Fall 12-2009

Principal Efficacy: An Investigation of School Principals' Sense of Efficacy and Indicators of School Effectiveness

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PRINCIPAL EFFICACY: AN INVESTIGATION OF SCHOOL PRINCIPALS' SENSE OF EFFICACY AND INDICATORS OF SCHOOL EFFECTIVENESS

by

Charles Wayne Lovell

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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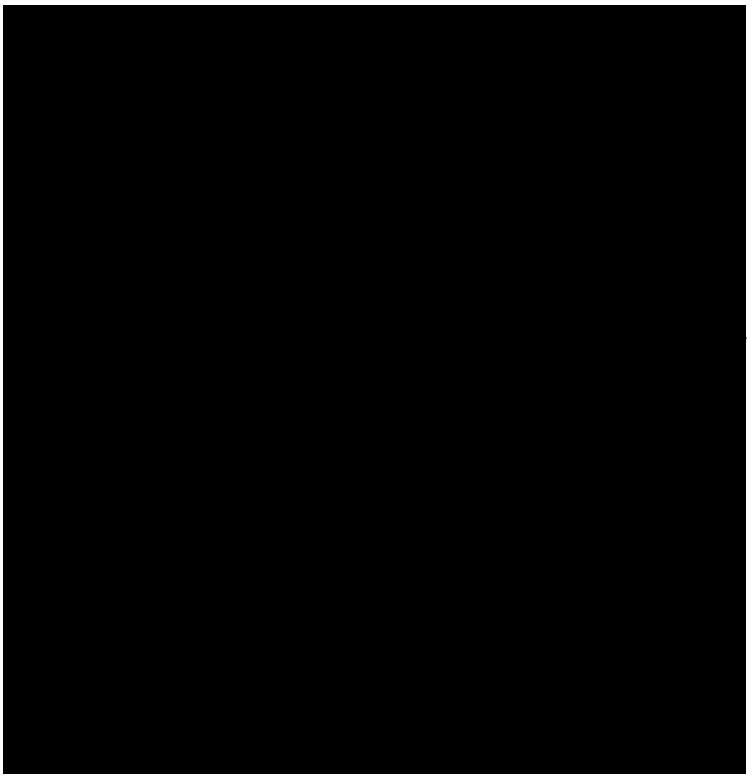

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ABSTRACT

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At the individual school level, the responsibility for demonstrating school effectiveness lies on the shoulders of the building administrator. In fact, "it is widely accepted that good principals are the cornerstones of good schools and that, without a principal's leadership efforts to raise student achievement, schools cannot succeed" (Tschannen-Moran & Gareis, 2004, p. 573). However, federal, state, and local mandates have increased the pressure on school administrators to demonstrate effectiveness. As a result, the work of school administrators has changed. Furthermore, Fullan (2003) identifies a trend that demonstrates a dramatic decrease in the principal's perceptions of effectiveness, authority, trust, and involvement. Additionally, Bandura (2000) stated that "when faced with obstacles, setbacks, and failures, those who doubt their capabilities slacken their efforts, give up, or settle for mediocre solutions. Therefore, the efficacy beliefs of the principal are vital to meeting the challenging expectations facing school administrators (Paglis & Green, 2002).

The primary purpose of this study was to determine if there is a statistically significant relationship between principal's sense of efficacy beliefs and indicators of school effectiveness. The participants for this study included 387 school administrators from the state of Georgia. The researcher utilized the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004) and a demographic survey to

collect data. Data was collected by using an online survey site. A response rate of 24% was obtained.

In regard to statistical findings, six hypotheses related to principal efficacy and school effectiveness were tested. Statistical significance was obtained in regard to principals' years of experience and in regard to whether or not principal worked in a school that meet Annual Yearly Progress (AYP) or not. Additional findings suggested that there is not a strong link between principal efficacy beliefs and indicators of school effectiveness as demonstrated by this research. However, there were some interesting findings that justify the continued exploration of principal efficacy beliefs and factors associated with school effectiveness. Specifically, future research should examine the relationships between principals' sense of efficacy for instructional leadership and principals' sense of efficacy for management and indicators of school effectiveness at the middle and high school levels.

DEDICATION

On behalf of my loving family, I dedicate this manuscript to each of you. Your devotion and patience have been an inspiration. I will always remember the encouragement and love that you gave during this time in my life. I thank God daily for each of you.

To my wife, Kim, this could not have been possible without your undying support and commitment. I will be in your debt forever. Your sacrifices were not in vain. Truly, I have found a virtuous woman.

To my children, Alyssa, Rachel, and Jesse, this has been for each of you. I know that my absence over the past few years has been the hardest on my children. However, I hope and pray that from this experience each of you will see the value of education, hard work, and persistence.

To my parents, Harold and Regina Lovell, thank you for being the role models that you have been. Your commitment, dedication, and sacrifices have been invaluable to our family. I strive daily to live up to the standard that you two have maintained for all of these years. Without the love and support that you gave me, I would not be where I am today.

ACKNOWLEDGEMENTS

I would like to express my gratitude to the members of my committee. I am deeply grateful to my chair, Dr. Kyna Shelley, for her mentoring, patience, guidance, and willingness to see me through this endeavor. A special thanks goes to Dr. Thelma Roberson for her extensive and helpful suggestions. I would also like to express my gratitude to Dr. Gaylynn Parker and Dr. David Lee for agreeing to be a member of this team.

With regard to helpful and insightful feedback, a number of people provided continuous support and devoted friendship, including Nichel Swindler, James Thompson, and Joe Cash. Your willingness to continually read and proof my work was invaluable.

Most importantly, I would like to acknowledge the importance of God in my life and His help in this process. During this period of my life, I found encouragement and solace in Isaiah 40:31, "But they that wait upon the Lord shall renew their strength; They shall mount up with wings as eagles; They shall run, and not be weary; and they shall walk and not faint." Without my faith, all of this would be in vain.

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CHAPTER I

INTRODUCTION

The terms accountability, improvement, adequate progress, and growth have become ubiquitous in the field of education. Likewise, the field of educational leadership has developed a unique familiarity with the concepts behind these terms. School systems across the nation have been mandated by the *No Child Left Behind* (*NCLB*) (2001) legislation to address school effectiveness and student achievement. At the individual school level, the responsibility for demonstrating school effectiveness lies on the shoulders of the building administrator. In fact, "it is widely accepted that good principals are the cornerstones of good schools and that, without a principal's leadership efforts to raise student achievement, schools cannot succeed" (Tschannen-Moran & Gareis, 2004, p. 573). In addition, Leithwood, Louis, Anderson, and Wahlstrom (2004) have suggested that the key to successful school reform lies in the motivations and capacities of the school principal. Most significantly, these authors have stated that "leadership is second only to classroom instruction among all school related factors that contribute to what students learn" (p. 7). However, many school districts have found that sustainable reform is very difficult to achieve (Fullan, 2005).

In an attempt to resolve this difficulty, the researcher investigated the self efficacy of school principals employed in school districts throughout the state of Georgia. It was the aim of this research to provide insight into leadership capacity and performance. In particular, the study examined the self-efficacy beliefs that exist among principals at the elementary, middle, and high school levels and the indicators of school effectiveness. The primary indicators of school effectiveness came from the Annual Measurable Objectives

(AMO) that have been established by the Georgia Department of Education. It should be noted that AMO are reported as percentage of students scoring proficient or advanced on state assessments in reading/language arts and mathematics on the Criterion-Referenced Competency Tests (CRCT) for the elementary and middle grades and the Enhanced Georgia High School Graduation Tests (EGHSGT) for the high school. In addition to indicators of school effectiveness, the researcher examined the relationship between principal efficacy beliefs and Title I status. Title I refers to a federally mandated program that seeks to improve the academic achievement of disadvantaged students by providing equal opportunities to a high quality education (Georgia Department of Education, 2009).

Statement of the Problem

Federal, state, and local mandates have increased the pressure on school administrators to demonstrate effectiveness. As a result, the work of school administrators has changed. No longer is the role or position of a school administrator solely that of a manager. To be effective in the school systems of today, one must be more than a supervisor (Senge, 1990). Indeed, the Georgia Leadership Institute for School Improvement (GLISI), working collaboratively with the Board of Regents of the University of Georgia, the Georgia Partnership for Excellence in Education, business leaders, the Georgia Professional Standards Commission, the Georgia Department of Education, the Office of the Governor, and K-12 educators, has developed a framework for describing effective educational leadership. This outline is extensive in the manner that it expands the traditional definition of a school leader/administrator and in the manner that it develops specific roles. More specifically, this framework has identified eight roles for which an effective leader must demonstrate competency. These roles are

identified as a data analysis leader, a curriculum, assessment, and instruction leader, a performance management leader, an operations leader, a relationship development leader, a process improvement leader, a change leader, and a learning and performance leader (Davis, 2006).

