dealt with a difficult parent: the questions she asked. The biggest thing was—and this was what [she] was so good at—I didn't say a word during the whole thing, but after the parent left she would sit there and ask me, "What did you see? What did I do? What was the parent's reaction? How did that transfer to working with this parent? How did I build that bridge with a parent that was already upset beforehand into a parent willing to work together with us?" She was very much about reflection.
- Lynn: I talked [with my consulting principal] about the staffing grid. He kind of walked me through it and explained what I needed to do. He walked me through that process, because as an assistant principal I never saw anything that had to do with staffing.

Bandura explained that this debriefing process is critical to the development of self-efficacy beliefs: "The problem of observability is overcome simply by having models verbalize their thought processes and strategies aloud as they engage in problem-solving activities" (Bandura, 1997, p. 93). The fact that these models were provided by a principal, a consulting principal, and a principal trainer also reflects what Bandura described: "People actively seek proficient models who possess the competencies to which they aspire" (Bandura, 1997, p. 88).

Several principals cited the impact of how their role models demonstrated important behaviors related to forming and maintaining relationships.

- Len: [My principal trainer] was fantastic at that. With her it was all about relationships. Everybody loved [her]. So I think people who probably have jumped off a bridge for her and whatever she had said, people would follow, and probably not a hundred percent, but they would go along. And we have different personalities. I am not that personality. Again, I think over time, I can be kind of harsh, especially in the beginning; it is just like a teacher who tries to be harsh in the beginning or very structured, not necessarily strict, and kids think they're mean, but over time they form relationships and they loosen

up. I think that's my personality. I do everything very respectfully, but it might not be something they like and they're going to have to live with it. And over time, they understand my priorities and they understand way I deal with people. I think you can ask anybody here now. I think most people here would jump off the bridge with me, too, but it took a lot of time.

- Julie: [My principal trainer] was someone that would be very dramatic.... In the summer, any special days, she would go out of her way to feed them, take care of them, make them the special person of the day, make a big to-do. One time she had the omelet man come, and, obviously she wasn't the one cooking, but she had the chef's hat on and the apron and she would have the flour on her face and she would go, "Oh my goodness!" and go through this whole drama of saying how she went through all of this because she loves her teachers. All the tables had arrangements. Everything had to be just so. And there had to be tablecloths. She went to town making sure that they felt special. So it used to crack me up, but that's a lot of work, and I find myself doing that constantly, and my secretaries say, "Can we tone that down a bit?" And that's where I think I get it from. Because she would go out of her way all the time to say "I am going out of my way because I love you," or "I think you're awesome." It's not an academic piece, but it's a climate piece that is huge.

In summary, the principals who participated in the interviews recalled numerous times when their self-efficacy beliefs were enhanced through vicarious experiences and meaningful reflection with a trusted mentor. It is important to note that these vicarious experiences took place in a supportive coaching environment with models who were perceived as capable and trustworthy. In addition, the message to the observers was, "If you pattern your behavior after what you have observed, you can expect a positive outcome: a less-agitated parent, an efficient staffing plan, a happy teaching staff." This practice is critical because, as Bandura (1997) pointed out, "people are more likely to exhibit modeled behavior if it results in valued outcomes than if it has punishing or unrewarding effects" (p. 90). These experiences, therefore, help to increase principal self-efficacy in instructional leadership tasks (motivating teachers, etc.), management leadership tasks (staffing, etc.), and moral leadership tasks (connecting with parents).

Verbal persuasion. Verbal or social persuasion is another source of information that can influence an individual's perceptions of self-efficacy. In these cases, individuals receive meaningful encouragement and reinforcement from trusted individuals, which enhances their self-efficacy as they approach a task. Bandura (1997) stated,

Social persuasion serves as a further means of strengthening people's beliefs that they possess the capabilities to achieve what they seek. It is easier to sustain a sense of self-efficacy, especially when struggling with difficulties, if significant others express faith in one's capabilities than if they convey doubts. (p. 101)

Although verbal persuasion by itself is generally not as powerful as mastery experiences or vicarious experiences, it can be influential if the positive message is "within realistic bounds" and if the feedback is conveyed in a way that boosts efficacy (Bandura, 1997).

In addition, the impact of verbal persuasion on self-efficacy beliefs is amplified if combined with mastery experiences or effective modeling. Bandura explained,

Skilled efficacy builders, therefore, do more than simply convey positive appraisals or inspirational homilies. In addition to cultivating people's beliefs in their capabilities, they structure activities for them in ways that bring success and avoid placing them prematurely in situations where they are likely to experience repeated failure. To do this effectively, persuasory mentors must be good diagnosticians of strengths and weaknesses and knowledgeable about how to tailor activities to turn potentiality into actuality. Moreover, to ensure progress in personal development, skilled efficacy builders encourage people to measure their success in terms of self-improvement rather than in terms of triumphs over others. (Bandura, 1997, p. 106)

Several principals reflected on the impact of verbal persuasion on their self-efficacy beliefs when recalling how they had been encouraged to pursue careers in school leadership:

- David: I was lucky because I had a principal at my last school [that] really pushed me. The [career] track [in that system] was to become a consulting teacher, which led to being an administrator. [My principal] pushed me to apply to be a consulting teacher. I had thought about it, but she really encouraged me to do it. I did apply for it—lots of people applied—and I was more than surprised that I got the job.

- Edie: I remember my supervisor at the [university] encouraging me. Even at that time (when I was just going into teaching), he said, “You know, you really ought to think about teaching and learning, but also, you’ve got some leadership potential, too.” I felt like I would pay attention to those things.

Three of the principals made it clear in the interview that they were not planning to seek the principalship until trusted individuals encouraged them to do so through verbal persuasion.

- Paula: It was really my principal in [another state]. I was deciding which Master’s program to go into—and I was thinking maybe reading specialist, maybe administration.... It was maybe my 3rd year of teaching, and he said to me, “Why would you want to be a reading specialist? You’re a special education teacher; you’ve been trained in that field. I really think you should do administration. You run all of our EMT meetings; you’re a cochair of the school improvement plan. I really think you should do [administration], and I will give you more opportunities.” I said, “Okay, all right.”
- Julie: After [completing] my Master’s degree, I originally thought about just continuing in the middle school and different leadership roles, but there were some encouragements into going into administration—at least completing the application packet. Encouragement from people in the Korean community, from my parents, from others who were in my cohort saying, “Why aren’t you doing the next step (applying for the assistant principal pool)?”.... So I thought, all right, at least I will put the packet through.... And before I even completed the packet, I got a call. I thought that was unusual. It was a call to an interview I hadn’t even planned on and that led to a job offer that I hadn’t planned on! So that’s how that worked out.
- Lynn: Well, first of all, [becoming a principal] wasn’t my first choice. I wanted to be the area supervisor for math, back when we were divided into areas...but everyone would encourage me to be an administrator, saying, “You would be a good administrator”.... They kept encouraging, encouraging. The principal at [my middle school], also teammates saw my organization, follow-through, high expectations, holding parents and students accountable, meeting deadlines.

These recollections indicate that the verbal persuasion was provided to the principals on a repeated basis, with some persistence. This reflects Bandura’s assertion that “persuatory modes of instilling a sense of efficacy should not be misconstrued as limited to brief verbal influence attempts. Social persuasion involves much more than fleeting pep talks”

(Bandura, 1997, p. 106). This persistence of verbal persuasion also is reflected in the encouragement and coaching that the interview participants received from principals, trainers, and mentors during their time in the leadership development program. One principal reflected on how she received constant verbal persuasion and encouragement from a group of mentors:

- Julie: When I got into the [assistant principal] pool and then I got hired, right away there was a group of women who took me under their wing; I call them the “sisters” of the Asian American Education Association. And they would set up events (breakfasts and lunches) and invite people to those events for the sole purpose of having me sitting next to those people and having conversation with them. They would set up things and then say, “Go talk to [the deputy superintendent of schools]! “Go talk to [the chief technology officer]!” I’d say, “I don’t know what to talk about,” and they’d say, “It doesn’t matter; they’ll ask you.” They would sit there and if there was a long pause, they would jump in, swoop in, and save the day. They set up workshops for young leaders to talk about voice and handshakes and demeanor and dress. Here were all these women from different parts of MCPS mentoring me. Isn’t that awesome? It made me very nervous. They are all strong personalities. I knew when I was going through all of the issues these women would say, “Won’t worry about it—you are going to be fine. We’re behind you.”

In some cases, the coaches or mentors provided verbal persuasion that helped aspiring leaders to persevere in their pursuit of the principalship:

- David: I was in a [principal intern] class of 10 people and everyone else had [been selected as principal for a school], and I had gone through a number of interviews and I hadn’t gotten a job. There was one job—I walked out of the interview and I was almost sure I had it, but I didn’t get it. So I was very frustrated and I said to [the director of elementary leadership development], “I don’t know if I want to keep going through this process because I don’t know where it is leading to.” We were not getting any feedback from the interviews, so you think, “What else do I have to do?” And she said, “No, that’s not the situation.” And she may have known something, but she said, “Just keep doing it, go with the process, believe in the process and it will be okay.” I said, “Fine,” and a month later I got my first school.

In other cases, beginning principals were in great need of verbal persuasion as they adjusted to the pressures and challenges of their new positions:

- Paula: The situation when I came in here [in my 1st year as a principal], it was very hard. I was very lonely. My assistant principal was a retired principal [brought in to support the new principal midyear]. She probably was one of my biggest influences because she didn't want my job. She just wanted to be my AP because she loved kids, loved her job. I could go to her and say, "Here's what I am trying to do and I am having trouble. Am I going about it the right way? Can you give me some advice?" And she would give me advice and say, "Whether or not you use it is totally up to you, it's your decision...." I am so close with her now. I don't think I could have survived my first 2 years without her.
- Edie: [My community superintendent (CS)]—I have been with her since my intern year. My intern year was her 1st year as CS. So I am going into my 7th year with her. She was scary in the beginning, but what she has done for me is that she asks really good questions. She saw something in me, because I thought, "Really, you want me at [this school]?" She saw something in me as a leader that made her think that I was the right person for this school. She told me, "How you communicate is something this school needs. How collaborative you are." She used to say, "Sometimes I think you are too collaborative and I need you to look at that. Sometimes, you just have to make decisions. Sometimes you need to get feedback." She talked to me about the level of decision making and change and when you just need to take ownership of it and explain your rationale. She did push me to look at that, which has been helpful in leadership meetings. Through her questioning, she has gotten me to reflect on me and that's not always easy for me. So sometimes, she is, like, "C'mon!" I guess I am modest and sometimes she tells me it is okay not to be. She challenges me and I appreciate that. She makes me think.

These comments recall Bandura's claim that

social persuasion serves as a further means of strengthening people's beliefs that they possess the capabilities to achieve what they seek. It is easier to sustain a sense of self-efficacy, especially when struggling with difficulties, if significant others express faith in one's capabilities than if they convey doubts. (Bandura, 1997, p. 101)

In these cases, significant others provided verbal persuasion that helped the developing leaders to believe in their capabilities and persevere in the work.

Verbal persuasion is also very effective when used in the context of coaching individuals in how to approach specific leadership tasks that are associated with serving as a school leader. Principals reported the following situations:

- David: [My principal trainer] was good at getting me to sit and be reflective. The best example I can give you—one day she saw me at dismissal and I was jumping in, and she said what you need to do is not jump in, what you need to do is watch because what you need to do as principal is learn whether what you have in place is working or not working so that you can adjust. And she was right, you need to step back and observe and make sure you have everything in place so that even when you're not there it is going to work.
- Paula: My 1st year here, [my consulting principal] really helped me to look at the staff and say these are the things we need for training, this is what we need, but also what was my delivery going to be to the staff because I had one staff meeting where they looked at me like, "We already know that," like, "Why are you talking to us about this?".... So she really helped me figure it out. We looked and saw you have teachers who have been teaching for a while as well as some new ones. Their scores are good, but we wanted them to be higher. They were kind of "that's okay; we're okay with what we are doing." But how to treat them with the respect of—I know you know this—but how do you take what you know from the back of your consciousness and bring it to the forward and say, "Yeah, you learned it, but for what is happening in the school right now, that needs to become a priority." So not demeaning them or saying that they don't know, but acknowledging that they know it, but now we need to act on it and go deeper. After that, I have not had a staff meeting that has crashed and burned. Because I had to think differently about how to approach it with a group of people who could teach, but could do better.
- Edie: [My community superintendent] is very encouraging, as is my performance director. They really do recognize your efforts. I will also say that [my CS] in particular has been very consistent in her approach to equity and the challenge of helping everyone understand that we need to provide opportunities to enable all kids to succeed. She keeps me honest with that. She gives us lots of strategies as principals, when we are in the larger group, to take these resources back. Not just equity—she just did a wonderful seminar on engaging students. She provides opportunities for my growth and how to implement them as needed.

These comments also underscore how the impact of verbal persuasion is determined by how the person receiving the information perceives the person who is delivering the information. In these three cases, the verbal persuasion was being provided by respected professionals in the school district: a principal trainer, a consulting principal, and a community superintendent. In District A, where the study was conducted, individuals did not rise to these roles unless they had demonstrated leadership and effectiveness over an

extended period of time. Therefore, participants in the leadership development program valued their advice and encouragement. As Bandura noted,

persuatory efficacy appraisals have to be weighted in terms of who the persuaders are, their credibility, and how knowledgeable they are about the nature of the activities.... Self-appraisals are partly based on the opinions of others who presumably possess diagnostic competence gained through years of experience with aspirants in a given field. (Bandura, 1997, p. 104)

In summary, the principals had clear recollections of how the verbal persuasion of trusted individuals had enhanced their feelings of self-efficacy, resulting in pursuit of career opportunities, willingness to take risks, persistence in the face of obstacles, and deepening of skills. This finding illustrates Bandura's point that "people who are persuaded verbally that they possess the capabilities to master given tasks are likely to mobilize greater effort and sustain it, than if they harbor self-doubts" (Bandura, 1997, p. 101).