This is an example of how one state is correlating the importance of the building level supervisor to the effectiveness of the school. Georgia is not alone in this movement to expand the definition or job description of the school administrator (Page, 2006). Likewise, the expansion of the school administrator's roles and responsibilities has had an impact on local school districts. Specifically, as roles and responsibilities have increased, school districts have found it difficult to find quality individuals who are willing or capable of assuming leadership positions (Olson, 2008).

Along with their ever increasing roles, a school administrator must also contend with *No Child Left Behind*'s goal of 100 percent proficiency in reading and math by 2014. Adequate yearly progress, or AYP, will become more and more difficult to demonstrate as schools begin to reach the higher levels of proficiency (Hoff, 2008). Again, pressure on school administration to keep on target with yearly expectations will continue to increase.

In response to the increasing demands placed on school administrators, school districts throughout the U.S. are focused on improving the recruitment, preparation, development, and retention of quality school administrators (Page, 2006). Unfortunately, an often overlooked factor is related to principals' self-beliefs of capabilities. For instance, Fullan (2003) identifies a trend that demonstrates a dramatic decrease in the principal's perceptions of effectiveness, authority, trust, and involvement. He cites an

additional survey conducted by the Avalon Group which found that 58% of the respondents felt that the performance expected from them was unrealistic and unattainable. Furthermore, Bandura (2000) stated that "when faced with obstacles, setbacks, and failures, those who doubt their capabilities slacken their efforts, give up, or settle for mediocre solutions. Those who have a strong belief in their capabilities redouble their effort to master the challenge" (p. 120).

Therefore, the efficacy beliefs of the principal are vital to meeting the challenging expectations facing school administrators (Paglis & Green, 2002). Likewise, principal efficacy research could play a significant role in any change in recruitment, preparation, development, and retention programs that a district might implement. It is the intent of this study to determine if there are statistically significant relationships between principal self-efficacy scores on the Principal Sense of Efficacy Scale (PSES) and indicators of school effectiveness.

Hypotheses

The purpose of this project was to examine the relationship of principal self-efficacy and school effectiveness. The sample included all of the principals in the state of Georgia. The research was guided by the following question:

1. Is there a relationship between principal efficacy beliefs and indicators of school effectiveness?

To that end the following hypotheses were tested:

H_1: There will be a significant relationship between elementary school principal efficacy beliefs and indicators of school effectiveness.

H_2: There will be a significant relationship between middle school principal efficacy beliefs and indicators of school effectiveness.

H_3: There will be a significant relationship between high school principal efficacy beliefs and indicators of school effectiveness.

H_4: Principal efficacy is a significantly contributing factor to predicting overall school performance.

H_5: Principal efficacy beliefs can be predicted by school size, school AYP status, years experience, and/or ethnicity.

H_6: A significant relationship exists between principal efficacy beliefs and Title I status.

Definition of Terms

The following terms were used throughout this study:

1. Annual Measurable Objectives (AMO) – refers to performance indicators used to monitor student performance across student subgroups, schools, and districts. In Georgia, it is used to identify students scoring proficient or advanced on a number of state assessments in reading, math, and English. In addition, AMO are used to determine Annual Yearly Progress. For the purpose of this study, AMO will be used as indicators of school effectiveness (GADOE, 2009).
2. Annual Yearly Progress (AYP) – refers to the annual assessment of student achievement, participation, and growth on a number of statewide assessments and indicators. AYP is used to determine if a school has made adequate progress towards a proficiency goal (GADOE, 2009).

3. Collective Teacher Efficacy - refers to "the perceptions of teachers in a school that the efforts of the faculty as a whole will have a positive effect on students" (Goddard, Hoy, & Woolfolk-Hoy, p. 479, 2000).
4. Criterion-Referenced Competency Tests (CRCT) – refers to one of the annual measurable objectives or assessments designed to measure student performance and knowledge acquisition of Georgia's Performance Standards and Quality Core Curriculum standards. Georgia law requires that students in grades one through eight be assessed using a CRCT in the areas of reading, English/language arts, and math. Additionally, students in the grades three through eight must take a CRCT in the areas of science and social studies (GADOE, 2009).
5. Enhanced Georgia High School Graduation Tests (EGHSGT) - refers to the English and Math graduation tests that have been enhanced to meet the standards of *NCLB* and a federal peer review of Georgia's accountability system (GADOE, 2009).
6. Full-Time Equivalent Report (FTE) - refers to the method by which schools report student enrollment. Additionally, in Georgia, it is the state funding mechanism from which the operations of instructional programs are generated. In Georgia, the FTE report is divided into 17 categories with a specific funding weight assigned to each category. The Georgia General Assembly determines the base amount of money to be received for each FTE student (GADOE, 2009).
7. Georgia Performance Standards (GPS) – refers to the curriculum standards that have been developed as part of a revision of Georgia's Quality Core Curriculum (GADOE, 2009).

8. *No Child Left Behind Act of 2001* (NCLB) – refers to Public Law 107-110 which was enacted by the federal government for the purpose of increasing the standards for states, school districts, and schools. This law is the reauthorization of the Elementary and Secondary Education Act (ESAE). This represents the federal law affecting k-12 education in the United States (NCLB, 2001).
9. Perceived Self Efficacy – refers to an individual's belief in his or her capabilities to perform a specified task (Bandura, 1977a).
10. Principal's Sense of Efficacy for Instructional Leadership (PSEIL) – refers to a subscale of the Principal Sense of Efficacy Scale instrument. This subscale relates to the administrator's ability to lead a school in curriculum and instructional related issues. For the purpose of this study, PSEIL is measured by a subscale of the Principal Sense of Efficacy Scale (Tschannen-Moran & Gareis, 2004).
11. Principal's Sense of Efficacy for Management (PSEM) – refers to a subscale of the Principal Sense of Efficacy Scale instrument. This subscale relates to administrator's ability to handle the management aspects of school administration. For the purposes of this study, PSEM is measured by a subscale of the Principal Sense of Efficacy Scale (Tschannen-Moran & Gareis, 2004).
12. Principal's Sense of Efficacy for Moral Leadership (PSEML) – refers to a subscale of the Principal Sense of Efficacy Scale instrument. This subscale relates to the administrator's ability to promote ethical behavior in the school setting. For the purposes of this study, PSEML is measured by a subscale of the Principal Sense of Efficacy Scale (Tschannen-Moran & Gareis, 2004).

13. Principal's Sense of Efficacy Scale – refers to a survey developed by Tschannen-Moran and Gareis (2004) to provide insight into a school administrator's sense of efficacy in the areas of management, instructional, and moral leadership.
14. Quality Core Curriculum – refers to curriculum standards resulting from Georgia's Quality Basic Education Act of 1985 (GADOE, 2009).
15. School Level – for the purpose of this study, identifies the respondent's school as an elementary, middle, or high school.
16. School Setting – for the purpose of this study, indicates the respondent's school as urban, rural, or suburban.
17. School Size – for the purpose of this study, indicates the total enrollment for the specified school.
18. Self Efficacy – refers to a sense of confidence or capability regarding the performance of a specific task (Bandura, 1986).
19. Social Cognitive Theory - describes human behavior in terms of interrelationship between behavior, environmental factors, and personal factors (Bandura, 1977a; Bandura, 1986).
20. Teacher Efficacy - refers to the "teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Hoy & Miskel, 2008, p. 160).
21. Title I - refers to Title I, Part A of the *No Child Left Behind Act of 2001*. The purpose of Title I is to target high-poverty schools to provide educational funding for services designed to improve the academic achievement of economically disadvantaged students (NCLB, 2001).

22. Total Years Experience – for the purpose of this study, indicates the total number of years the individual has been employed as an educator.