Affective states. Affective states or emotional arousal are another source of information that can affect individuals' beliefs about their own self-efficacy. As Bandura explained, "in judging their capabilities, individuals partly rely partly on somatic information conveyed by physiological and emotional states" (Bandura, 1997, p. 106). In many cases, a charged emotional state negatively affects the level of self-efficacy that a person has as he or she approaches a task: "Because high arousal can debilitate performance, people are more inclined to expect success when they are not beset by aversive arousal than if they are tense and viscerally agitated" (Bandura, 1997, p. 106). This is not a foregone conclusion, however, because individuals have the ability to process and interpret information, including their own physiological state. Bandura asserted,

It is not the sheer intensity of emotional and physical reactions that is important but rather how they are perceived and interpreted.... For people who generally find arousal facilitatory, arousal will have a different efficacy meaning than for those for whom arousal has been debilitating. Indeed, high achievers view arousal as an energizing facilitator, whereas low achievers view it as a debilitator. (Bandura, 1997, p. 108)

When principals participating in the interview phase of the study were asked to recall experiences that involved affective states or emotional arousal, some told about single, isolated events that were stressful, whereas others related stories that involved a high level of stress and personal conflict with others over an extended period of time.

Single-event stories included the following:

- Edie: [During my 1st year as a principal in District A], I was called and asked for the overdue evaluations for the principal before me. I didn't know the teachers and there wasn't a lot of communication about it; they just had to be turned in. Well, they hadn't been done, so I had to work through that.
- David: I'll be honest about one. I got very frustrated. I was in a staff meeting before school, I was leading, I was called out of the meeting by a community superintendent asking for information that was readily available somewhere else, and, I gotta admit, I lost it. When I called back I said it to the secretary instead of the CS. I said, "This is ridiculous. You are taking me out of a staff meeting for information that you already have. I am so frustrated that I am ready to walk out because you are not letting me do what I am supposed to be doing." I got a call back from the CS and she was right, I shouldn't have said it to the secretary, but at the same time, I think they need to respect the fact that you can't ask for data and say I need it in half an hour. That's not realistic. I am running a school. I am in a staff meeting. It is important. You devalued everything I had planned for that staff meeting for information you could have gotten elsewhere.
- Lynn: One of the worst days I had was when three [third-grade] kids came to school with knives and hammers, wanting to kill the substitute teacher. It [was reported] on the news. It started as soon as they came in the building, and we found two hammers, two knives...and I had an awards assembly. So I had to go in front of all of the teachers and the parents and the kids all excited about the awards with this in the back of my head, trying to orchestrate this investigation. I am shaking hands and smiling and when that was over, we had to call the police. We had another assembly in the afternoon. And a parent sees the police cars and she sees me, and I am running back and forth. We have the second assembly and, you know, I had to write the letter home

[about the incident], so all this is going on at one time. And then dealing with a hysterical grandmother who is crying profusely because her granddaughter is being taken out in handcuffs. So I had to hug and console. It was two major kids that were involved, so they were taken out in handcuffs. I had to console and got the letter out on time, too.

Other accounts involved anxiety-producing situations that lasted an extended period of time:

- Julie: The intern year for the most part was with a bunch of acting principals. It started out with [my principal trainer]. Before going into the year, she and I had a talk about her retiring that year, and her vision was to hand [the school] over to me. Personal goals are not always the system goals. So we had that in mind. Then she got the bad news [about her health] at the tail end of the year. It was a lot of rotating people [various acting principals].... It was a lot of figuring out what [each acting principal] wanted and what they needed from me. So it was a lot of taking care of the staff, a little negativity between [one of the acting principals] and the staff, so it was me trying to do the go-between and at the same time, get the job done. And please her. It was a lot of balancing and doing the job, making sure that the staff was okay. 'Cause they were going through that whole trauma, too. They had lost their best friend, their principal. Taking care of them emotionally and making sure that all of the acting principal's needs were being met. It was a little crazy. My health was going downhill, too. It was constant indigestion, acid reflex, throwing up all the time, rock in my gut all the time...
- Len: I will tell you that, maybe not the 1st year, maybe the 2nd year, there were a lot of staff that were not providing students with what they needed. So as an administrator, you have to have that dialogue with people, and it was a small staff, a very close-knit staff, and no matter if [someone was] a good teacher or a bad teacher, they stuck together and it was difficult to give those messages out, especially when a school is high performing. They think, "We're already great. Why do we need to get better or do anything differently?" That 2nd year, my confidence went down because it was a bit of a battle, and it was not a fun time.
- Lynn: During this time that I became the acting principal, I was able to encourage the administrative secretary to leave. I was getting complaints about her almost daily. So she was able to move on, so that left me without a secretary. So my mother used to be a secretary in public schools, so I said, "Look, I am having a time. We really need some help." So she said, "Fine, I'll come help," because she was retired. This was in October. Then my mother fell sick, had a mild heart attack (all this is during the 1st year), ended up having open heart surgery and then never came out of the coma. So all of that.... I had to deal with making medical decisions for my mother, while

keeping the school together for everybody, hold the ship, keep it straight, keep everybody calm.

- Len: It was that first [at my first school] and that was around giving feedback to teachers and a lot of teachers not loving that feedback. It [was] just around high expectations and instructional practices in the school. Some conversations were, “We’re not here to show movies.” And the response would be, “Well, the kids worked hard and [the former principal] would let us watch movies at the end of the day so it’s only like a half an hour or an hour.” And I’d say, “That’s a half an hour or an hour of lost instruction.” I don’t allow movies. What I learned at that point, wherever I go, I make it very clear. When I got here, “Let me be clear, my number one pet peeve is we don’t watch movies for enjoyment. If it’s a recess time, if it’s a short thing it’s fine, but not during instruction. So, if you are going to show any kinds of videos or movies, make sure I know it first and make sure I know what the objectives are because I don’t want to walk in and see kids watching movies for enjoyment. Parents do not send their children to school to watch movies. They can do that at home.” I had to have conversations around this, and that caused a great negative wave across the school. To a point that I said to my wife one time, “I’m done. Because I just really can’t do this. This is difficult and it’s like me against the world.”
- Paula: I had a teacher my 1st year, veteran teacher, she was not on board with [our school expectations]. She didn’t care about the expectations, didn’t care about how she spoke to kids. I had so many parent meetings in my 1st year with parents whose kids felt degraded by her. She could teach, but the environment, the whole standard one piece (expectations) was not there. We would have conversations, and she would just dismiss them. Then we finally had the conversation that, “This is who we are now and if you’re not on board with it, or if you can’t follow it, then maybe you need to find a school that better fits your needs.”... I had to put someone on an action plan and that was high anxiety for me because I could see this gentleman who was getting himself physically ill because he just couldn’t figure out “if you just do this, then.... With all the supports we are giving you, you will be okay.” He just couldn’t see it, and he got himself ill. [That was] really hard for me.
- David: One situation was [a state grant]. A teacher and I had written it all based on feedback from central office, and she had given us the parameters and we had spent days writing a 60-page document, and basically she then told us that we hadn’t done what we were supposed to do. That came from central office but then also from the principal and then I was described as being defensive, but I was just trying to gain understanding of why what we had done was not meeting the criteria that you established. Did we go back and change it? Yes, I was part of the program, so we went back and made changes that were needed, but I never really understood why we were asked to

make changes when we had written the document based on the original parameters, which were then changed after the fact. Very frustrating.

Although the principals had clear recollections of these stressful situations, it did not appear that these experiences had a lingering effect on their self-efficacy. In fact, although the principals recounted tales of great anxiety and disturbance, they all reported high levels of self-efficacy in all leadership areas. For these principals, overcoming and persevering through the stressful situations became a mastery experience that increased their self-efficacy beliefs. The principals believed if they could endure through such trying circumstances and survive, they would be able to handle any new situation that occurred. This belief reflects Bandura's claim that individuals can overcome the negative effect of emotional arousal on their self-efficacy if they have sufficient mastery experiences, vicarious experiences, and verbal persuasion:

Somatic information occurs in the context of other diagnostic indicators of self-efficacy. These include prior mastery experiences, validation of capability in comparison with others, and appraisals by knowledgeable others. Sometimes these indicators conflict, as when people who are assured of their capabilities experience anticipatory arousal as they are about to perform before critically evaluative audiences. The other indicators of self-efficacy are usually given greater weight because they are more reliably diagnostic of personal capabilities than are diffuse, transitory states of the viscera. (Bandura, 1997, p. 110)

In summary, the interviewed principals clearly reflected Bandura's assertion that self-efficacy beliefs are produced and sustained through an ongoing process of receiving and interpreting information from mastery experiences, vicarious experiences, verbal persuasion, and affective states. When asked to reflect, the principals could connect their current perceptions of self-efficacy to specific experiences they had as teachers, developing administrators, novice principals, and experienced school leaders. It was clear that the principals had processed and integrated these experiences in a way that increased their self-efficacy beliefs. As asserted by Bandura, the principals seemed to

gain the most self-efficacy from mastery experiences; however, many of the mastery experiences were connected to verbal persuasion from coaches and modeling provided by mentors the principals encountered. The principals' comments reflected the notion that effective professional learning results when individuals are immersed in a program that continually provides them with modeling, verbal encouragement, and opportunities to succeed with new challenges. As previously noted, each of the principals went on to lead at least one school to exceptional levels of student achievement. In addition, they currently reported high levels of self-efficacy in approaching the complex responsibilities of the principalship.

Principals' perceptions of leadership development experiences. Research Question 4 for this study asked, "What perceptions do principals of high-achieving elementary schools have about how their self-efficacy beliefs have been affected by professional development experiences and leadership development programs?" In their responses during the semistructured interviews conducted in Phase 2 of the study, the participating principals shared numerous recollections of leadership development and training they had experienced as they progressed from their roles as teachers to aspiring administrators to novice principals to experienced principals. Their comments reflect the research on self-efficacy beliefs and how they are developed. In addition, their responses indicate what they viewed as most valuable in their training to be principals and what they found to be less valuable in their development.

When asked what they considered to be the most valuable aspects of their leadership development program and training, the principals' responses focused on two important aspects: (a) the opportunity to learn and practice "real-world" skills and (b) the

quality of the persons involved in providing the supports. In District A, individuals involved in the leadership development program included principals (who supervised assistant principals), principal trainers (who coached and supervised principal interns), consulting principals (experienced administrators who supported novice principals), training representatives (retired principals who supported developing administrators), community superintendents (who supervised principals), and the director of elementary leadership development.

Several principals commented that they appreciated how the leadership development program provided them with opportunities to learn and practice the skills they would need as administrators:

- Paula: The most valuable thing was the opportunity to do new things from the beginning—starting a program, opening a school—starting from the ground up.
- Edie: When we had to do a project and carry it out from start to finish. That helped me with the school improvement plan, the spending plan, etc.

A number of principals alluded to learning managerial tasks during their years as assistant principals:

- Julie: As an AP, [I was] given a lot of jobs—testing, GT coordinator, etc. —a lot of those jobs. So when I think of my early years as an AP, I think of my years at middle school, where we had a testing scandal. So when I got the job as a testing coordinator, I thought, “Oh no,” so my inclination for organization and systems, I did that in that job and my job as GT coordinator and any other job I was assigned. So from that whole thing, the teachers felt an ease. So behind the ease, there is system and structure. The teachers might not feel that all that went into it. I don’t think they should feel it. The teachers should go about their business of feeling this is easy to do...there’s a flow, whereas I see all the pieces lining up. They don’t necessarily need to see all the pieces. If they had to work on every little piece, then forget it. So I worry about all of the little system pieces and then it operates smoothly.
- Lynn: When the school was growing, the principal needed an assistant principal, and she knew I had my certification and had taken the courses and

all; she asked me would I be interested. I said yes and she put in the request and I became the assistant principal there. I was in charge of the seventh-grade teams, three teams, testing, and also the backup principal when the principal was not there, master calendar, and keys! That was a major responsibility! Have you ever seen a key box?

- Len: [My 1st year as an assistant principal] I didn't know what to expect because it was brand new to me. My responsibilities were a lot of management things, like, at that school, it went from [over] 400 students to, the year I got there, [over] 800 students, so I was somewhat put in charge of how we are going to get the buses in, how we'll get the walkers in, how we are going to line the kids up, etc.
- David: One of the biggest assignments I had—we had two grants, [a state grant] and another one. I literally wrote both of them along with one of the classroom teachers. I thought it was an advantage because being new [to the school] I got to learn a lot about the school and about District A, but I also had to figure out...how was I going to write this plan to make sure we could [implement] it.
- Lynn: I felt like I did a good job as an AP. So when I came here, I worked hard because it's a very challenging school, but I was happy to be closer to home. I was responsible for emergency plans, the handbook, observation and evaluation for Grades 3-5, art, etc. Responsible for the master calendar.