Delimitations

The scope of this study was limited by the following factors:

1. The administrators, self-efficacy scores, and annual measurable objectives are limited to the respondents and student populations from the state of Georgia. Therefore, the results of this study may not be generalized beyond this population.
2. This study is limited to self-disclosed perceptions of efficacy of the administrators who choose to participate in this study.
3. This study relied on the participants to report their school's annual measurable objectives. Due to the confidential nature of this study, there was no way to verify the reported annual measurable objectives.
4. This study relied on the participants to report their demographic data accurately. Due to the anonymity of the participants, there was no way to verify the reported demographic data.
5. The research design of this study was designed to show strength of a relationship. Therefore, caution should be used when reviewing the data.
6. This study cannot determine causality or the specific elements that are related.

Assumptions

1. The researcher assumed that demographic data is reported accurately.
2. The researcher assumed that the Annual Measurable Objectives are reported accurately.
3. The researcher assumed that Title I status is reported accurately.

4. The researcher assumed that only current school administrators participate in the study and that data reported is specific to his or her school.

Justification

Justification for this study lies in the importance of the school principal as the "key agent for setting the tone and direction of the school" (Tshannen-Moran & Gareis, 2005). In addition, recent research has established a statistically significant correlation between school leadership and student achievement (Marzano, Waters, & McNulty, 2005). Furthermore, McCormick (2001) suggested that principal self-efficacy is related to leadership function. It was the goal of the researcher to add to the knowledge base regarding principal self-efficacy along with its relationship to student achievement.

The results of this study will contribute to the limited research base currently available that examines the relationship between principal self-efficacy and collective school performance. According to Lehman (2007), more research is needed to understand how principal self-efficacy influences academic achievement. Additional research would help to provide comparative information in regards to similar settings and populations. Furthermore, Santamaria (2008) states that the study of principal self-efficacy has had a very limited focus. Up until recently, efficacy research in the field of education has focused primarily on students, teachers, and collective teacher efficacy. Additionally, the results of this study will be valuable to school districts during the selection process of professional development opportunities for school administrators.

Summary

Chapter One discussed the ever increasing demands that confront school administrators. Likewise, an introduction to the importance of principal self-efficacy is

presented. Chapter Two contains an overview of the theoretical framework of social cognitive theory and the concept of self-efficacy as related to school administrators and school effectiveness. Chapter Three provides the methodology that will be utilized to conduct this study. In Chapter Four, the results of the data collection and statistical analyses will be presented. Chapter Five will contain an in-depth discussion of the researcher's findings, implications, and recommendations for future research.

CHAPTER II

LITERATURE REVIEW

Theoretical Framework

This study is based on the theoretical foundation of the self-efficacy theory. This theory is derived from Bandura's social cognitive theory (Hoy & Miskel, 2008). This chapter will provide a review of the relevant literature related to social cognitive theory, self-efficacy theory, the relevance of self-efficacy to the field of education, and self-efficacy as applied to the academic setting to include; the constructs of student efficacy, teacher efficacy, collective efficacy, and principal efficacy. In addition, this chapter will provide a review of the relevant literature related to the importance of leadership in the academic setting. This review will explore the importance of effective leadership and its impact on student achievement/school effectiveness.

Social Cognitive Theory

At the core of Bandura's social cognitive model is the concept of triadic reciprocal causation. This is a multi-directional model that suggests individual actions and choices are affected by environmental, behavioral, and interpersonal factors. In effect, individuals take an active role in making things happen. Bandura terms this "human agency" (Bandura, 1986). Key to this sense of agency is the fact that, among other personal factors, individuals possess self-beliefs that enable them to exercise a measure of control over their thoughts, feelings, and actions, that "what people think, believe, and feel affects how they behave" (Bandura, 1986, p. 25).

The concept of the triadic reciprocal causation evolved from developments in behavior theory during the late 1960's through the early 1970's. During this time period,

researchers interested in the causality of human behavior shifted their focus from internal determinates to external influences. In fact, Skinner contended that "human behavior is shaped and controlled by environmental contingencies" (Bandura, 1997, p. 9). Simply put, behavior was considered to be a specific response to environment influences or factors. This view soon gave way to idea that behavior is influenced by more than just the environment or situational factors. Behaviorists began to think of behavior as not just a passive response, but as the result of an interaction between the environment and the person. Bandura (1977b) suggested that this concept is represented as $B = f(P, E)$. This formula demonstrated that behavior was a result of a function of personal factors and environmental factors. As behavior theory continued to evolve, a model that recognized bidirectional influences of personal factors and environmental factors was developed. This model is represented as $B = f(P \leftrightarrow E)$. In this representation, the function acknowledges the personal factors and the environmental factors. However, this model failed to recognize the importance of the behavior in the interaction. In fact, Bandura (1977b) stated that "in this analysis, persons and situations are depicted as independent causes of behavior as though it were only a product that does not figure into the casual process" (p. 9).

Bandura recognized the importance of cognitive and social dimensions to behaviorist positions. With this in mind, Bandura developed a theory that acknowledged behavioral factors, personal factors, and environmental factors as determinants of each other. This is the basis of what Bandura termed triadic reciprocal causality (Bandura, 1977a). In Bandura's theory of what was then known as social learning theory, these three sources operate differently in different settings and for different behaviors. In other

words, there exists a dynamic interrelationship between these three factors where in one setting environmental factors may exert the most powerful influence but in another setting, personal factors may exert the most powerful influence. This interaction can be represented as a triangle with behavior at one vertex, environment at one vertex, and personal at the last. This model is presently known as Triadic Reciprocal Causation (Bandura, 1986).

The importance of the social cognitive theory to this study is related to the prominence this model places on self-regulatory capacity. This theory supports the notion that individuals are able to exercise control over their behaviors and over their environments. Futhermore, Bandura (1995) states that "striving for control over life circumstances permeates almost everything people do because it can secure them innumerable personal and social benefits" (p. 1).

Self Efficacy Theory

In Bandura's (1977a) publication of Self-Efficacy: Toward a Unifying Theory of Behavioral Change, he develops a social cognitive model of behavior that includes self-efficacy as a major construct. In fact, self-efficacy theory grows out of Bandura's original social learning theory. Social learning theorists have defined self-efficacy as a sense of confidence or capability regarding the performance of a specific task (Bandura, 1986). In other words, how one thinks he or she can perform a specific task can have an impact on how well one actually performs because effective functioning requires competencies, skills, and a strong self-belief. In general, the theory of self-efficacy suggested that "individuals will work hard when they believe they have the capabilities to be successful,

the task is not too difficult, they have had success at completing similar tasks, and they have good models of success" (Hoy & Miskel, 2008, p. 168).

Bandura is quite possibly the most prolific researcher regarding self-efficacy (Bandura, 1977a, 1977b, 1986, 1988, 1991, 1993, 1995, 1997 & 2000). His research has shown many ways in which beliefs in one's ability will or can influence one's actual performance. Bandura stated that one's expectations about cause and effect result from experience and that the most powerful efficacy beliefs are situation specific. It should be noted that self-efficacy does not refer to actual ability, or skill, but to what one believes one can do with whatever skill that individual possesses. In addition, Bandura suggested that learning, choice making, and motivation are affected by one's self-efficacy beliefs (Bandura, 1995).

Moreover, it is also suggested that people with high self-efficacy beliefs often approach tasks differently from individuals with low self-efficacy beliefs. The individuals with high self-efficacy view challenges as opportunities to master rather than dangers to avoid. Consequently, individuals with high self-efficacy tend to demonstrate a greater intrinsic interest, set more challenging goals, recover confidence after failure quickly, and attribute failure to insufficient effort (Bandura, 1988, p. 286). However, it should be noted that "self-efficacy beliefs are context specific" (Tschannen-Moran & Gareis, 2004, p. 573).

Additionally, Bandura (1997) makes a distinction between self-efficacy and self-esteem. Self-efficacy focuses on one's judgment of self capability; whereas, self-esteem focuses on one's self-worth. Interestingly, Bandura states there is no direct relationship between one's concept of capability and one's concept of self-worth. Pajares and

Kranzler (1995) affirm self-efficacy to be highly predictive of behavior. Conversely, self-esteem is not a significant predictor of behavior. This is most apparent when the researchers factored out the influence of efficacy.

Bandura suggested that there are four primary sources of individual self-efficacy. These include mastery experience, vicarious experience, verbal persuasion, and physiological states (1977b). Mastery experience is the most influential source of efficacy. Past successes and failures have a direct impact on an individual's self-efficacy. In fact, Bandura suggested that successful experiences at a specific task are associated with an increase in self-efficacy for similar situations in the future (1997). Conversely, recurrent failures and self-doubt will decrease self-efficacy (Hoy & Miskel, 2008).