Participants spoke frequently about the year that they completed the principal internship as part of District A's leadership development program. During assignment as a principal intern, each aspiring administrator began the experience by shadowing the principal, who served as their primary trainer. Each principal intern also was supported by a retired principal, who served as a training representative and coach. As the year progressed, the principal intern assumed more and more responsibility. Toward the midpoint of the school year, the principal left the building, and the principal intern served as acting principal for a period of several weeks:

- David: My principal trainer, by far, [was the most valuable part of the leadership development program] because beyond teaching me about [District A] and the way things are done and how to deal with difficult parents, she taught me to be reflective and how to analyze and problem solve, so that we can find the best solution. There don't have to be winners and losers. She's

just amazing at it. That reflection—problem solving and situational leadership—she really knows that and taught me that.

- Len: Just the experience [during the intern year] of being in the school and being in that role and shadowing the principal and seeing all the duties and the debriefing experiences: Why did you do this? Why not do this? What would you do this in this case? That type of thing is really valuable.
- Paula: My intern year was great. I had always been in Title I schools, [and the system] decided to give me a different setting, a different climate, and [my intern year school] was kind of that middle-of-the-road kind of school. More parent involvement.... I had to learn a lot of things on my own. Didn't always have a lot of direction.... The principal went out in December, and she came back [for spring testing]. The staff could see what I could do, but I was under the shadow. And [the principal and I] had a very different relationship when she came back because she could see that I really did know what I was talking about. But I learned a lot. Also learned to have courageous conversations my intern year.
- Julie: The other piece is the connection between the mentoring principal and the principal intern. When it's a good thing, it's amazing; when it's not good, then...
- Len: [As an intern] I took over all the duties, because we shared all the duties. We had over 600 kids, no AP, Title I school, very needy school, so [the principal] and I pretty much split everything, observations, evaluations. I started by just shadowing her a lot and then slowly started taking on all her responsibilities and she left (during practicum). So I had all the responsibilities of the principal—communicating to parents...so lots of newsletters; that communication to parents is really important. The day-to-day operations of the school: dealing with staff, dealing with students, discipline, all that stuff.

Other comments focused on the supports that were provided during the program, particularly in terms of the individuals who served as principals, principal trainers, community superintendents, and training representatives:

- Paula: I would say my consulting principal was a godsend. She gave me a lot of guidance. I really needed someone to talk to, and I would say, through all my years, I have had really good mentors. In this whole program, I have been very lucky that every person I've had has been a big support, and I know that isn't always the case for people. I know a lot of my colleagues have had a bumpy road, whether it was with their trainer or the principal they were with,

bad situations. I can't say that I have had a bad situation. I have had really good people who were respected in their jobs.

- Julie: [One supervising principal demonstrated that] things didn't happen just because they happened. I worked in several different schools for [summer school], and [this principal] had things planned WAY in advance! The plan for [summer school at this school] happened way before the summer, way before March, even January, way before I was even assigned [to be the AP for the summer program]. By the time I got in, obviously the planning had gone on and on and on because a lot of the structures and systems that I am comfortable having were already in place. So my role was making sure I used all those processes to implement and making sure I had a reporting piece for collecting data. Even after it happened, there was a lot of discussion of feedback. For [that principal] it is all thought out and systematic. And the way she was working with her team. She had everybody with their hands in it. It wasn't like she planned it out. Everybody came to the table with ideas. She wasn't the one running the show. There were teachers and team leaders, and people without titles leading, and I thought, "Wow."
- David: I had an extremely difficult parent at my first school; he had already been threatening the teachers and putting signs on their cars and made complaints about me, sent pictures to my community superintendent. The CS sat there and we listened patiently and didn't interrupt. When it was the CS's turn, he started talking and parent kept interrupting, and the CS finally stopped him and said, "You have had your chance; I want you now to listen," and I was almost taken aback by it, because I knew that you try to build the link with parents, but it was the right thing to do because there has to be at least some limit set, so it dawned on me that it was okay to say, "Wait a minute, that's enough."
- Edie: [My performance director] is amazing. She really is. If I could develop my skill, it would be along her line. She is so empathetic and not only thoughtful, but very honest, and I have enjoyed my conversations, though brief, with her. I only had her for a couple of years as a performance director. She supported the community superintendent beautifully and provided a real balance.

In short, these high self-efficacy principals reported that the most valuable aspects of the leadership program were the opportunity to have relevant mastery experiences and the support of high qualified and trusted individuals who could provide vicarious modeling and verbal persuasion.

Not surprisingly, when principals were asked to comment on the least valuable parts of the leadership development program, their comments centered on two items: (a) activities and assignments that were viewed as irrelevant “surface” level work, and (b) the negative effects of personal support that was either lacking or ineffective:

- Paula: Some of the reflection pieces, the school profile, surface-level data activities. These were not very relevant.
- Julie: The meetings, the trainings. By the 3rd year, I was saying, “They need to differentiate these things.”
- Len: The least effective experience was that [in my 1st year as an assistant principal] I didn’t have somebody that I could learn from there.... Principal was out almost the whole year...might have been there 20 days out of the school year. I missed out on some of that connectedness with the principal and being able to learn from her.
- David: [The principal I had my 1st year as an assistant principal] showed me the kind of principal I didn’t want to be—someone in her office all the time, who didn’t interact with kids, who came in late, left early, didn’t come in on snow days—didn’t seem to want to be part of the school. I didn’t want to be that person.

These responses reflect Bandura’s claims about how self-efficacy is attained and developed. Successful principals saw value in real-world opportunities to gain mastery experiences and dismissed the need for surface-level activities. They recognized the great value of effective and committed mentors who could provide useful modeling and verbal persuasion while at the same time cautioning about the possible negative effects of ineffective or noncommitted mentors.

These beliefs are also reflected in the comments that principals made when asked how they would change the leadership development program:

- David: [Include more] situational leadership. That’s the real world of school leadership. What are you going to do with *this*?

- Julie: The other piece that is lacking is the whole financial aspect of [the principalship]. You don't really learn about the finances. I don't know if you really can learn about it as an AP, but you need to learn it; it is one of the first things you can get fired for. I think they could expand that part of the program.
- Len: It's been a long time and they have made some changes. I think doing 2 years as an AP has been an important change and the flexibility of that. I had [a great person] here 2 years as an AP before she was an intern. She didn't need to be here 2 years. She could have done 1 year and been an intern; she was that good. And then there's other people that giving them the flexibility of doing 2, 3, 4 years as an AP is really good for them. I've had two interns. I think, in some ways, the expectations need to be higher. Not everyone is cut out for the job. Not everybody is as effective as others. Looking at people, you put a lot of money and time into them, but I don't think you just let them go through because of that. There need to be some real guidelines around that.
- Julie: Do a differentiated menu for the trainings.
- Paula: Make it more real world. Provide scenarios, like, "You inherit a school with certain characteristics: What would you do?"
- Lynn: I think it should take longer to go through the program. I didn't go through the elementary program. I had an AP1 and AP2 year. People should go through the program and be an assistant principal for a couple of years before becoming a principal.

The principals' comments about their training and leadership development experiences are aligned with the research conducted by Bandura and others. The experiences that these high-performing principals saw as most effective had provided meaningful activities and relationships that fostered the self-efficacy of the participants, whether or not the designers of those activities were explicitly and consciously attempting to build the efficacy of their clients. Those who were providing the professional development functioned as the skilled efficacy builders that Bandura asserted "do more than simply convey positive appraisals or inspirational homilies. In

addition to cultivating people's beliefs in their capabilities, [efficacy builders] structure activities for them in ways that bring success" (Bandura, 1997, p. 106).

Themes

In pursuing answers to Research Questions 3 and 4, the researcher reviewed the transcribed interviews in terms of the four sources of self-efficacy and participants' perceptions of how their efficacy beliefs had been affected by leadership development experiences. Analysis of the transcribed interviews also revealed several compelling themes that emerged from the comments offered by the principals. In the next section of this chapter, these themes are presented and participant comments related to the identified themes are examined. These themes are interesting because they were not specifically related to questions in the interview protocol, yet all of the principals made clear reference to the themes in their comments. Consequently, these themes reflect foundational ideas common to all of these high self-efficacy principals.

Theme 1: Focus on students. The principals who participated in the interview phase of the study were experienced school leaders whose schools had demonstrated high levels of student achievement in comparison to similar schools. In addition, these principals reported high degrees of self-efficacy on the Principal Self-Efficacy Scale. These data, along with the data collected during the interviews, reveal that these principals were leaders who had high expectations for themselves and for everyone with whom they worked. The principals' comments indicate that these high expectations were rooted in a fundamental focus on students and their welfare. In every interview, principals made repeated statements, in response to different questions, that clearly reflected their top priority, students and their learning:

- David: I think one of my strengths is making sure that [teachers and staff] know that every decision I make is based on what we believe is best for kids. We can argue, and they know this about me, but that's the cut to the chase. It may be a real simple thing but sometimes it's hard.
- Julie: If you just make decisions in the interest of the children, then you can't go wrong. No matter what population.
- Edie: As an administrator, you have to be [child-centered]. That has to be your guiding light. It's got to be about the kids. Even though some of the adults might think differently, it's got to be about the kids.
- Paula: My instructional core is what we do—we have to do—for kids. All kids have the right to be better than they were when they came in...we all need to own the kids. That's just me. That's what I bring to the table. That's my vision.
- Len: I think people see that students are my main priority, and over time they say that it may not be what they want to do, or in the teachers' best interest, or in the parents' or another adults' best interest, but I think they see over time, okay, it is in the best interest of children. It's good; it makes sense. That's something I constantly preach: "What we do is about the kids. It's not about us."
- Lynn: I have to have my courageous conversations, which I don't enjoy doing, but you have to do it, and you can't be afraid to do it because it is about the children.

This foundational focus on students was also reflected in specific stories about working with students and their families:

- Paula: I have two boys who bring me their contracts at the end of the day, and they are so happy when I praise them and I give them a sticker. I have stickers over there that say "My principal thinks I am great," etc. Sometimes we have kids on individual contracts (sometimes more because of the teacher instead of the kid), and they come and see us at the end of the day. I am happy when they are happy.
- Julie: I think the 1st year it was them and me trying to come together and understand where each was coming from in terms of teaching and learning and then developing a common idea about where we are going with this. When I got there the data was typical. The MSA data looked good. But it wasn't like "high high." It was just middle of the road. When I looked at the day-to-day data I was shocked because there was a lot of reds and yellows.

Looked at the running records, etc., and thought that doesn't go with the MSA at all! So what's going on? And then when I looked at who was in what sort of classes, I was asking, "Why is it all Asian kids in the Math A class and why is there only one Math class? Anybody see a pattern?" That was my question. Nobody saw a pattern! Then they said, "What's the matter with it?" I am Asian and I have a problem with it. There isn't anyone else who can be in that class? I was asking lots of questions. They were probably sick of me asking questions. At one point, [they said], "Can't you just tell us what you want?" So giving them the gift of time gave me the chance to ask them for things in return, and that was their ear, their heart and mind, and why we are talking about this—provided the opportunity to talk about this.

- Edie: I was in a meeting; we had a parent with a child here, and the parent needing a lot of hand holding. She wasn't sure about the ways that special education children were taught. So we did a lot of hand holding. So now she has a younger child in kindergarten. We worked out a situation and an agreement. Then she brought up that she had a problem and couldn't afford day care and I had a scholarship to [the day care center] right there on my desk. So since I knew what the issues were, I could provide the help.

The principals' foundational belief in a focus on students aligns with Bandura's description of effective schools: "High expectations and standards for achievement pervade the environment of efficacious schools" (Bandura, 1997, p. 244). Furthermore, the sense of self-efficacy that is reflected in their comments indicates they believed in their capabilities to enact this philosophy through their work as school leaders.

Theme 2: Knowledge of instruction and feedback to teachers. A second theme closely related to the first involved the importance of understanding classroom instruction and the ability to provide meaningful feedback to teachers about their work with students. Each of the principals reported a high degree of self-efficacy in his or her ability to observe and analyze classroom instruction and then coach teachers on how to improve:

- David: Good instruction is good instruction. There are good strategies that can be used whether you are teaching fourth grade or teaching kindergarten or preK. Whether you are teaching physical education or art and music, good instruction is good instruction. Good instructional practices—good

instructional strategies—are teachers engaging students, and if they are not, what can you do to make that happen? If they are, what are they doing that is positive? And giving teachers that feedback about what you are doing, what is happening with the kids as a result of what you are doing, and then making suggestions. “What you did worked, but did you think of...,” giving a couple of other things for them to consider, giving open and honest feedback.

- Lynn: I think one of my strengths is getting into the classrooms and giving informal feedback as well as formal, but I try to get into classrooms every day. I do keep a chart of the people that I have observed, and I try to increase that every year. I am in the classrooms several times during the year, and I always leave a written feedback. Another strength is giving suggestions to teachers to turn a “C” lesson into a “B” and then a “B” into an “A.” I think I’m pretty good at supervising brand new teachers. I’m not giving them too much feedback. I am giving them just enough to get that ball in the air, instead of giving them everything they need to work on. Give one or two things, let them get better at those and then add another thing, so they won’t become overwhelmed.
- Len: When I walk into a classroom, I feel that I can prioritize the next step that this teacher needs to take. I can observe whether the critical points, the objective’s posted, the orderly environment, those kind[s] of obvious and necessary things, but those are foundational in my opinion. If they are not there, you’ve got to start there. If there is a management issue that becomes very obvious to me and that’s something that we need to then talk about. With the content—as an observer—I can understand whether the approach that the teacher is taking with the content is effective or not. My greatest strength, I think, is I can look at that and say, “We need to start here first.” Because if we don’t have these things, we can’t really get to the next step.
- Edie: I think observing lessons and being able to diagnose what were the strengths of the lesson and what needs to be improved and then meeting with teachers and providing that feedback to them.
- Julie: I think that I had a lot of background in teaching different grade levels, preK to eighth grade, so I think I understand the scope and sequence. Where they are coming from and where they are going, that global understanding of what has happened previously, foundational skills and scaffolding, my strength is in that. So when I talk with teachers and work with teachers they say, “I can’t get this down,” so I say, “Did you try...?”
- Paula: As an instructional leader, I guess my viewpoint is that you gotta look at the kid. But when you are teaching curriculum, you have to know the purpose of it, how you are going to go about it, how are you going to differentiate it for the kids who don’t get it, and I think that was one of the biggest challenges for me here. I could see the big picture, but that’s me,

that's my passion. "Okay, what are you going to teach, and how are you going to get it there, and what if the kid doesn't get it?"

The principals' focus on teaching and learning reflects Bandura's comments about educational leaders:

Strong principals excel in their ability to get their staff to work together with a strong sense of purpose and belief in their abilities to surmount obstacles to educational attainments. Such principals display strong commitments to scholastic attainment and seek ways to enhance the instructional function of their school. (Bandura, 1997, p. 248)

In addition, the principals' clear descriptions of their ability to analyze instruction and provide feedback to teachers indicate a high degree of self-efficacy in this area and reveal that this was a task they were deliberately performing as a key part of their day-to-day work as principals. The principals' commitment to instructional supervision echoes research by Goddard et al. (2010) that found principal involvement in supervision of instruction had a significant impact on teacher practice.

Theme 3: The importance of hiring high-quality staff. A third theme that emerged from the interviews was the principals' conviction that hiring the right staff members was critical to school success. There were numerous references to the importance of "hiring well," and every principal cited their staff members when asked why their school was so successful:

- David: I think hiring the very best people [is critical].... I am always interviewing with teams, lots of staff involved and I typically do two interviews, one where we separate and then a second when we call back one or two. Sometimes we would have almost the whole grade-level team involved because (and I tell the candidates) it is not about whether or not they can do the job; it is about whether you are a good match for us and whether we are a good match for you. Because we want people who want to be here, but we want people who bring certain aspects to the team and dynamics to the team but also meld with the current members.

- Lynn: I think I do a good job, along with my assistant principal, of hiring. We look at a good 8 to 10 people for a position before we make a decision, and we've been together 6 years, and we have only disagreed on three people. .. I remember being told (probably by another principal), "Always hire well, because if you don't, you are going to spend the time on the other side. Spend your time on the interviewing and the hiring rather than spend it on documenting (underperformance)."
- Paula: Their level of teaching here is dramatically higher because of the professional development [we have provided], and I think the way I look at instruction and hiring people that know instruction.
- Edie: I believe in hiring the very best teachers I can find. I try to give them every resource they need to be successful and then I let them do their job.
- Lynn: I get the right staff. And what I look for in staff is a passion for teaching and that they would actually do this job for free. That's what I look for. So I pick the right staff. Very passionate, very tenacious, very competitive. It's all in the right staff and then giving them the resources to do what they need to do with the children. You know, commitment to high expectations, etc., but it all comes down to the staff.
- Len: I would say it is getting the right people in the classrooms. I really believe that when I interview, I have a really good sense of who is going to be great in the classroom based on questions I ask and their responses. Of course, I am wrong sometimes. Example of a question: My questions are all around instruction. I asked them to specifically tell me about a lesson. For example, reading: "Think of the best reading lesson you ever gave (enjoyed, most success), and tell me from the beginning to the end what that looked like. What was your mastery objective, how did you plan for that, how are you going to monitor progress toward mastery at the end of the lesson, all the way through providing new information, guided practice, independent practice, monitoring, checking for understanding? Take a couple of minutes, gather it up in your head, it's a tough question and then walk me through, beginning to end." There's people who can't even do it, and I am done with them. There's lots of people who can talk about how great they are, but they can't even explain a great lesson and their thinking process when they plan. "And what are you going to do for a child who already knows it; what are you going to do for them? What about a child who just can't get it? What are you going to do for them?" When they can answer that, and I ask them the same thing about math and the same thing about writing, and then I ask some management questions, but most of it is around instruction.

The principals' comments indicated that they understood the importance of

"having the right people on the bus" and, furthermore, that they had a high degree of self-

efficacy in their ability to recruit, identify, and secure the best staff members. Their comments also revealed that these high self-efficacy principals were, in many ways, seeking to staff their schools with teachers and other staff who also demonstrated strong self-efficacy beliefs.

Theme 4: Building relationships. A fourth theme involved the importance of building relationships. Although there was no question in the interview protocol that specifically asked principals to comment on this, the participants made frequent reference to the importance of building strong relationships with stakeholders. These references included recollections of mastery experiences involving relationships, instances when effective relationships were modeled for them, and experiences of being coached to develop strong connections with staff, parents, and students.

- Len: [For my first principalship], I got appointed [principal] the day after teachers arrived in August. So I was trying to play “catch-up” to learn everything I could about the school. Learn about the staff. One of the things I did I think was most effective: I sat down with every single staff member and just asked questions about the school: what they liked, what they didn’t like, things they thought were successful, things they thought needed to be changed. I set up meetings with parents so I was much more involved with all stakeholders right off the bat. I met with parents all throughout the summer, again, asking, “What are the strengths of the school, what would you like to see changed, what could make this school even better?” I sat down with some kids and did that, too.
- Julie: First thing I thought [when I was first appointed principal]: I am going to go in and find out what the staff needed. Wanted to get from the people on the ground what they felt was the strength and need and what they wanted. So I had one-on-one interviews set up with everybody. “What do you think is the best thing about [our school], and what is that one thing you would like me to promote or help?” Typical, everybody said time, planning, and so that came out as a strong theme. The majority if not all of them said something related to time. So during the spring I was turning the wheels and started to look at some ways that could be done: master schedule, common planning. I looked at the number of staff and had a sense of who the leaders were and everything like that. Also watched a lot, complimented them, little stuff, big stuff. Watched and built relationships with them. Talked about where I saw my role

as “to make your job easier so that you [can] do the things you need to serve kids.”

- Edie: What I did know is I felt I really made a point of asking questions if I didn't understand and to not assume. Again, the personal relationships play into that. If you really want to support people and not just observe and evaluate, there's a real different approach to teaching and learning, and I think that's one of the strengths that I have. I am out to help people: “I believe you can do it. I am here to give you whatever resources I can provide so that you are successful as a teacher.” I think I was well-received.
- David: I think coming into a successful school as a new leader is a challenge. One of the things I think I did well was to really understand the strengths of the school by listening to the people, by getting to know them.... I didn't have to change everything. Developing a sense of trust in the staff here and the fact that we were going to set goals together and we were going to prioritize the important things. I was able to take off from there. Some of the things looked pretty obvious that we needed to change, but unless I won them over and helped them understand and heard from them not only about all the issues, but certainly prioritize with them. I met with everyone that summer. I had an open-ended opportunity for them. I specifically set time for teams to come in. I really tried to get to know them. It was to come in, really understand what was working well, and to look at the data to understand what the priorities are, and then to engage people in the change process.
- Lynn: Building relationships is important, and I didn't realize how important until I became the actual principal. I had lots of conversations with [my principal] about that. Numerous.
- Julie: Initially at [my first placement as an AP] I didn't have the benefit of starting with [the principal]. I ran into a lot of mines, and that year I thought a lot about dealing with difficult people. I read everything there was to read about that. It was all about people. I realized in all three schools, it was about relationships. When I didn't have them, that's when it could go down pretty bad. Even if we have different views or disagreed, if they didn't know where I was coming from, that's when things didn't work out. The relationship piece is huge...if you don't get it down as principal, this is an area where it might not get you fired, but it can make your job really, really difficult in terms of leading your team. Because if you don't have them on board because you are not communicating or because you don't have a relationship, there's a lack of trust or there's a bad climate because everyone feels like they are going to get run over; then you are not going to get people to do the instructional piece, because why should they?

The principals' comments reflect the notion that although they were confident individuals with a strong sense of self-efficacy, they understood that they could not do everything by themselves. They understood that providing an engaging and supportive learning environment for a school full of children is a team effort and it is important to assemble the best team possible. They also understood that leaders need to devote time to cultivating and sustaining relationships and that this is critical to their success as leaders as well as the success of their schools.

Theme 5: Overcoming adversity. The fifth theme that emerged from the interview responses involved overcoming obstacles, setbacks, and adversity. As previously noted, each of the principals overcame significant challenges to achieve success as leaders in their schools. By meeting and defeating these adverse circumstances, the principals added to their own sense of self-efficacy and moved on to face greater challenges. Persons with a lower sense of self-efficacy might have been overcome by these factors and not completed the journey to success as a school principal. Indeed, each year a number of individuals had requested exit from the leadership development program in District A because they did not want to continue in the program. Others had been evaluated out of the program by their professional development teams or supervisors. The principals interviewed for the study, however, overcame their obstacles and went on to lead schools to an exceptional level of student achievement and to cultivate a high sense of personal efficacy as principals. Principals' stories of overcoming adversity generally centered on dealing with mistreatment from others, working with resistant or contrary staff, responding to student behavior issues, or implementing change to address negative school climates:

- Julie: After I got placed [in my first administrative position] that wasn't appreciated by the principal. [The principal] did not like having a placement. At our introductory meeting in the summer, she sat with her back turned to me. Very awkward at first. And there were lots of requests, like, "I need all of these things done in a short amount of time," usually within a week. Often I would get it done before that, like in a couple of days. Like she would ask for all this data (GT, graphs, etc.) and most of it wasn't that complicated, so I would give it to her and she would go, "Where did you get this, how did you get this, how did you do this so fast?" So then we had a talk about loyalty, about dirty laundry, lots of talks about "you don't bother me, I don't bother you." And then it was me being on the run, providing things for her as an assistant principal should. Thinking ahead about what she might need for an upcoming meeting. Instead of her asking me I would say, "Do you want me to do...," and she would say, "Ok." After a while, she realized I was a doer and that it would be fine. Then she called me "honey, baby, sweetie pie." She had a reputation within the county, and other principals told me I was going from the pan into the fire. It ended up being the most supportive, loving relationship. But during that 3 years, she was sick a lot and went through a bunch of surgeries, so I went through about three different acting principals. The last year she was there she had cancer and she passed away.
- Paula: I had a really tough situation walking into the building [for my first principalship]. Climate was gone. Parent community was every angry and there was no trust between administration and community. No one had trust. Besides that it was fine! But there were good teachers. I had to deal with the management piece first—dealing with the trust and the communication and processes. How do you get kids under control? How do you get parents the information that they needed and have processes? First year here, we had 400 referrals [office referrals for student behavior]. It was insane. Insane. 400. The five rules we established were a good start, and now we live and breathe by them, but 400 referrals! So my 1st year here, what I am most proud of is that we started in the summer with those five rules. The leadership team and the whole staff worked on them and then we trained staff for 2 years about how to build a positive atmosphere in the classroom, and then every grade level came up with their own system for how to praise kids for what they were doing well. So within 3 years, we had less than 70 referrals.
- Paula: I am very collaborative, and I think that has helped with building a culture at this school. I think through very carefully, "Yes, this is the end in mind," but what are the little steps because you can't do everything at once. And walking into a school that had no respect—there was no trust between the staff and the community. Staff thinking one way about the administration as well as the community, I'm like, oh my god. My 1st year, it was, "Okay, we need to put processes in place, but it's about kids, so let's just look at how we operate the whole school." We redid every process possible: arrival, dismissal, when we would buzz into your room, when we would get things to

you, we would always respond in 24 hours. Like me responding to an e-mail within a day was like, “We love you.” It would take 2 weeks before. I had a lot of “OMG” moments. They needed to know that I respected them and that I would hear them; I always justified my thinking. Everything, how we moved in the school and that was such a “win-win” my 1st year. Because I am very good; I can talk with you. I can see both sides. I always know where I want to be and I don’t want to use the word manipulate, but I can guide and influence to get to end in mind. They do need to feel like they came up with the solution. After 2 years I got the buy-in, but I think it’s how you talk with them and how you respect them. I’m a warm person, but you gotta know what you are talking about, and I think that’s how I won the community over. Yeah, I will listen, I will share with you my thoughts and feelings, but I know what I am talking about. I think I earned their respect.

- Len: I had two teachers who were really abusing leave—they probably taught 2 days out of a week—and they would use the excuse that “my children were sick,” yet they would take them to the doctor in the morning and in the afternoon they would be playing at the playground right up the street! So my parents would say, “Why isn’t my child’s teacher teaching?” So I told them if they were going to be out for an illness, they would need to have a doctor’s note. Everybody. And they went nuts, and they filed a class action grievance and it went to the hearing officer, and he looked at me first and said, “Is it affecting your students’ progress?” And I said, “Absolutely, and the morale of my school, because even though there is no one who is going to stand up and say they don’t like it, there are teachers who are there every day who don’t appreciate someone coming in 2-3 days a week and getting away with it. It really hurts morale. And it affects kids’ learning. You know—who’s teaching those kids?” And so [the hearing officer] looks at the union rep and says, “It is impacting his students’ learning, and so you don’t win on this. He has the right to do it.” The grievance was denied.... Those two teachers left [along with] a couple of other people that were [involved in the situation], and 100% of the people that stayed said, “You were right to do it.”
- Edie: [I had some challenges with the new programs we were implementing]. The leadership team and I thought the programs were very exciting things to try, but amassing the troops and getting their support—those were challenging times. With [one program], it was so different then; I said, “We have to come up with a rule: *No crying in planning*.” Like “*No crying in baseball*.” It was such a change for them and it wasn’t county led; it was “Why are you doing this to us?” It was uncharted territory.