An additional source of self-efficacy pertains to vicarious experiences or modeling. Seeing someone else succeed or fail has an impact on an individual's self-efficacy beliefs (Hoy & Miskel, 2008). This is especially true if the model is very similar to the individual. Bandura suggested that the more skilled the model is the greater the impact on individual self-efficacy beliefs (1997).

Likewise, verbal persuasion can be a very powerful source of self-efficacy. The concept of verbal persuasion relates to encouraging or reinforcing the idea that one is capable of completing a task. Bandura cautions that verbal persuasion has limited power unless the verbal acknowledgements are realistic (Bandura, 1997).

The fourth source of self-efficacy is related to emotional arousal. Hoy and Miskel suggested that individuals will "make judgments about anticipated performance based on positive arousal such as excitement and enthusiasm and on negative factors such as fear, fatigue, stress, and anxiety" (2008, p. 158). Bruning, Schraw, Norby, and Ronning (2004)

suggested that negative emotions can decrease individual self-efficacy. However, Bandura suggested that if one is given appropriate coping skills, self-efficacy can be enhanced (1997).

Just as there are four sources of self-efficacy, there are four major processes through which efficacy beliefs regulate human functioning (Bandura, 1995, p.5). These include cognitive, motivational, affective, and selection processes. These processes identify ways in which self-efficacy beliefs affect one's psychological welfare and functioning. In regard to the cognitive processes that help to regulate behavior, Bandura states that "most courses of action are initially organized in thought" (1995, p.6). These thought processes help one to establish goals by providing a method to evaluate his or her capabilities or competencies. Deci (1995) has suggested that these desires to feel competent or effective is so strong that they could be could be considered a fundamental human need. Consequently, the higher one perceives these capabilities or competencies, the higher the goals one sets and the more committed they are (Bandura, 1989). Likewise, when confronted with difficult problems, high self-efficacy individuals devote large amounts of cognitive resources to mastering the situation whereas individuals with low self-efficacy tend to spend cognitive resources worrying about the negative outcomes. Additionally, it is through cognitive processes that outcomes are visualized. Individuals with a high sense of efficacy for a given situation are more likely to visualize successful outcomes to challenging situations whereas individuals with a low sense of efficacy are more likely to visualize negative outcomes. Moreover, individuals who consistently visualize successful outcomes may experience enhanced performance in the future (Bandura, 1989, p. 1176).

Motivational processes involve self-efficacy as a form of regulation. This is evidenced through the processes by which self-efficacy beliefs influence the cognitive approaches individuals use to establish, evaluate, and achieve specific goals. Bandura identifies three theories associated with cognitive motivation. These are attribution theory, expectancy-value theory, and goal theory. Self-efficacy is related to attribution in that individuals with high self-efficacy beliefs will attribute failures to a lack of individual effort or factors beyond his or her control (Bandura, 1986). However, individuals with low self-efficacy beliefs internalize the failure and view the failure as a lack of personal ability. In regard to expectancy-value theory, individuals act on what they expect to occur and to the degree they value the outcome. The expectations are based partly on the capability beliefs of the individual. As a result, self-efficacy plays an important role in the goals that one sets based on his or her own perceptions of ability. The last theory associated with cognitive motivation is that of goal theory. In goal theory, self-efficacy beliefs play an important role in the regulation of motivation and action. For example, Bandura (1986) affirms that motivation is contingent upon one's interpretation of one's performance in relation to an internalized standard for the self.

Affective processes relate to the coping strategies that one has developed to handle the stress and depression that may be experienced as a result of threatening or difficult situations. Efficacy beliefs influence these coping strategies in a number of ways. One example is related to the manner in which the threat or situation is perceived and cognitively processed. Another way is related to the exercise of control over disturbing thoughts. A further way is related to self-efficacy and how self-efficacy can help to minimize anxiety by providing behavioral support to change the situation

(Bandura, 2000). In summation, individuals with a high sense of efficacy have the capacity to effectively manage stress and anxiety.

Selection processes signify the choices individuals make to pursue specific goals, to engage in specific activities, and to their level of engagement. Individuals tend to engage in activities that they believe they can master. Similarly, individuals tend to avoid activities that they believe exceed their capabilities. More specifically, self-efficacy beliefs help one to shape their environments through the career paths they choose, the better they are prepared for their chosen profession, and the more persistent they remain in face of obstacles (Bandura, 1995).

It is important to note that there is a difference between one's self-concept beliefs and one's self-efficacy beliefs. Self-efficacy is a context specific assessment of competence to perform a range of tasks or an assessment of one's ability to perform specific actions (Schunk, 1991). This becomes a question of "can I." Whereas, the self-concept is a cognitive appraisal that is integrated across various dimensions that individuals attribute to themselves.

In summation, self-efficacy is a major construct of Bandura's social cognitive theory. Self-efficacy can be defined as an individual's belief in his or her capabilities to perform a specified task (Bandura, 1977a, 1977b). These beliefs influence how people think, feel, motivate themselves, and act (Bandura, 1995, p. 2). Additionally, these beliefs are developed from four main forms of influence; mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states. Furthermore, self-efficacy beliefs contribute to the regulation of human behavior through cognitive, motivational, affective, and selection processes (Bandura, 1989).

Self-Efficacy in the Academic Setting

Although the construct of self-efficacy is grounded in social cognitive theory, it is a construct that has been widely applied to a variety of fields and settings. One can find current self-efficacy research in practically any setting from health and medicine to sports and performance (Pajares, 1997). In regard to the academic setting, self-efficacy research has focused on three primary areas, two of which have a firm research based established and one that is emerging. These areas are student self-efficacy, individual teacher and collective teacher efficacy, and principal efficacy. The researcher will identify and review the early studies associated with student efficacy research, introduce the concept of teacher efficacy and review relevant literature, and discuss the emergence of principal self-efficacy research. The research compiled from student, teacher, and collective efficacy studies has established a theoretical foundation for principal self-efficacy research (Hoy & Miskel, 2008). The researcher believes that it is important to outline the major research findings in these areas to demonstrate the impact that efficacy research has had on student and school performance.

There is a vast and complex literature concerning student academic self-efficacy and academic performance. The literature suggests that there is a strong link between student self-efficacy and academic performance (Schunk, 1991). Although Bandura is the leading theorist on self-efficacy in general, in the educational domain, Schunk has been the leading theorist and researcher regarding the role of student self-efficacy in the classroom setting (Schunk, 1981, 1982, 1983, 1984, 1991, and 1996). Schunk's research has revealed several important trends. In an early study, Schunk (1981, 1982) found that efficacy accounted for significant increments in student achievement in mathematics. He

has stated that "a heightened sense of efficacy sustains task involvement and results in greater achievement" and "percepts of efficacy lead to less persistence and lower achievement" (Schunk, 1983, p. 92). This was evidenced in a later study as well. Schunk found that students with high levels of self-efficacy will try a variety of strategies and persevere while students who have low self-efficacy often give up on a learning process if early efforts do not result in perceived success (Schunk, 1984).

Self-efficacy has also been related to the quantity of effort and willingness to persist at a task (Schunk, 1996). Once again, Schunk stated that individuals with strong efficacy beliefs are more likely to exert effort in the face of difficulty and to persist at a task when they have the requisite skills. On the upside for students with low self-efficacy, Bandura (1986) notes that there is evidence that self-doubt or weak self-efficacy may foster learning when students have not previously acquired the skills. Besides the quantity of effort, the quality of work in terms of deeper processing strategies and general cognitive engagement of learning has been strongly linked to self-efficacy perceptions (Pintrich & Schrauben, 1992).

Schunk (1991) also found that students who had stronger self-efficacy beliefs were able to master various math and reading tasks better than students with weaker efficacy beliefs. In addition, these studies showed that efficacy was a significant factor or significant predictor of learning and achievement, even after prior achievement and cognition skills were taken into consideration. Likewise, Jinks and Morgan (1996) reported significant relationships between elementary student's perceptions of self-efficacy and self-reported grades. In fact, these relationships held constant across urban, suburban, and rural settings.

Pajeres (1996) states that his research supports Bandura's claim that efficacy beliefs mediate the effect of skills or other self-beliefs on subsequent performance by influencing effort, persistence, and perseverance. Bandura (1986) describes the process of creating and using self-beliefs as an intuitive process. Individuals engage in behaviors and then interpret the results of their actions to create and develop beliefs about subsequent behaviors. Thus, academic performances are a result of what an individual comes to believe her or she has or can accomplish. Hackett and Betz (1989) have suggested that the students' perceptions may more accurately predict students' motivation and future academic choices. This helps explain why some students' academic performances may differ markedly when they have similar abilities.

Bandura (1997) makes the claim that people with a high sense of self-efficacy in a specific domain often approach difficult tasks in a number of ways that are different from the way an individual with a low sense of self-efficacy would approach the same tasks. The individuals with high self-efficacy view challenges as things to be mastered and not as dangers to be avoided. They have greater intrinsic interest in activities, they set more challenging goals and they maintain a stronger commitment to them.

In sum, student self-efficacy beliefs have been shown to be important mediators of all types of achievement behavior as well as many other types of behavior. Self-efficacy influences what choices are made, the amount of effort that is put forth, the quality of effort, how persistent the individual is, and how the individual feels about his or her ability to succeed.

Like student efficacy, teacher efficacy is an area that has also been the focus of self-efficacy research in the academic setting. The research in teacher efficacy has

developed two important strands. The first line of research investigates individual teacher efficacy beliefs; similarly, the second strand investigates teacher efficacy beliefs as a collective construct (Pajares, 1996, 1997; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). Initial research related to teacher efficacy began as a research project for the RAND Corporation in the 1970's (Berman & McLaughlin, 1977; Dellinger, Bobbett, Olivier, & Elliot, 2007). The researchers involved in this project reported that they based items that were related to teacher beliefs to impact student performance on Rotter's (1966) locus of control theory. Dellinger et al. (2007) report that neither Bandura nor his theory of perceived self-efficacy was mentioned in this report. However, this was around the time that Bandura's (1977a) construct of perceived self-efficacy was receiving acceptance. As efficacy research evolved, studies indicated that perceived self-efficacy could be a stronger predictor of behavior than Rotter's locus of control (Hoy & Miskel, 2008). As a result, later studies have remained consistent with Bandura's social cognitive model of perceived self-efficacy (Tschannen-Moran et al., 1998). Similarly, self-efficacy beliefs are task specific (Bandura, 1997). In regard to defining this construct, Tschannen-Moran et al. (1998) have defined teacher efficacy as a "teacher's beliefs in his or her own capability to organize and execute courses of action required to successfully accomplish a specific task in a particular context" (p. 233).

The research in the area of teacher efficacy has revealed that teacher efficacy beliefs are associated with improved student performance in a number of ways. For example, Dellinger et al. (2007) found that teacher efficacy beliefs were useful in distinguishing effective from non-effective schools. Ross and Bruce (2007) note that teachers who score high in efficacy beliefs are more open to innovative instructional

techniques, demonstrate highly effective classroom management techniques, are more successful with low ability students, and demonstrate greater levels of persistence when dealing with low-achieving students. Additionally, Goddard, Hoy, Woolfolk-Hoy (2004), Ross (1998), and Tschannen-Moran et al. (1998) have concluded that teachers with high efficacy beliefs generate higher levels of student achievement than teachers with low efficacy beliefs.

Woolfolk-Hoy (Shaugnessy, 2004) prefers to use the term teacher sense of efficacy as opposed to teacher efficacy. Bandura (1997) and Woolfolk-Hoy (2004) both suggest that teacher sense of efficacy is developed and enhanced by mastery experiences, vicarious experiences, social persuasion, and physiological states. Additionally, Goddard, Hoy, and Woolfolk-Hoy (2000) have suggested that these sources of efficacy beliefs can influence not only individual efficacy beliefs but also collective efficacy beliefs. Collective efficacy refers to the belief of shared capabilities. For example, collective teacher efficacy is defined as the shared perception of teachers in a school that collective efforts can have an impact on student achievement and school culture (Hoy & Miskel, 2008). This shared perception is derived from two components: the individual's beliefs about his or her own abilities and the individual's beliefs about the group's capabilities.

The research in the area of collective teacher efficacy has provide evidence that collective efficacy is associated with improved student achievement (Goddard, Hoy, & Woolfolk-Hoy, 2000). In addition, Goddard and Skrla (2006) state that collective teacher efficacy fosters student achievement by promoting a school culture that is characterized by persistent effort toward school improvement. Goddard and Skrla examined the extent to which teachers' race/ethnicity, gender, and years experience influenced collective

efficacy beliefs. The results of this study indicated that Hispanic and African American teachers had stronger collective efficacy beliefs than nonminority groups (whites). In addition, the more years experience a teacher reported, the stronger the collective efficacy beliefs. In another study, Ware and Kitsantas (2007) found that collective efficacy was enhanced when teachers believed they were able "to enlist administrative support, to influence decision making, and to control classroom instruction" (p. 309).

Goddard, Hoy, and Woolfolk-Hoy's (2000) study of collective efficacy has produced several important findings. Most importantly, the researchers found collective teacher efficacy to be positively associated with school level student achievement. In fact, this study demonstrated an eight point gain in math and reading achievement associated with a one unit increase in a school's collective efficacy. In addition, the researcher's analysis suggests that social cognitive theory can be applied to the organizational level.

In sum, the research on teacher efficacy and collective teacher efficacy provides evidence that teacher's individual beliefs about their capabilities to improve student performance and teachers' beliefs about collective efforts to improve student performance can significantly impact student achievement. In addition, the sources of efficacy which include mastery experiences, vicarious experiences, verbal persuasion, and physiological states can enhance and improve individual and collective efficacy beliefs (Bandura, 1997).

An emerging area of self-efficacy research in the academic setting is related to the construct of principal self-efficacy. In regard to this line of research, there exists a literature void. The literature on the specific construct of principal sense of efficacy is comprised of the publications of Tschannen-Moran and Gareis (2004, 2005) and the

approximately 15 dissertations that been identified by Proquest's Dissertations and Theses online database. The literature illustrates the importance of Tschannen-Moran and Gareis to the principal sense of efficacy research. The relevant studies identified by Proquest focus on research that employed the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004, 2005).

Tschannen-Moran and Gareis (2004, 2005) defined principal sense of efficacy as the principal's "judgment of his or her capabilities to structure a particular course of action to produce desired outcomes in the school he or she leads" (p. 90). The researchers state that principal self-efficacy beliefs are important in regard to the effort that the individual is willing to put forth, the goals that the individual is willing to set, and how the individual handles obstacles and difficult situations. Additionally, the researchers suggest that principals may be able to impact school effectiveness. "It may be that principals with strong self-efficacy beliefs are better able to cultivate higher sense of efficacy in the teachers, resulting in stronger motivation and improved performance of not only teachers but also, indirectly, students" (p. 111).

To aid in determining the level of principal sense of efficacy, Tschannen-Moran and Gareis (2004) developed an instrument following Bandura's guidelines for self-efficacy scale construction. A factor analysis indicated that this scale was comprised of three primary factors. These factor loadings ranged from 0.42 to 0.82 and accounted for 60% of the variance in principals' self-efficacy (p. 97). The three factors are related to a principal's sense of efficacy for instructional leadership, a principal's sense of efficacy for managerial leadership, and a principal's sense of efficacy for moral leadership. Reliability for the three primary factors was identified as 0.87 for efficacy for

management, 0.86 for efficacy for instruction, and 0.83 for efficacy for moral leadership. Additionally, subsequent analyses indicated that the three primary factors could be loaded together accounting for 70% of the variance in principals' sense of efficacy (Tschannen-Moran & Gareis, 2005).

In a follow up to the original study, the researchers investigated the principal sense of efficacy beliefs of school principals in the state of Virginia. In this study, the researchers identified a slight relationship between principals' race and efficacy beliefs. In regard to gender, women expressed higher efficacy beliefs than men. As a result, gender was a significant predictor of principals' efficacy beliefs. There were no other significant relationships identified in regards to demographics. Several implications to this study are offered. However, one of the most compelling is related to future studies. Tschannen-Moran and Gareis (2005) suggest that this construct provides a possible method to investigate the relationship between leadership behaviors and beliefs and student achievement.