In facing and overcoming these daunting situations and problems, the principals exemplified how Tschannen-Moran and Gareis described principals with high self-efficacy:

Confronted with problems, high efficacy principals do not interpret their inability to solve problems immediately as failure. They regulate their personal expectations to correspond to conditions, typically remaining confident and calm and keeping their sense of humor, even in difficult situations. (Tschannen-Moran, 2004, p. 574)

In summary, important themes emerged from the interviews with the principals that reflected their commitment to students, their focus on teaching and learning, their commitment to acquiring the best staff possible, their understanding of relationships in the school environment, and their tenacity in overcoming challenges. These themes are very reflective of the limited research on principal self-efficacy and its influence on principal behavior that had been conducted previously. These studies pointed to promising links between high principal self-efficacy and positive leadership behaviors and effects, including change management, openness to collaborative decision making, confidence in dealing with obstacles, positive school climate, instructional leadership, teacher efficacy, and student achievement (Dimmock & Hattie, 1996; Leithwood & Jantzi, 2008; Smith et al., 2003; Tschannen-Moran & Gareis, 2005)

Summary

In this chapter the quantitative and qualitative data analysis and the findings of this mixed-methods study have been presented. The quantitative data were collected through use of the Principal Self-Efficacy Scale with a group of elementary principals whose schools had demonstrated high levels of academic achievement in comparison to similar schools. Survey data were analyzed to answer Research Questions 1 and 2 of the study concerning principals' perceptions of their own self-efficacy beliefs and the relationship, if any, between those beliefs and several variables, including school and personal demographics. Analysis of the survey data did not reveal any statistically

significant relationships between scores on the PSES and characteristics of the principals. Nevertheless, there were discernible differences in the scores reported by several different groups; these differences are explored in chapter five. The researcher also was able to use the survey data to identify high-quality candidates for the qualitative phase of the study, a semistructured interview. In this process, the researcher utilized a participant selection variant of the explanatory sequential research design. Six principals were identified for participation in the interviews, which were conducted in accordance with an interview protocol. The protocol was designed to examine Research Questions 3 and 4 of the study concerning principals' perceptions of the sources of their efficacy beliefs and the influence of training experiences and leadership development programs on their self-efficacy. The data collected in the interviews supported Bandura's research about the sources of efficacy information as principals recounted how they had developed their sense of self-efficacy through mastery experiences, vicarious experiences, verbal persuasion, and management of affective states. The interview participants also shared their reflections regarding their leadership development experiences and offered suggestions for improvement. Finally, the researcher also examined additional themes that emerged from the interviews with these principals of high-achieving elementary schools. In the next chapter, the researcher presents conclusions and recommendations based on the findings of the study.

Chapter Five: Discussion, Conclusions, and Implications

Introduction

This study examined the self-efficacy beliefs of elementary school principals whose schools had demonstrated high levels of student achievement in comparison to similar schools. The purpose of this mixed-methods study was to explore these principals' perceptions of their own self-efficacy and to examine the sources of those efficacy beliefs. The conceptual framework used in the study was based on the research that Albert Bandura and others had completed in the area of social learning theory (Bandura 1977, 1986, 1993, 1997; Pajares, 2003; Tschannen-Moran & Gareis, 2004). Insights gained through this study will help to inform the development and implementation of leadership development and principal preparation programs. Earlier research indicated that persons with a higher sense of self-efficacy are more willing to attempt challenging tasks, they exhibit more perseverance when faced with difficulty, and they demonstrate higher levels of performance (Bandura, 1993). Aspiring principals and their schools would be well served by leadership development programs that explicitly increase self-efficacy in the leadership skills and associated tasks that principals are expected to complete at a high level.

This chapter is organized into four sections. The first section presents a brief review of the study purpose, research questions, and methodology. The second section presents conclusions based on the findings presented in chapter four. The third section posits recommendations for future practice based on the findings. The final section recommends directions for future research.

Research questions. This mixed-methods study explored four research questions:

1. What perceptions do principals of high-achieving elementary schools have about their self-efficacy as it relates to the tasks and skills that are required of principals in today's public schools?
2. What relationship is there, if any, between principals' perceived self-efficacy beliefs and personal factors (gender, race or ethnicity, years as a principal, years as principal at current school) and demographic factors (school size, percentage of students qualified for free or reduced-price meals)?
3. What perceptions do principals of high-achieving elementary schools have about the sources of their self-efficacy beliefs?
4. What perceptions do principals of high-achieving elementary schools have about how their self-efficacy beliefs have been affected by professional development experiences and leadership development programs?

Methodology. Research Questions 1 and 2 were explored through quantitative research carried out in Phase 1 of the study. The researcher used publicly available state test score data to identify high-achieving elementary schools in District A, a large suburban school district. Public records were used to identify the principals of these schools and, furthermore, to create a list of principals who had served at their current schools for at least 3 years. These steps produced a list of 40 principals of high-achieving schools, each of whom had led his or her school for a minimum of 3 school years. The researcher asked each of these 40 principals to complete a survey that included six demographic questions (name, race–ethnicity, years as a principal, years at current

school, school enrollment, school FARMS percentage) and the 18 items of the Principals Self-Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004). Of the 40 principals, 36 returned the completed scales, thereby generating a return rate of 90%. The researcher analyzed the returned scales to identify principals who reported high degrees of self-efficacy in comparison to other principals. These results were then used to identify a small group of principals to participate in Phase 2 of the study, a semistructured interview. In using the quantitative results to select participants for the qualitative phase of the study, the researcher employed a participant selection variant of the sequential explanatory research design (Creswell, 2010). The researcher conducted in-person interviews with six principals. The interviews followed an interview protocol and lasted between 60 and 80 minutes each. The researcher recorded, transcribed, and analyzed the interviews, looking for themes and patterns in the qualitative data. This analysis produced findings regarding how the principals perceived their self-efficacy beliefs and how they had developed those beliefs. The principals also provided their opinions and reflections regarding their professional training and leadership development experiences.

Analysis Related to Research Questions 1 and 2

Research Questions 1 and 2 for the study were as follows:

1. What perceptions do principals of high-achieving elementary schools have about their self-efficacy as it relates to the tasks and skills that are required of principals in today's public schools?
2. What relationship is there, if any, between principals' perceived self-efficacy beliefs and personal factors (gender, race or ethnicity, years as a principal,

years as principal at current school) and demographic factors (school size, percentage of students qualified for free or reduced-price meals)?

These questions were investigated through Phase 1 of the study, which involved use of the Principal Self-Efficacy Scale as a quantitative measure. Thirty-six principals completed the online survey, which included several demographic questions. Descriptive and inferential statistics were calculated using SPSS. Analysis indicated that the PSES was a reliable and consistent measure.

Total scale and subscales. Means and standard deviations were calculated for both the composite scale score and for each of the subscales (instructional leadership, managerial leadership, moral leadership). The mean score for moral leadership was highest ($M = 47.17$), followed by instructional leadership ($M = 46.78$) and managerial leadership ($M = 43.72$). These findings indicated that the participating principals reported the highest degree of self-efficacy in tasks related to moral leadership, followed by instructional leadership, and trailed significantly by managerial tasks. Indeed, when the principals' responses on all 18 PSES items are ranked from highest to lowest, six of the seven lowest scores are items related to management tasks. This finding echoes concerns voiced by Grissom and Loeb (2009) that principal preparation programs do not adequately prepare future administrators for the managerial aspects of the job. The PSES scores and the principals' comments indicate that the participants understood that the modern principal's workday is characterized by unplanned interruptions, competing demands, and paperwork tasks that demand time and create stress. It is clear, however, that these principals did not see these factors as overwhelming. In fact, their comments indicate that they felt a strong sense of efficacy in their ability to carry out their

responsibilities, and they simply accepted the time demands and stressors as part of the job. This conclusion reflects Bandura's theory of triadic reciprocal causation, which asserts that human agency occurs within a dynamic interplay among three components: behavior, internal personal factors (which may be cognitive, affective, or biological), and the external environment (Bandura 1997). The principals who participated in the interviews reflected a strong sense of efficacy with regard to their own personal factors and the impact of their behavior. For example, all of the principals commented about their knowledge of good instruction (personal factor) and their ability to provide teachers with meaningful feedback about that instruction (behavior). As experienced school administrators, however, these individuals knew that there were elements of their working environment they could not completely control, including interruptions in the planned schedule for the day and administrative tasks assigned by a supervisor. Thus, the high-achieving principals who participated in the study were more likely to report a lower degree of self-efficacy in terms of managing their time, schedules, and paperwork, and a higher sense of efficacy for leading the instructional program or inspiring the moral climate of their school.

Gender. Previous studies examined whether or not there is a link between principal self-efficacy and the principal's gender, as well as other personal and school factors (Lehman, 2007; Santamaria, 2008; Smith et al., 2003; Tschannen-Moran & Gareis, 2004, 2005). The results of these studies were inconsistent and inconclusive. Findings in this study indicate that male principals scored slightly higher than females on the composite scale and scales for moral and managerial leadership, whereas female principals scored higher in the instructional domain. Both male participants and female

participants reported the highest degree of self-efficacy in moral leadership, followed by instructional leadership, and leadership of management tasks.

Years as a principal. Previous studies sought to determine if there is a relationship between the number of years a person has worked as a principal and the self-efficacy beliefs he or she reports. Bandura's work in social cognitive theory indicated that a greater degree of experience, especially if it is characterized by success, should be accompanied by a higher level of self-efficacy, because as a person has the opportunity to gain more mastery experiences and information from the other sources of self-efficacy, he or she also will have the opportunity to receive and interpret that information to enhance his or her efficacy beliefs. In this study, principals with more than 11 years of experience reported higher levels of self-efficacy on the composite scale score and each of the subscales. This finding is not surprising, given that the sample comprised principals of high-achieving schools and that these principals served in a district with a long history of structured professional development for school leaders. Each of the principals that participated in Phase 1 of the study had been at his or her current school for at least 3 years, and the school had demonstrated an exceptional level of student achievement in comparison to similar schools. These principals shared the mastery experience of having their students demonstrate high levels of learning on a state assessment often used to compare schools. In some cases, the participating principals had accomplished this feat at more than one school. Thus, it is reasonable to expect that successful principals will grow in self-efficacy the longer they are in the profession, provided that their mastery experiences continue.

This conclusion has implications for both the professional development and the supervision of experienced principals. To keep successful principals successful, those who provide for their professional development should work to ensure they are provided with continuing opportunities for mastery experiences, vicarious experiences, and verbal persuasion. Although efficacy-building activities are critical for both developing and novice principals, this study indicates that high-performing principals can be sustained at the top of their profession if they continue to have experiences that feed their self-efficacy. The supervisors of these principals should look for ways to provide these administrators with new challenges and opportunities for growth and success. Supervisors also should make sure that even veteran principals have the opportunity to view effective models (vicarious experiences) and receive meaningful coaching (verbal persuasion). Establishment of effective peer networks and opportunities for peer observation and feedback will help to ensure that experienced principals stay engaged and enthusiastic about their responsibilities.

School enrollment size. Principals of larger schools (more than 450 students) generated higher scores on the total scale and the subscales for managerial and instructional leadership, whereas principals of smaller schools reported slightly higher levels of self-efficacy for moral leadership tasks. It is not surprising that principals of smaller schools reported higher degrees of efficacy with regard to the moral leadership tasks of promoting positive behavior among students and staff and promoting a sense of school spirit. In some ways, these tasks are easier to approach and accomplish with a smaller student body. For example, many aspects of moral leadership are based on relationships with students and staff, and it is easier for the principals to establish

personal relationships with the majority of students when there are 400, rather than 800, K-5 students. In terms of managerial leadership, it is puzzling that principals of larger schools reported a higher degree of self-efficacy, as larger student bodies can mean more interruptions, more competing priorities, more paperwork, and more stress. Nevertheless, the sample comprised principals who were highly successful in their work and had achieved exceptional levels of student achievement. These high-efficacy principals might have learned, through necessity, to manage their larger schools, perhaps by effectively using the additional staff members allocated to schools with higher enrollments.

Socioeconomic characteristics of the student body. Previous studies sought to determine if there is a relationship between the reported self-efficacy of the principal and the socioeconomic characteristics of the student body. In this study, principals of schools with lower percentages of students qualifying for free or reduced-price meals reported higher levels of self-efficacy on the composite scale and each of the subscales than did principals of schools with higher percentages of students receiving meals support. As previously noted, in Bandura's model of triadic reciprocal causation, human agency involves the interplay among behavior, internal personal factors, and the external environment (Bandura, 1997). When a principal is leading a school within an external environment that is characterized by high poverty, he or she faces some unique challenges. Although every school has its challenges and the principalship is a complex job in any school, principals of schools serving children and families affected by poverty face obstacles that are not present in communities where poverty is not an overriding influence. These obstacles include reduced readiness for kindergarten, children affected

by substandard housing, families without access to quality health care, childhood hunger, and limited access to transportation. The survey results in this study suggest that the self-efficacy of a high-achieving principal can be tempered somewhat by the realities of serving a high-poverty community. This finding in no way indicates that these principals have lower expectations for their students because of their economic status. In fact, the data used to select principals for Phase 1 of the study prove that all of the principals had expected and achieved high levels of student learning. The PSES results do indicate, however, that when principals are aware of the influence that poverty can have in the environment component of triadic reciprocal causation, this awareness may be related to a slightly reduced sense of self-efficacy.