Aderhold (2005) researched the relationship between principal efficacy and reading achievement. In this study, from the population of all elementary school principals in the state of South Dakota, 165 principal completed the survey packet and returned it for recording. The researcher used the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004). No statistically significant relationship was identified on any of the three subscales (efficacy for instructional leadership, efficacy for managerial leadership, and efficacy for moral leadership) of the PSES. In addition, Aderhold did not find a statistically significant relationship between principal efficacy and reading achievement. However, a significant relationship was

found in regards to the relationship between principal efficacy and class size. Aderhold reports higher efficacy scores for principals in schools with larger class sizes. In addition, principals with higher scores on efficacy for instructional leadership demonstrate higher levels of effective leadership practices. Although Aderhold examined school size, *NCLB* status, socio-economic status, years experience, and highest educational level attained, none of these variables demonstrated a significant relationship with principals sense of efficacy. Lehman (2007) also researched the relationship between principal efficacy and reading achievement. In this study, the sample population included all elementary school principals in the state of Wisconsin. Of the 1,124 principals that made up the population, 361 principals responded. The researcher used the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004). Lehman found that there was a statistically significant relationship between principal sense of efficacy and reading achievement. In addition, socio-economic status and number of students receiving free and reduced lunch were significant predictors of principal sense of efficacy. Other variables in this study had included enrollment size, school location, and *NCLB* status. No differences were found in regard to these variables.

Santamaria (2008) researched the relationship between principal efficacy and NCLB status. Included in the variables to be investigated in this study were school size, school setting, principal gender, principal ethnicity, years experience, number of years in education, number of years in administration, school enrollment, district enrollment, number of students on free and reduced lunch, percentage of English learners, percentage of students receiving special education services, and *NCLB* status. Participants for this study include all Title I primary and secondary schools in the state of California. Data

was received from 695 principals. Santamaria used a web based survey to collect this data. In addition, Santamaria used the principal efficacy instrument developed by Tschannen-Moran and Gareis. The researcher identified three critical findings: principals of schools that were in program improvement had significantly lower efficacy beliefs than principals that were not in program improvement, remaining in program improvement has a negative impact on principal efficacy, and age was the strongest negative predictor of efficacy (p. 72). Santamaria indicated that age, number of years of educational experience, program improvement status, school level, and percentage of English learners were significant predictors of principal efficacy. This is in contrast to the previous studies that had examined many of the same variables. Santamaria suggests that the limited size of the participating sample may have been more reflective of the population at large.

Due to the context and task specificity of self-efficacy, this cognitive construct has lent itself to research in a wide array of fields (Bandura, 1977a). In regards to education, research on self-efficacy has examined the constructs of student efficacy, teacher efficacy and collective teacher efficacy, and principal efficacy. Researchers have agreed that these constructs can have a positive impact on school culture and school effectiveness. Studies conducted on principal efficacy have demonstrated mixed results in regards to school effectiveness. However, Santamaria's (2008) study identified important trends and implications for future research and future policy; thereby, providing a basis for continued research in this area.

Leadership

The roles and responsibilities of building level school administrators are constantly changing and evolving. In the past, the demonstrated link between student achievement and school leadership was very weak (Witziers, Bosker, & Kruger, 2003). However, recent research has established a strong relationship between specific principal practices and student achievement (Cotton, 2003; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Marzano, Waters, & McNulty, 2005). The research and contributions of three primary studies that are particularly relevant will be discussed. Additionally, the Georgia Leadership Institute for School Improvement's model will be presented. The purpose of this discussion is to highlight the significant role the building level school administrator plays in student achievement and school effectiveness. Likewise, this discussion will demonstrate the expansion of the roles and responsibilities of school administrators.

Cotton (2003) reviewed 81 research articles that were published post 1985 that were related to principal behaviors and student achievement. Approximately 49 of these research articles were identified as primary documents. The remaining articles were comprised of reviews, summaries, and analyses of principal behaviors. It should be noted that Cotton's investigation was not quantitative. The researcher identified specific articles that dealt with student achievement, student attitudes, student behaviors, teacher attitudes, teacher behaviors, dropouts, and other significant stakeholder attitudes. From this in-depth review of the literature, Cotton was able to identify 25 specific categories of principal characteristics and behaviors (Appendix A). Cotton found a positive

relationship existed between these specific categories and student achievement, attitudes, and social behaviors (Cotton, 2003).

Cotton's research also produced several interesting findings relative to principal gender, school setting, and school socio-economic status. In regard to gender, it was noted that female principals typically receive higher ratings on instructional leadership roles than male principals (Bulach, Boothe, & Michael, 1999). Females were also perceived as more democratic and more comfortable in a participative leadership role than males. Additionally, females were more people oriented and more capable of developing a strong sense of community. In relation to school setting, Cotton found that secondary school principals devoted less time to instructional issues than elementary principals. In addition, secondary school principals spent less time observing classroom teachers. It was also noted that principals of low socio-economic schools rated lower on instructional leadership than principals of high socio-economic schools. Cotton identifies a study by Mendez-Morse (1991) in which the researcher suggests that principals of low socio-economic schools are more likely to be managers and less likely to be leaders. Lastly, Cotton identifies instructional leadership as the key for success in low socio-economic schools (2003).

The previous research review underscores the importance of school level administrator behaviors in relation to student achievement. In fact, a key point of this analysis identifies strong administrative leadership as a key component of effective schools (Cotton, 2003). Similarly, the 25 categories of principal behaviors and traits are positively related to highly effective schools. Although Cotton acknowledges that

effective leadership is more than just categories of behaviors and traits, it should be noted that these behaviors are related to successful school and student outcomes.

Leithwood et al. (2004) reviewed available research in response to specific questions related to school leadership and student achievement. The researchers were interested in the effect successful leadership had on student learning, the common leadership practices employed by effective school leaders, and the behaviors or characteristics associated with successful school leadership. The findings indicate that leadership is second only to classroom instruction as a factor that influences student achievement and that leadership effects are the greatest where they are needed most. These two statements demonstrate the important role building level administrators hold in promoting school effectiveness. Likewise, Fullan (2005) contends that effective leadership is critical to school success especially with so many school districts across the nation in need of school reform.

In regard to the leadership practices that are employed by effective school leaders, the researchers contend that there are three sets of practices that must be evident. First, effective school leaders must set the direction for the school. Leithwood et al. (2004) assert that setting directions includes articulating the school vision and mission, fostering common goals, monitoring performance, and promoting effective communication. Second, effective school leaders develop the people around them. Effective leaders provide opportunities for intellectual stimulation, models of best practice and individual support. Last, effective school leaders effectively redesign the organizations through strengthening the school culture, modifying the organization, and developing collaborative communities (p. 8).

In regard to what is required for successful school leadership, the researchers frame the answer around specific indicators of what school leaders need to be able to accomplish in a highly accountable policy context. Leithwood et al. (2004) suggest that effective school leaders need to be able to accomplish the following four tasks. To be effective, leaders need to be capable of creating and sustaining a competitive school, capable of empowering others to make decisions, capable of providing instructional leadership, and capable of developing and implementing a school improvement plan.

According to Lunenburg and Ornstein (2003), there are six major categories of leadership that can be identified in the academic setting; instructional leadership, transformational leadership, moral leadership, participative leadership, contingency leadership, and managerial leadership. Some researchers, such as Leithwood et al. (2004), view these categories as superfluous. Leithwood et al. would suggest that the core of leadership lies upon assisting in the establishment of organizational directions and using one's influence to advance the organization in that established direction. The imperative in leadership is not in the title but in the underlying skills that help the administrator to define the school's mission, to manage the instructional process, and to promote a positive climate.

In 2003, Mid-continent Research for Education and Learning (McREL) conducted a major quantitative study that examined school level leadership and its effect of student achievement. This study reviewed over 5,000 previous studies that had looked at the relationship between student achievement and principal leadership. Marzano, Waters, and McNulty identified 69 of these studies based on the quality of the design of the study, the rigor of the study, and the reliability and relevance of data (Waters & Cameron, 2005). In

addition, these 69 studies shared four characteristics; the dependent variable was student achievement, the independent variable was leadership, student achievement measures were quantitative and standardized, and the measures of school leadership were all quantitative and standardized.

According to Marzano et al. (2005), several major findings were identified. Most importantly, this analysis obtained a correlation between principal leadership behaviors and average student achievement to be 0.25. This correlation indicates that "a one standard deviation increase in principal leadership behavior corresponds to a 10 percent difference in student achievement on a norm referenced test" (Waters & Cameron, 2005, p. 3). This demonstrates a major shift from previous studies that demonstrated a very weak relationship between leadership behaviors and student achievement.

The second major finding is related to leadership responsibilities. The meta-analysis identified 21 categories of leadership behavior with an associated 66 practices (Appendix B). These categories are not inter-correlated (Waters & Cameron, 2005). An example of one of these categories and the corresponding practices will demonstrate the important role served in school leadership and student achievement. For example, the category of Flexibility refers to the degree to which a leader can adapt his or her leadership behaviors to a specific situation (Marzano et al., 2005). Associated practices with this category are identified as: adapting leadership style to the needs of specific situations, being directive or nondirective as the situation warrants, encouraging people to express diverse and contrary opinions, and being comfortable with making major changes in how things are done. Not only are these 21 categories of leadership behaviors associated with a significant difference in student achievement but they are also research

based. The previous example demonstrates the transformational leadership model (Burns, 1978; Bass, 1985; Bass & Avolio, 1994; Leithwood, 1994).

To provide a more manageable organizational structure, Mid-continent Research for Education and Learning synthesized these 21 categories of leadership behaviors into a construct that they have termed the "Balanced Leadership Framework" (Marzano et al., 2005). This framework groups the 21 responsibilities into the following groups: leadership, focus, magnitude of change, and purposeful community (Waters & Cameron, 2005). In effect, this framework provides practitioners with a viable system of applying the responsibilities and practices to their respective educational settings.

This study provides empirical foundations and practical applications to the field of educational leadership. Marzano, Waters, and McNulty, along with McREL have established a firm connection between leadership practices/behaviors and student achievement. The implications of this study are clear. Principal leadership makes a difference in a school's effectiveness and in effect student progress and achievement.

As discussed in Chapter One, the Georgia Leadership for School Improvement (GLISI), working collaboratively with the Board of Regents of the University of Georgia, the Georgia Partnership for Excellence in Education, business leaders, the Georgia Professional Standards Commission, the Georgia Department of Education, the Office of the Governor, and K-12 educators, has developed a framework for describing effective educational leadership. This outline is extensive in the manner that it expands the traditional definition of a school leader/administrator and in the manner that it develops specific roles. More specifically, this framework has identified eight roles in which an effective leader must demonstrate competency. These roles are identified as a data

analysis leader, a curriculum, assessment, and instruction leader, a performance management leader, an operations leader, a relationship development leader, a process improvement leader, a change leader, and a learning and performance leader (Davis, 2006).

The Eight Roles framework was designed to be consistent with the Educational Leadership Constituent Counsels Standards for the Advanced Programs in Educational Leadership. The roles represent a performance based system that lends itself to the measurement and analyzing of performance. Additionally, GLISI has developed modules around the roles that are designed to instruct educational leadership in these behaviors and practices. Presently, these modules are assisting colleges and universities in Georgia to standardize leadership preparation (Davis, 2006). Levine (2005) has reported that the educational leadership programs across the nation are not adequately preparing educational leaders for the expanded roles and responsibilities that are required of effective school administrators. Likewise, Hess and Kelly (2005) call for better preparation programs that combine organizational management and systems thinking. GLISI's Eight Roles have attempted to provide this type of support and guidance to educational leaders. In addition, the Eight Roles have attempted to synthesize broad research findings of researchers such as Marzano et al. and Leithwood et al. into a framework that was not overwhelming but that would provide an in-depth knowledge base and role specific skills repertoire (Davis, 2006).

For example, under the Eight Role model, an effective educational leader must be able to perform as a data analyses leader. GLISI describes the data analyses leader as one that "demonstrates the ability to analyze multiple sources of data to identify improvement

needs, symptoms, and root causes" (p. 27). Additionally, the data analyses leader should have the knowledge and skills to analyze standardized test scores, disaggregate the data, lead analyses teams, present data, lead root cause analyses, develop data driven goals, and assist in monitoring goal progress (Davis, 2006). This represents the knowledge and skills base required to function effectively in one of the eight roles.

Unfortunately, in today's atmosphere of high stakes accountability, uncertainty in regards to administrator preparedness, and an increase in roles and responsibilities of the building level administrator, many educators are not willing nor prepared to enter the field of educational leadership. These concerns along with a call for national standards have precipitated the move of Georgia's Leadership Institute for School Improvement to develop a framework to assist practicing and future educators to prepare for the new work of school leaders (Senge, 1990). This framework provides the principal greater autonomy in a systematic school improvement process.

This lengthy discussion, which included Georgia's Eight Role Model and the Balanced Leadership Framework, provides a discourse that substantiates not just the past focus on categories of behaviors, characteristics, or traits that are associated with effective leadership but also evidence of the importance of one's judgment of capability in regard to school leadership. Moreover, the Principal Sense of Efficacy Scale (PSES) provides a measurement of leadership judgment of capability on three specific factors; efficacy for instructional leadership, efficacy for managerial leadership, and efficacy for moral leadership (Tschannen-Moran & Gareis, 2005). These factors, much like the leadership practices identified by Leithwood et al. (2004), provide insight into the underlying skills that help the administrator manage the instructional process, provide

instructional leadership, provide effective managerial support, and to promote a positive school culture.

Summary

This chapter has provided an overview of social cognitive theory as a theoretical framework for this study. Self-efficacy has been defined and details regarding the characteristics of self-efficacy have been provided. In addition, the importance of the school administrator to school effectiveness and, therefore, to student achievement has been established. It should be noted that previous studies have discussed the importance of self-efficacy with regard to student efficacy, teacher efficacy, collective teacher efficacy, and principal efficacy. These studies examined a wide variety of variables and identified numerous significant relationships. This study will expand upon the previous research in regards to principal efficacy and indicators of school effectiveness. This will be accomplished by investigating variables that have been identified in previous studies along with variables that are specific to the state of Georgia. Specifically, this study will investigate the relationships of principal efficacy ratings and the specific annual measurable objectives. Additional variables to be investigated will include participant's gender, age, ethnicity, highest degree earned, school level, number of years as an educator, number of years in administration, number of years in present school, school enrollment, district enrollment, percentage of student's on free and reduced lunch, percentage of students receiving special education services, percentage of students receiving Student Support Team (SST) or 504 services, and school's Title I status.

CHAPTER III

METHODOLOGY

Introduction

This chapter provides a description of the methodology used in this study. It includes the research questions and hypotheses, information related to the participants, the instrument used to measure principal efficacy (Principal Sense of Efficacy Scale), and the procedures involved. This study investigated the self-efficacy beliefs that exist among principals at the elementary, middle, and high school levels. In addition, the study was designed to investigate the relationships between principal efficacy beliefs, indicators of school effectiveness, Title I status, and several demographic variables. It was the purpose of this study to determine if there were statistically significant relationships between principal self-efficacy scores and specific indicators of school effectiveness. In addition, demographic information was analyzed to determine if any significant relationships existed between the principal efficacy score and selected variables.

Hypotheses

This study addressed the following research hypotheses:

H_1: There will be a significant relationship between elementary school principal efficacy beliefs and indicators of school effectiveness.

H_2: There will be a significant relationship between middle school principal efficacy beliefs and indicators of school effectiveness.

H_3: There will be a significant relationship between high school principal efficacy beliefs and indicators of school effectiveness.

H_4: Principal efficacy is a significantly contributing factor to predicting overall school performance.

H_5: Principal efficacy beliefs can be predicted by school size, school AYP status, years experience, and/or ethnicity.

H_6: A significant relationship exists between principal efficacy beliefs and Title I status.

Research Design

This study employed quantitative analysis. Descriptive statistics were collected and analyzed. In addition, each hypothesis was tested using an appropriate statistical test. The variables included participant's Principals' Sense of Efficacy for Management score, Principals' Sense of Efficacy for Instructional Leadership score, Principals' Sense of Efficacy for Moral Leadership Score, indicators of school effectiveness, Title I status, and a myriad of selected demographic items.

Participants

Participants for this study included public elementary, middle, and high school principals in the state of Georgia. A total of 2,220 administrators were identified and selected using the most recent FTE data provided by the Georgia Department of Education. A participation rate of 24 percent was obtained yielding a final sample of 387 participants.