This conclusion has implications for those who provide professional development to principals in higher poverty schools as well as those who provide supervision and guidance to these principals. The results of this study indicate that principals of high-poverty schools may benefit from professional development that builds their self-efficacy beliefs. A stronger confidence in their capabilities to perform the required tasks of the principalship will help these principals to persevere and lead their staffs in providing a rigorous and engaging learning environment for all students. Those who supervise these principals should recognize the interplay of personal, behavioral, and environmental factors and work to provide these leaders with opportunities for mastery experiences, vicarious experiences, and verbal persuasion. In addition, supervisors should be aware of the effect that negative affective states can have on principal self-efficacy and, consequently, should strive to provide support and coaching.

Findings from the quantitative phase of this study reflect Bandura's work in social cognitive theory, especially in terms of how human agency occurs within the dynamic interplay of personal factors, behavior, and the external environment. When the self-efficacy beliefs of principals are formed and strengthened through mastery experiences, vicarious experiences, and verbal persuasion, these beliefs help school leaders to contend with the unpredictable aspects of the external environment. With the right types of professional development and support, leaders can continually build their self-efficacy, which will help them to persevere and be successful in providing high-quality education to the students in their schools.

Analysis Related to Research Questions 3 and 4

Research Questions 3 and 4 for the study were as follows:

3. What perceptions do principals of high-achieving elementary schools have about the sources of their self-efficacy beliefs?
4. What perceptions do principals of high-achieving elementary schools have about how their self-efficacy beliefs have been affected by professional development experiences and leadership development programs?

These questions were investigated through Phase 2 of the study, which involved use of semistructured interviews with principals. To select principals for this qualitative phase of the study, the researcher employed the participant selection variant of the sequential explanatory design. The researcher analyzed survey responses and scale scores and chose a group of six principals to interview. The selected principals not only reported high levels of self-efficacy, as reflected in high scores on the PSES, but also represented a sample with some diversity in terms of gender, race–ethnicity, years as a principal,

school enrollment, and FARMS percentage of students. Using an interview protocol, the researcher conducted interviews with the six principals. Findings from the qualitative phase of the study reinforced Bandura's theories about the sources of self-efficacy, provided insights into how the principals viewed their leadership development experiences, and identified several prominent themes that revealed foundational beliefs held in common by these high-achieving individuals.

In the interviews, the principals confirmed that their sense of self-efficacy was significantly influenced by mastery experiences, vicarious experiences, verbal persuasion, and affective states, the four sources of self-efficacy identified by Bandura (1977). The principals recounted numerous success experiences that had strengthened their beliefs that they could be successful as school leaders. These experiences included successes they had achieved as teachers, as developing administrators, as novice principals, as experienced principals, and even as workers outside the field of education. The principals related stories of experiencing mastery in instructional leadership, managerial leadership, and moral leadership. In many cases, their mastery experiences involved overcoming obstacles, which reinforced their belief in their own capabilities. With this strong sense of self-efficacy in place, these principals had led their schools to exceptional levels of student achievement.

In the interviews, principals also shared how their self-efficacy had been enhanced by observing models. Bandura described these experiences as vicarious. The principals recalled instances, especially during their development as school leaders, when trusted mentors or colleagues demonstrated skills or approaches for them and then took the time to review and explain their approaches. The principals viewed these as very

valuable experiences that caused them to revise their own approaches to adopt the strategies demonstrated by the persons who were modeling. Within the context of District A and its leadership development program, many of the models were active participants in the program, including supervising principals, principal trainers, retired principals, community superintendents, and directors of school performance. In particular, several principals each spoke of the great learning experienced during his or her principal intern year assignment in District A and how the principal trainer had served as a powerful model who shared strategies and facilitated reflection. The intern year also gave aspiring principals multiple opportunities to practice the skills that had been modeled for them. As a result, the self-efficacy gained in the vicarious experience was reinforced and strengthened by an associated mastery experience.

Participating principals also recounted how their self-efficacy beliefs had been affected by verbal persuasion or by encouragement and reinforcement from trusted mentors or peers. In several cases, this experience involved another person's expressing faith in the principal's capabilities at a time that the principal was having some doubt about his or her own abilities. The interviews revealed that verbal persuasion played a significant role in two specific scenarios: (a) when the aspiring leaders were first encouraged to consider pursuing careers in school administration and (b) when developing principals were experiencing some difficulty or stress and the encouragement of trusted mentors helped them to persevere. Once again, this source of efficacy was facilitated by participation in District A's leadership development program. As was the case with vicarious experience, the program provided developing and novice principals with multiple mentors who provided verbal encouragement. Because these individuals

were people who had achieved high levels of success in the district (principals, community superintendents, central office directors, etc.), their comments of encouragement and belief carried special weight for the principals.

Finally, principals recounted how affective states had influenced their perceptions of self-efficacy. Bandura asserted that emotional arousal usually has a negative effect on a person's self-efficacy, but he also pointed out that "high achievers view arousal as an energizing facilitator" (Bandura, 1997, p. 108). As the principals recounted their stories of dealing with high levels of stress, it was clear that there had been a significant emotional dimension in the experiences. Nevertheless, the principals did not respond to these experiences by withdrawing and attempting to avoid future stressors. Instead, they persevered through the difficult situations, and that success reinforced their self-efficacy. Their comments reflected a belief that, if they could overcome those situations, they could overcome anything.

In many ways, the design of the leadership development program in District A facilitated the development of self-efficacy beliefs of the participants. Many of the learning situations described by the principals started with vicarious experiences (modeling), often combined with verbal persuasion (reflection and encouragement). In each of these cases, a principal trainer, consulting principal, community superintendent, or some other trusted coach demonstrated a skill and explained it to the aspiring leader. In the course of this explanation, the coach also communicated a belief that the mentee was capable of completing the task, thus enhancing his or her self-efficacy. Once the developing principal put this information into practice and achieved a mastery experience, the self-efficacy was reinforced and strengthened. Participants in the District

A leadership program experienced this type of cycle dozens of times with different types of tasks as they progressed through the program. These experiences helped to continually build their self-efficacy as principals.

This increased self-efficacy also prepared the developing principals for unexpected challenges. The efficacy that they gained from modeling, encouragement, and mastery experiences gave them the strength to withstand the potential negative affective states caused by stressful situations. Although some of the experiences in the District A program produced anxiety for these principals, the stressful experiences were offset by the efficacy that had been developed in other ways. The extended multiyear training program provided many participants with multiple opportunities to practice and master essential skills. Furthermore, the program was designed to provide participants with a constant stream of respected models who demonstrated effective leadership and also provided participants with verbal persuasion. These program characteristics enhanced the ability of District A to build the self-efficacy beliefs of their aspiring administrators.

During the interviews, the participating principals also provided comments about their leadership development experiences and offered their opinions about what was most valuable, what was least valuable, and what they would change about the program in District A. The principals' comments reflect Bandura's research on self-efficacy beliefs and how they are developed. The principals saw the most value in the opportunities to experience mastery through completing authentic tasks reflective of the real responsibilities of today's principals. These comments reiterated the findings of Smith et al. (2003), who argued that principals should be provided with leadership development

that allows them to experience success in grappling with real-life scenarios, asserting that these success experiences would increase the self-efficacy of the participants. Thus, effective coaching from trusted mentors that helped the principals to build real-life skills was highly prized, whereas activities or assignments that appeared to be surface level or irrelevant were dismissed as not valuable.

As previously mentioned, the principal intern experience was cited by several principals as the most valuable experience because it gave them authentic experience while they received ongoing coaching and feedback from their respective principal trainers. The intern program, as it was designed and implemented in District A, created excellent opportunities for developing leaders to build their self-efficacy. There was also frequent mention of other supportive individuals, including consulting principals, training representatives, and central office supervisors. District A's model for leadership development ensured that developing administrators intersected with many experienced professionals during their time in the program. As aspiring leaders encountered new challenges and questions, there always seemed to be experienced mentors nearby to help with reflection and processing. In addition, however, there was acknowledgment that sometimes the relationship between the developing principal and the supervising principal or principal trainer was strained, thereby creating a difficult situation, which some principals cited as a negative aspect of the program. Nevertheless, as demonstrated by the principals who participated in Phase 2 of the study, even such difficult circumstances can be overcome by developing leaders if they are provided with other types of support to sustain their self-efficacy.

When asked to provide recommendations for modifying the program, principals reinforced the concept of real-world experiences, advocated for flexibility in how a person moves through the program, suggested additional training and guidance for supervising principals, and recommended greater differentiation in the training sessions.

Recommendations for Future Practice

Principals in today's public schools face a job that is increasingly complex and demanding. Contemporary principals need to demonstrate mastery in a number of roles and under very trying and stressful circumstances. Leadership development programs that profess to prepare individuals to be successful principals need to provide the experiences that the research shows will develop their knowledge, skills, and ability to do the job. Bandura's work in social cognitive theory confirms that an individual's self-efficacy beliefs play a vital role in how the individual approaches tasks, challenges, and stress-filled situations (Bandura 1977, 1993, 1997). Today's school leadership development programs need to be deliberate and explicit in building the self-efficacy of persons that they are preparing for the daunting responsibility of serving as school principals. As Gist and Mitchell (1992) recommended, professional development for principals should be planned and implemented to build self-efficacy by integrating training activities that involve mastery, modeling, and persuasion experience.

The insights gained from this study show that principals-in-training benefit from programming that immerses them in efficacy-informing events: mastery experiences, vicarious experiences, verbal persuasion, and experiences that produce affective states. Persons and organizations responsible for training future principals should infuse their programs with explicit efforts to build the self-efficacy of their participants in the areas

that are critical to success. These areas are reflected in the subscales of the PSES used in this study. Principals need to be capable and believe in their capabilities when exercising instructional leadership, managerial leadership, and moral leadership. In addition, this study identified the importance of principals' ability to focus on student learning, evaluate instruction and provide feedback to teachers, hire high-quality staff, build effective relationships, and overcome adversity.

Leadership programs should be designed to provide participants with the mastery experience that comes from being successful with challenging tasks that are clearly related to the day-to-day responsibilities of principals. These tasks should be scaffolded to provide participants with greater levels of support in the beginning of the program. As individuals progress through the program, they should be presented with more complex and difficult tasks and be expected to complete the tasks with less guidance and support. Throughout the program, participants should receive regular feedback and coaching from experienced professionals who have been trained in self-efficacy research and techniques for providing effective modeling and verbal persuasion.

District A's leadership program reflected some of these recommendations; however, the aspiring administrators would benefit from a more concerted effort to infuse the program with deliberate efficacy-building content and practices. This is especially true in terms of the training provided to individuals who design and implement the leadership development program. Individuals and organizations charged with preparing educators to serve as principals should become familiar with the research on self-efficacy beliefs, including how these beliefs are formed, strengthened, and sustained. These designers should then integrate this information into the curricula and professional

development experiences that are provided to future principals. Although it can be argued that many principal preparation programs provide some degree of mastery experiences, vicarious experiences, and verbal persuasion to participants, a more explicit and deliberate effort to build self-efficacy will help to better prepare future school leaders.

Recommendations for Future Research

For this study the researcher identified a sample of elementary school principals who reported high degrees of self-efficacy on leadership tasks and whose schools had demonstrated high levels of student achievement in comparison to similar schools. The researcher then used quantitative and qualitative methods to explore how these principals perceived their self-efficacy beliefs and how those beliefs were formed. The researcher also explored how the principals' self-efficacy beliefs were influenced by the experiences they were provided through their district's leadership development program.

This study was limited by the size of the sample and by the focus on a single school district. To add to the understanding of principal self-efficacy and how it is formed, strengthened, and sustained, future research should be conducted with larger samples. In addition, studies should examine the relationship between principal efficacy and teacher efficacy; explore the connections among principal efficacy, teacher efficacy, and student achievement; and further inspect how self-efficacy is reinforced through leadership development programs and strategies.

The research on principal self-efficacy is still in its infancy. Many of the studies that have been conducted have involved relatively small samples of principals (Leithwood & Jantzi, 2008; Siegrist et al., 2009; Watkins & Moak, 2010). Although a

number of studies have explored the relationship between principal self-efficacy and a variety of demographic factors (Lehman, 2007; Santamaria, 2008; Smith et al., 2003), the results have been inconclusive and inconsistent. Greater insights about principal efficacy could be gained by examining current school principals' perceptions of their self-efficacy on a larger scale. The Principal Self-Efficacy Scale could serve as a useful measure in this effort. The PSES is a reliable scale instrument with a high level of internal consistency, and it is a user-friendly measure that takes only minutes for participants to complete. Researchers should look for opportunities to use the PSES to collect data from very large samples of principals. This type of research would provide a better assessment of the efficacy levels of current principals; furthermore, such studies also could help to determine if there is any consistent meaningful relationship between a principal's self-efficacy and various individual and school demographic variables.

The relationship between principal self-efficacy and the academic achievement of students in the school is another topic that needs to be researched at a deeper level. Although this study examined the self-efficacy beliefs of principals at high-achieving schools, the study did not specifically examine the relationship between the level of principal efficacy and the level of student success on state tests. Although a number of studies have been conducted that point to a connection between the school principal's self-efficacy beliefs and the academic success of students (Lehman, 2007; Leithwood & Jantzi, 2008; Siegrist et al., 2009), further research is needed in this area. Studies should be conducted on a large scale, in which the PSES is completed by a significant number of principals (perhaps an entire state) and their reported self-efficacy is correlated with a common assessment that is completed by all of the schools in the sample. Such research

will help to clarify the relationship between principal self-efficacy and student learning. Studies of this type, however, would be enhanced by including teacher efficacy as a variable. As discussed in this study, principals have a significant, though indirect influence on student achievement. Principals' influence is indirect because it is mediated through others, namely teachers and other staff members in the school. It would be very informative to conduct a large-scale study that examines three variables for a large sample of schools: principal self-efficacy, teacher efficacy (both individual and collective), and student achievement. The hypothesis, based on the research, would be that schools with high principal efficacy and high teacher efficacy will demonstrate high levels of student achievement. Such a study would help to clarify the relationships between principal efficacy and teacher efficacy, teacher efficacy and student achievement, and principal efficacy and student achievement.

Future research also should examine whether or not different types of leadership development programs help to build the self-efficacy of participants. This study indicated that District A's multiyear leadership program and structures for providing modeling and coaching played a role in building the self-efficacy of the participants. Studies should examine the full range of programs, including university master's programs and school system models, to identify strategies that support future success by providing participants with experiences that are deliberately designed to increase self-efficacy. Once these strategies or best practices have been identified, this information can be used to design new programs or to update existing models.

Summary

Research has indicated that school principals have significant, though indirect, influence on the student learning that occurs in their schools (Cotton, 2003; Leithwood & Jantzi, 2008; Marzano et al., 2005). When principals are effective and successful, there is a positive effect on the students attending the schools they lead. Principals are more likely to be effective and successful if they believe in their own capability to execute the critical tasks that help to produce the characteristics associated with effective schools, including a safe and orderly learning environment, a positive school climate, and a high level of student learning. Bandura's work showed that individuals form their self-efficacy beliefs by receiving and interpreting information collected from mastery experiences, vicarious experiences, verbal persuasion, and affective states. This study indicates that leadership development programs can provide aspiring leaders with experiences that form and strengthen their sense of efficacy with regard to the complex and demanding tasks that contemporary principals must complete at a high level. There is, however, a considerable amount of untapped potential. A more explicit marriage of self-efficacy research and leadership development strategies will help to better prepare school leaders of tomorrow for the challenges they will face. Furthermore, equipping the next generation of school principals with a stronger sense of self-efficacy will greatly benefit the students who attend the schools they lead.

Appendices

Appendix A: The Principal Self-Efficacy Scale (PSES) and Demographic Questions

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for principals in their school activities.

Directions: Please indicate your opinion about each of the questions below by marking one of the nine responses in the columns on the right side.

1	2	3	4	5	6	7	8	9
Not at all		Very little		Some degree		Quite a bit		A great deal

The scale of responses ranges from *None at all* (1) to *A great deal* (9), with *Some degree* (5) representing the midpoint between these low and high extremes. You may choose any of the nine possible responses, as each represents a degree on the continuum. Your answers are confidential.

Please respond to each of the questions by considering the combination of your *current* ability, resources, and opportunity to do each of the following in your present position.

In your current role as principal, to what extent can you:

1. facilitate student learning in your school?
2. generate enthusiasm for a shared vision for the school?
3. handle the time demands of the job?
4. manage change in your school?
5. promote school spirit among a large majority of the student population?
6. create a positive learning environment in your school?
7. raise student achievement on standardized tests?
8. promote a positive image of your school with the media?
9. motivate teachers?
10. promote the prevailing values of the community in your school?
11. maintain control of your own daily schedule?
12. shape the operational policies and procedures that are necessary to manage your school?
13. handle effectively the discipline of students in your school?
14. promote acceptable behavior among students?
15. handle the paperwork required of the job?
16. promote ethical behavior among school personnel?
17. cope with the stress of the job?
18. prioritize among competing demands of the job?

Demographic Questions

1. Please indicate your gender:
 - a. Female
 - b. Male
2. Please indicate your race or ethnicity
 - a. American Indian
 - b. African American
 - c. Asian–Pacific Islander
 - d. Caucasian
 - e. Hispanic–Latino
 - f. Multiracial
3. How many years have you been a principal?
 - a. 1-2
 - b. 3-5
 - c. 5-9
 - d. 10-15
 - e. 15 or more
4. How many years have you been a principal in your current school?
 - a. 1-2
 - b. 3-5
 - c. 5-9
 - d. 10-15
 - e. 15 or more
5. What is the approximate student enrollment in your school?
 - a. Fewer than 300
 - b. 301-450
 - c. 451-600
 - d. 601-750
 - e. More than 750
6. What is the approximate percentage of students in your school who qualify for free- or reduced-price meals (FARMs)?
 - a. Less than 10%
 - b. 11-20%
 - c. 21-30%
 - d. 31-40%
 - e. 41-50%
 - f. 51-60%
 - g. 61-70%
 - h. 71-80%
 - i. More than 80%

Appendix B: Survey Consent Letter

Letter of Invitation to Participants

The purpose of this letter is to invite you to participate in a study about the self- efficacy beliefs of principals in high-achieving elementary schools. This research has been approved by [District A Public Schools]. The purpose of this research project is to examine the perceptions and sources of the self-efficacy beliefs of elementary principals whose schools have demonstrated a high level of student achievement when compared to similar schools. You have been chosen to participate in the study because you are an elementary principal, you have served as principal of your current school for at least three years, and your school's performance on the 2011 [state assessment] indicates a high level of student achievement when compared to schools with a similar percentage of students qualifying for free and reduced-price meals.

There are two parts to this study. The first part of the study involves asking a selected group of 40 elementary principals to complete a short online survey. The survey contains a total of 24 items, including items about self-efficacy beliefs and demographic questions about you and your school.

In the second part of the study, I will invite five to six principals to participate in individual semi-structured interviews about their self-efficacy beliefs and their professional development experiences. If you are selected for the second part of the study, I will send you a letter inviting you to meet with me.

Although the survey will ask you to provide your name and demographic information about your school, all data collected in the study will be managed through systems and strategies that ensure your anonymous participation. Principals, schools, and even the school system will not be referred to by name in the study. Only the members of my dissertation committee and I will have access to the information obtained directly from the survey. Your participation in the survey is voluntary, and you may decide not to continue at any time. The results of the study will be provided in the form of an executive summary and made available to [District A] and all participants upon request.

If you would like to participate in the study, please review and sign the enclosed consent form and send it back to me in the self-addressed stamped envelope that is provided. Then click on following weblink: https://www.surveymonkey.com/s/JVirga_SelfEfficacyStudy and complete the short survey. The survey should not take more than 20-25 minutes to complete.

Thank you in advance for your participation and prompt response. If you have any questions, please feel free to contact me via e-mail at James.J.Virga@mcpsmd.org or by calling me at 301-538-8863. Thank you for your consideration.

Sincerely,

Jamie Virga
Doctoral Student
MCPS Consulting Principal

Appendix C: Principal Interview Questions

Category/ Coding	Question
General self-efficacy	Think back to when you first started the process of becoming a school administrator. How did you feel about your ability to be a successful principal?
Education experiences	What were some of the experiences that you had as a teacher/educator that caused you to feel that way?
Personal experiences	Did you have experiences outside education that caused you to feel that way? What were they?
Leadership experiences	Please tell me about your assignment and activities during your time as an Assistant Principal I.
Leadership experiences	Please tell me about your assignment and activities during your time as an Assistant Principal II.
Leadership experiences	Please tell me about your assignment and activities during your time as a Principal Intern.
Leadership experiences	Please tell me about your assignment and activities during your time as a First Year Principal.
General self-efficacy	Did your feelings about your ability to be a successful principal change as you went through the leadership program? In what way?
Mastery experiences	Please tell me about a time during the program, that you were very successful with a task or responsibility—something you were proud of.
Mastery experiences	Any other examples? What do you think led to your success in these tasks?
Vicarious experiences	Please tell me about a time that someone (a supervisor, a peer, a coach) modeled a task or a skill for you. What did you gain from that experience? Any other examples of modeling?

Verbal persuasion	Please tell me about a time that someone (a supervisor, peer, coach) influenced you through a conversation. What was the conversation about? What did you gain from the experience?
Verbal persuasion	Any other examples of what we might call coaching through conversation?
Verbal persuasion	Who were some of your mentors during the program? How did they support you?
Affective states	Please tell me about a time during the program that you had a stressful experience or interaction or were experiencing some very negative emotions. What was the situation? How was it resolved?
Affective states	Please tell me about a time during the program that you had an exhilarating or very positive experience. What was the situation?
Affective states	Tell me about one of your best days as a principal.
Affective states	Tell me about one of your worst days as a principal.
Leadership experiences	As you reflect on the program, what were some of the most valuable experiences you had?
Leadership experiences	What were some of the least valuable?
Leadership experiences	If you could make a change in some aspect of the program, what would you change and why?
General self-efficacy	You are now principal of a school that is demonstrating a high level of academic growth and success when compared to similar schools. If I asked you to list the main reasons for this success, what would you say?
Personal experiences	When you think of your success as a person and a principal, what are some of the personal characteristics that you have that you believe have contributed to your success?
Personal experiences	What do think are the sources of those characteristics?
General self-efficacy	What is your best piece of advice for a beginning school administrator?

Appendix D: Interview Consent Letter

Letter of Invitation to Participants

Dear _____,

First, let me thank you for participating in the first part of my research study by completing the survey about principal self-efficacy. The purpose of this letter is to invite you to participate in the second part of this study. For the second part of the study, I will be conducting semistructured individual interviews with a small number of principals who completed the principal self-efficacy survey. The purpose of the interviews is to explore principals' perceptions about their self-efficacy beliefs and to gain knowledge about the sources of those beliefs. Participants in the interviews will be asked questions about their efficacy beliefs and their professional development experiences. The interviews will be approximately 1 hour in length. The interviews will be audio taped.

The data will be analyzed in terms of themes and patterns that relate to principal self-efficacy and the sources of efficacy beliefs. Interview data will be organized in a way that ensures your anonymous participation. Only the members of my dissertation committee will have access to the information obtained directly from the interviews. Your participation in the interview is voluntary, and you may decide not to continue at any time. The results of the study will be provided in the form of an executive summary and made available to XXPS and all participants upon request.

Thank you in advance for your participation and prompt response. If you have any questions, please feel free to contact me via email at James_J_Virga@xxpsmd.org or by calling me at 301-538-8863. Thank you for your consideration.

Sincerely,

Jamie Virga
Doctoral Candidate
University of Maryland

Appendix E: The Leadership Development Program in District A

Future Administrators Workshops: To be eligible to apply for assistant principal positions in District A's elementary schools, school system employees must first complete the Future Administrators Workshops; four 3-hour sessions that provide an overview of school administration in District A and the full leadership development program.



Assistant Principal I (AP1) Year: During their AP1 year, developing administrators receive on-the-job training from their principals and participate in leadership seminars with other AP1s. These seminars are planned and implemented by the district's directors of elementary and secondary leadership development, former principals who are now charged with training the new generation of school leaders. Each AP1 is also provided with a professional development team (PDT) comprising the AP1, the school principal, an assistant superintendent, and a mentor. The PDT meets regularly to hear updates on the AP1's performance and to provide training and guidance. The PDT plays a critical role in determining whether or not the AP1 will continue to progress through the leadership development program.



Assistant Principal II Year: After successful completion of the AP1 year, the aspiring principal becomes a 2nd-year assistant principal (AP2). Once again, the leadership candidate is provided with training, seminars, mentoring, and guidance from a professional development team. As an AP2, the administrator's responsibilities are greater; the PDT expects a higher level of performance.



Principal Intern Year: An aspiring principal who successfully completes the AP2 year can apply to be selected as a principal intern. As a principal intern, the aspiring administrator takes on an even greater level of responsibility. The intern year involves additional training, seminars, mentoring, and support from a PDT, which now includes a consulting principal. Consulting principals are former district principals who now serve as coaches and mentors to developing administrators. The principal intern year culminates with the intern practicum, a period of 6 weeks during which the permanent principal is away from the school building while the principal intern serves as acting principal, managing all aspects of the school on a daily basis. At the conclusion of the intern year, the members of the PDT evaluate the intern based on the district's standards for principals and determine whether or not the intern is ready to be a principal in the district.



First Year as Principal: Once an individual is selected as a new principal, the district continues to provide leadership development support. Every new principal participates in new-principal seminars that include direct coaching from the superintendent of the school system. In addition, the consulting principal first assigned during the intern year continues to work with the novice principal to provide support, advice, resources, and guidance.

References

- Allinder, R. A. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education, 17*, 86-95.
- Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A. Pauly, E., & Zellman, G. (1976). *Analysis of the school preferred reading programs in selected Los Angeles minority schools*. (REPORT NO. R-2007-LAUDS). Santa Monica, CA: Rand Corporation. (ERIC Document Reproduction Service No. 130 243)
- Ashton, P., & Webb, R. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York, NY: Longman.
- Ashton, P. T., Webb, R. B., & Doda, N. (1983). *A study of teachers' sense of efficacy: Final report, Executive summary*. Gainesville, FL: University of Florida.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review, 84*, 191-215).
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*, 122-147.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*, 117-148.
- Bandura, A. (1995). *Self-efficacy in changing societies*. Cambridge, UK: Cambridge University Press.
- Bandura, A. (1997). *Self efficacy: The exercise of control*. New York, NY: W.H. Freeman.
- Bandura, A. (2000). Cultivate self-efficacy for personal and organizational effectiveness. In E. A. Locke (Ed.), *The Blackwell handbook of principles of organizational behavior* (pp. 120-136). Malden, MA: Oxford University Press.
- Bandura, A., & Walters, R. H. (1963). *Social learning and personality development*. New York, NY: Holt, Rinehart, and Winston.
- Berman, P., & McLaughlin, M. W. (1977). *Federal programs supporting educational change, Vol. III: Factors affecting implementation and continuation*. Santa Monica, CA: The RAND Corporation.

- Branch, G., Hanushek, E., & Rivkin, S. (2009). *Estimating principal effectiveness*. Washington, DC: CALDER Institute.
- Brookover, W. B., & Lezotte, L. W. (1979). *Changes in school characteristics coincident with changes in student achievement*. East Lansing, MI: Institute for Research on Teaching and Learning, Michigan State University
- Bruce, C. D., Esmonde, I., Ross, J., Dookie, L., & Beatty, R. (2010). The effects of sustained classroom-embedded teacher professional learning on teacher efficacy and related student achievement. *Teaching and Teacher Education, 26*(8), 1598-1608.
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology, 44*(6), 473-490.
- Clark, D., Martorell, P., & Rockoff, J. (2009). *School principals and school performance*. Washington, DC: CALDER, the Urban Institute.
- Coladarci, T., & Breton, W. A. (1997). Teacher efficacy, supervision, and the special education resource-room teacher. *The Journal of Educational Research, 90*(4), 230-239.
- Condon, C., & Clifford, M. (2009). *Measuring principal performance: How rigorous are publicly available performance assessment instruments?* Naperville, IL: Learning Point Associates.
- Copland, M. A. (2001). The myth of the superprincipal. *Phi Delta Kappan, 82*(7), 528.
- Cotton, K. (2003). *Principals and student achievement: What the research says*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2011) *Designing and conducting mixed methods research (2nd ed.)*. Thousand Oaks, CA: Sage.
- Crosbie-Burnett, M., & Lewis, E. A. (1993). Theoretical contributions from social and cognitive behavioral psychology. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 531-561). New York, NY: Plenum Press.
- Cushing, K. S., Kerrins, J. A., & Johnstone, T. (2003). Disappearing principals. *Leadership, 32*(5), 28.

- Daly, A. (2009). Rigid response in an age of accountability: The potential of leadership and trust. *Educational Administration Quarterly*, 45(2), 168-216.
- Dellinger, A. B., Bobbett, J. J., Olivier, D. F., & Ellett, C. D. (2008). Measuring teachers' self-efficacy beliefs: Development and use of the TEBS-Self. *Teaching & Teacher Education*, 24(3), 751-766.
- Dimmock, C., & Hattie, J. (1996). School principals' self-efficacy and its measurement in a context of restructuring. *School Effectiveness and School Improvement*, 7, 62-75.
- DuFour, R., & Eaker, R. (1998). *Professional learning communities at work: Best practices for enhancing student achievement*. Bloomington, IN: National Education Service.
- Dussault, M., Payette, D., & Leroux, M. (2008). Principals' transformational leadership and teachers' collective efficacy. *Psychological Reports*, 102(2), 401-410.
- Edmonds, R. R., & Frederiksen, J. R. (1978). *Search for effective schools: The identification and analysis of city schools that are instructionally effective for poor children*. Cambridge, MA: Center for Urban Studies.
- Forsyth, P. B., & Hoy, W. K. (1978, Winter). Isolation and alienation in educational organizations. *Educational Administration Quarterly*, 80-96.
- Friedman, I. A. (1997, April). *High- and low-burnout principals: What makes the difference?* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Fry, B., O'Neill, K., & Bottoms, G. (2006). *Schools can't wait: Accelerating the redesign of university principal preparation programs*. Atlanta, GA: Southern Regional Education Board.
- Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 569-582.
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, 17, 183-211.
- Goddard, R. (2002). A theoretical and empirical analysis of the measurement of collective efficacy: The development of a short form. *Educational and Psychological Measurement*, 62(1), 97-110.
- Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Education Research Journal*, 37, 479-507.

- Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2004). Collective efficacy beliefs: Theoretical developments, empirical evidence, and future directions. *Educational Researcher, 33*, 3-13.
- Goddard, R. D., & Skrla, L. (2006). The influence of school social composition on teachers' collective efficacy beliefs. *Education Administration Quarterly, 42*(2), 216-235.
- Goddard, Y., Neumerski, C., Goddard, R., Salloum, S., & Berebitsky, D. (2010). A multilevel exploratory study of the relationship between teachers' perceptions of principals' instructional support and group norms for instruction in elementary schools. *The Elementary School Journal, 111*(2), 336-357.
- Gramling-Vasquez, S. (2010). *State report card rating, poverty and burnout: South Carolina high school principal perspectives* (Doctoral dissertation). Retrieved from Dissertations & Theses: Full Text. (Publication No. AAT 3397829)
- Grissom, J. A., & Loeb, S. (2009). *Triangulating principal effectiveness: How perspectives of parents, teachers, and assistant principals identify the central importance of managerial skills*. Stanford, CA: Stanford University.
- Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education, 4*(1), 63-69.
- Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*(3), 627-643.
- Guterman, J. (2007). Where have all the principals gone? The acute school-leader shortage [Electronic Version]. *Edutopia*. Retrieved from <http://www.edutopia.org/where-have-all-principals-gone>
- Haas, J. C. (2005). *A case study of the actions taken by a school district in planning and implementing a strategy to establish school-based professional learning communities*. College Park, MD: University of Maryland.
- Hallinger, P., & Heck, R. H. (1996). Reassessing the principal's role in school effectiveness: A review of empirical research. *Educational Administration Quarterly, 32*(1), 5.
- Hallinger, P., & Heck, R. H. (1998). Exploring the principal's contribution to school effectiveness: 1980-1995. *School Effectiveness & School Improvement, 9*(2), 157.
- Hallinger, P., & Heck, R. H. (2010). Collaborative leadership effects on school improvement: Integrating unidirectional- and reciprocal-effects models. *The Elementary School Journal, 111*(2), 226-252.

- Hallinger, P., & Snidvongs, K. (2008). Educating leaders: Is there anything to learn from business management? *Educational Management Administration & Leadership*, 36(1), 9-31.
- Hess, F. M., & Kelly, A. P. (2005). Learning to lead? In preparing principals, content matters. *Education Week*, 24.
- Hess, F. M., & Kelly, A. P. (2007). Learning to lead: What gets taught in principal-preparation programs. *Teachers College Record*, 109(1), 244-274.
- Hewitt, P., & Stambuck, H. (2008). Study pinpoints reasons for the principal shortage [Electronic Version]. *Colleague: News from the College of Education and Health Professions*. Fayetteville, AK: University of Arkansas. Retrieved from <http://coehp.uark.edu/colleague/6368.php>
- Hillman, S. J. (1983). *Contributions to achievement: The role of expectations and self-efficacy in students, teachers, and parents*. Bloomington, IN: Indiana University.
- Hipp, K. A., & Bredeson, P. V. (1995). Exploring connections between teacher efficacy and principals' leadership behaviors. *Journal of School Leadership*, 5(2), 136-151.
- Imants, J. G., & De Brabander, C. J. (1996). Teachers' and principals' sense of efficacy in elementary schools. *Teaching and Teacher Education*, 12, 179-195.
- Kelly, A. P., & Hess, F. M. (2005). The accidental principal. *Education Next*, 5(3).
- Lee, V. E., Dedrick, R. F., & Smith, J. B. (1991). The effect of the social organization of schools on teacher efficacy and satisfaction. *Sociology of Education*, 64(3), 190-208.
- Lehman, R. (2007). *The relationship of elementary school principals' perceptions of self-efficacy and student achievement* (Doctoral dissertation). Retrieved from Dissertations and Theses: Full text. (Publication No. AAT 3262932)
- Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership & Management*, 28(1), 27-42.
- Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly*, 44(4), 496-528.
- Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning. Review of research*. St. Paul, MN, University of Minnesota, Center for Applied Research and Educational Improvement, and Toronto, Canada, Ontario Institute for Studies in Education: The Wallace Foundation.

- Leithwood, K., & Macall, B. (2008). Collective leadership effects on student achievement. *Educational Administration Quarterly*, 44(4), 529-561.
- Levine, A. (2005). *Educating school leaders*. Washington, DC: The Education School Project.
- Lezotte, L. W. (1992). "Principal" insights from effective schools. *Education Digest*, 58(3), 14.
- Lyons, J. E. (2006). Perceptions of the impact of accountability on the role of principals. *Education Policy Analysis Archives*, 14(16), 1-16.
- Marks, H. M., & Nance, J. P. (2007). Contexts of accountability under systemic reform: Implications for principal influence on instruction and supervision. *Educational Administration Quarterly*, 43(1), 3-37.
- Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Alexandria, VA: Association for Supervision and Curriculum Development.
- McCormick, M. (2001). Self-efficacy and leadership effectiveness: applying social cognitive theory to leadership. *The Journal of Leadership Studies*, 8, 22-33.
- McGuigan, L., & Hoy, W. K. (2006). Principal leadership: Creating a culture of academic optimism to improve achievement for all students. *Leadership & Policy in Schools*, 5(3), 203-229.
- National Board for Professional Teaching Standards. (2010). *National Board Certification for Educational Leaders* (NBCEL). Retrieved December 28, 2010, from http://www.nbpts.org/products_and_services/nbcel
- Nettles, S. M., & Herrington, C. (2007). Revisiting the importance of the direct effects of school leadership on student achievement: The implications for school improvement policy. *Peabody Journal of Education*, 82(4), 724-736.
- Nir, A. E., & Kranot, N. (2006). School principals' leadership style and teachers' self-efficacy. *Planning and Changing*, 37(3&4), 205-218.
- No Child Left Behind Act of 2001. P.L. 107-110. Washington, DC: U.S. Congress. <http://www.ed.gov/esea>. Accessed 1 July 2009.
- Pajares, F. (1997). Current directions in self-efficacy research. In H. W. Marsh, R. G. Craven, & D. M. McInerney (Eds.), *International advances in self-research* (pp. 1-49). Greenwich, CT: Information Age Publishing.

- Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading & Writing Quarterly*, 19(2), 139.
- Rice, J. K. (2010). *Principal effectiveness and leadership in an era of accountability: What research says* (CALDER Brief 8). Washington, DC: The Urban Institute.
- Roellke, C., & Rice, J. K. (2008). Responding to teacher quality and accountability mandates: The perspective of school administrators and classroom teachers. *Leadership and Policy in Schools*, 7(3), 264-295.
- Rosenholtz, S. J., Bassler, O., & Hoover-Dempsey, K. (1986). Organizational conditions of teacher learning. *Teaching and Teacher Education*, 2(2), 91-104.
- Ross, J. A. (1994). *Beliefs that make a difference: The origins and impacts of teacher efficacy*. Paper presented at the annual meeting of the Canadian Association for Curriculum Studies, Calgary, Canada.
- Ross, J. A., & Gray, P. (2006). Transformational leadership and teacher commitment to organizational values: The mediating effects of collective teacher efficacy. *School Effectiveness and School Improvement*, 17(2), 179-199.
- Santamaria, A. P. (2008). *A principal's sense of self-efficacy in an age of accountability*. (Doctoral dissertation). Retrieved from Dissertations & Theses: Full Text. (Publication No. AAT 3296855)
- Sergiovanni, T. J. (1994). *Building community in schools*. San Francisco, CA: Jossey-Bass.
- Siegrist, G. R., Weeks, W. C., Pate, J. L., & Monetti, D. R. (2009). Principals' experience, educational level, and leadership practices as predictors of Georgia high school graduation test results. *Journal of Philosophy & History of Education*, 59, 174-179.
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26(4), 1059-1069.
- Smith, W., Guarino, A. J., Strom, P., Reed, C., Lamkin, M. L., & Rushforth, K. (2003). Principal self-efficacy and effective teaching and learning environments. *School Leadership & Management*, 23(4), 505-508.
- Soodak, L. C., & Podell, D. M. (1993). Teacher efficacy and student problem as factors in special education referral. *Journal of Special Education*, 27(1), 66.
- Stephenson, L. (2009). *Professional isolation and the school principal* (Doctoral dissertation). Retrieved from Dissertations & Theses: Full Text. (Publication No. AAT 3358323)

- Sunderman, G. L., Orfield, G., & Kim, J. S. (2006). Flawed assumptions: How No Child Left Behind fails principals. *Principal Leadership*, 6(8), 16-19.
- Tschannen-Moran, M., & Gareis, C. R. (2004). Principals' sense of efficacy: Assessing a promising construct. *Journal of Educational Administration*, 42, 573-585.
- Tschannen-Moran, M., & Gareis, C. R. (2005). *Cultivating principals' sense of efficacy: Supports that matter*. Paper presented at the annual meeting of the University Council for Educational Administration, Nashville, TN.
- Tschannen-Moran, M., & Hoy, A. W. (2006). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, 23(6), 944-956.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68, 202-248.
- Versland, T. M. (2009). *Self-efficacy development of aspiring principals in educational leadership preparation programs*. Bozeman, MT: Montana State University.
- Viel-Ruma, K., Houchins, D., Jolivette, K., & Benson, G. (2010). Efficacy beliefs of special educators: The relationships among collective efficacy, teacher self-efficacy, and job satisfaction. *Teacher Education and Special Education*, 33(3), 225-233.
- Ware, H., & Kitsantas, A. (2007). Teacher and collective efficacy beliefs as predictors of professional commitment. *Journal of Educational Research*, 100(5), 303-310.
- Watkins, P., & Moak, J. (2010). Elementary school principal: Dispositional, gender, and environmental predictors of student achievement success for the 21st century. *National Forum of Applied Educational Research Journal*, 24(1/2), 37-45.
- West, D. L., Peck, C., & Reitzug, U. C. (2010). Limited control and relentless accountability: Examining historical changes in urban school principal pressure. *Journal of School Leadership*, 20(2), 238-266.
- Whitaker, K. (1996). Exploring causes of principal burnout. *Journal of Educational Administration*, 34(1), 60.