Selection of Participants

One way of choosing an appropriate sample size for a study was to assess the sample size needed to achieve a particular level of statistical power. The *a-priori* power analysis was utilized to this end. The power analysis was conducted on the most

conservative (i.e., analysis yielding the largest sample size) statistical approach to be used in Chapter 4. An a-priori power analysis was conducted to determine the number of participants required to detect a medium effect size ($f^2 = .25$) with power = .80 for a one-way between-subjects MANOVA (multivariate analysis of variance) given the following parameters: two groups, three dependent variables, tested at $\alpha = .05$. The power analysis suggested that 48 individuals will be needed to achieve a power of .80 given these parameters for the global MANOVA effect. However, an additional power analysis indicated that 128 individuals were needed to achieve a power of .80 for potential univariate post hoc comparisons. Therefore, it was determined that a minimum of 128 participants should be included in the study. The power analysis was conducted with the statistical software G*Power 3.0.8. Therefore, a sample size of 387 was large enough for analysis.

Instrumentation

Participants were asked to complete a Principal Self-Efficacy Scale. This instrument provided an indicator of the participant's efficacy to perform his or her job as a school administrator. The Principal Sense of Efficacy Scale (PSES) (Appendix C) developed by Tschannen-Moran and Gareis (2004) was selected because this instrument measures the specific variables the researcher was interested in and this instrument has established reliability and validity. Furthermore, this instrument was developed based on the Interstate School Leaders Licensure Consortium standards. Permission to use the PSES was granted by the author (Appendix D). In addition, this instrument provides an aggregate efficacy score along with three primary factors. These factors have been identified as efficacy for management, efficacy for instructional leadership, and efficacy

for moral leadership. Factor analyses continue to provide statistical support to the three factors (Tschannen-Moran & Gareis, 2004, 2005).

Tschannen-Moran and Gareis have stated that the "principal's sense of efficacy has been difficult to capture" (p. 575, 2004). After conducting three separate studies designed to develop a promising instrument, a reasonably reliable and valid scale was developed. This instrument was modeled after an earlier teacher efficacy scale which was developed by Tschannen-Moran and Woolfolk-Hoy (2001). Initially, this scale was composed of 50 items. However, after a principal component factor analysis was conducted, the scale was reduced to 18 items. The analysis identified three factors, the first of which consisted of six items related to self-efficacy to measure the managerial aspects of a principalship. Reported loadings on this factor range from 0.53 to 0.82. The second factor consisted of six items related to self-efficacy to measure the instructional aspects. Loadings on this factor range from 0.45 to 0.81. The final factor consists of six items related to self-efficacy for moral leadership with factor loadings ranging from 0.42 to 0.78. Aggregately, these loadings explain 60% of the variance in principals' sense of efficacy for this sample. The obtained reliability, using Cronbach's alpha of internal consistency, was .91. Reliability for the three primary factors was identified as 0.87 for efficacy for management, 0.86 for efficacy for instruction, and 0.83 for efficacy for moral leadership. Additionally, subsequent analyses indicated that the three primary factors could be loaded together accounting for 70% of the variance in principals' sense of efficacy (Tschannen-Moran & Gareis, 2005). However, for the purpose of this study, the researcher chose to utilize the three subscales (efficacy for management, efficacy for instructional leadership, and efficacy for moral leadership) in lieu of the composite

efficacy score in addressing hypotheses. In an effort to minimize Type I error, the overall composite efficacy score was not used.

The Principal Sense of Efficacy Scale is comprised of 18 items. As stated previously, this scale contains three subscales which are identified as: Principals' Sense of Efficacy for Management, Principals' Sense of Efficacy for Instructional Leadership, and Principals' Sense of Efficacy for Moral Leadership. Each subscale has six corresponding items. Items 3, 4, 11, 12, 15, and 18 relate to efficacy for management, items 1, 2, 6, 7, 9, and 13 relate to efficacy for instructional leadership, and items 5, 8, 10, 14, 16, and 17 relate to efficacy for moral leadership. A nine-point modified verbal frequency scale is used to collect the participant's responses. The scale is anchored as follows: 1 = not at all, 3 = very little, 5 = some degree, 7 = quite a bit, and 9= a great deal.

Tschannen-Moran and Gareis (2004) have encouraged the use of this instrument to explore whether the factor structure that they have identified is stable in other populations. At present, there have been fewer than five published studies (Aderhold, 2005; Lehman, 2007; Santamaria, 2008) using this instrument to access principal efficacy.

In addition, participants were asked to reply to a list of demographic items. These items included; participant's gender, age, ethnicity, highest degree earned, school level, number of years as an educator, number of years in administration, number of years in present school, school enrollment, district enrollment, percentage of student's on free and reduced lunch, percentage of students receiving special education services, percentage of students receiving Student Support Team (SST) or 504 services, and school's Title I

status. The demographic survey (Appendix E) was modeled after Santamaria's (2008) and Smith, Guarino, Strom, and Reed's (2006) survey instruments. The former author's significant findings support further investigation of the above listed items in a comparable setting. To access school effectiveness, each respondent was asked to provide information related to student achievement and performance from the most recent Georgia Department of Education School Report Card. If the administrator was at the elementary level, the respondent was asked to provide test participation rate, Georgia Criterion-Referenced Competency Test (CRCT) Math passing rate, CRCT Reading/English Language Arts passing rate, and attendance rate. If the administrator was at the middle level, the respondent was asked to provide test participation, CRCT Math passing rate, CRCT Reading/English language arts passing rate, and attendance rate. If the administrator was at the secondary level, the respondent was asked to provide test participation rate, Enhanced Georgia High School Graduation Test (EGHSGT) Mathematics passing rate, Enhanced EGHSGT Reading/English Language Arts passing rate, and graduation rate.

Procedures

Prior to collecting data, the researcher applied to The University of Southern Mississippi Institutional Research Board (IRB) for approval (Appendix F) of the study. Following receipt of approval from IRB, Each member of the population was electronically mailed an invitation to participate (Appendix G) in an online survey. This invitation contained a link to the survey site. Participants were directed to complete the online demographic section and the Principal Sense of Efficacy Scale. It was anticipated that it would take no longer than 20 minutes to complete the entire survey.

Participants were asked to complete the PSES and demographic survey within ten days. Following this time period, a follow-up electronic mail was sent. This mailing served as a reminder to participate in the survey. Three weeks from the initial mailing, a third and final email was sent. This mailing served as a reminder to participate and expressed gratitude to everyone for responding.

Limitations

The study was conducted with the following limitations:

1. The results are limited to the self-reported belief statements of administrators in Georgia.
2. The results are limited by the self disclosure of participants.
3. The results are limited by the possibility of multiple responses from a single participant.

Data Analysis

Descriptive statistics were used to analyze the data collected. Measures of central tendency and variability, where appropriate, were interpreted. Multiple linear regressions, a binary logistical regression, and a MANOVA were used to test the hypotheses. Level of significance was set at .05. Once data had been collected, each research question was addressed using appropriate statistical analyses.

Summary

This study was based on the theoretical foundation of the self-efficacy theory. This theory is derived from Bandura's social cognitive theory (Hoy & Miskel, 2008). In general, the theory of self-efficacy suggests that "individuals will work hard when they believe they have the capabilities to be successful, the task is not too difficult, they have

had success at completing similar tasks, and they have good models of success" (Hoy & Miskel, 2008, p. 168). As Senge (1990) has suggested, the work of administrators has changed. School administrators must be up for the present and coming challenges. Schools need leaders that believe they have the capabilities to be successful and are willing to take on the challenges. The Wallace Foundation (Leithwood, Louis, Anderson, & Wahlstrom, 2004) has suggested that the total effects of school leadership on school effectiveness account for 25% of total school effects (p. 5). As there has been limited research on principal efficacy beliefs (Santamaria, 2008), the researcher believes these statements have provided evidence that the study of principal efficacy beliefs is justified. This chapter provides the methodology that the researcher used to investigate principal self-efficacy beliefs and school effectiveness.

CHAPTER IV

ANALYSIS OF DATA

This chapter contains the descriptive and statistical data analysis produced from the evaluation of the research question and hypotheses. It was the purpose of this study to determine if there were statistically significant relationships between principal self-efficacy scores, as identified on the three subscales of the Principal Sense of Efficacy Scale (PSES), and specific indicators of school effectiveness. In addition, demographic information was analyzed to determine if any significant relationships existed between the principal efficacy score and selected variables.

Results

Three-hundred eighty-seven elementary, middle, and high school principals participated in the study. The descriptive statistics for the participants' demographics are listed in Tables 1 and 2. One-hundred ninety-eight (52.4%) of the participants were female, and 180 (47.6%) were male. A majority (n = 307, 79.5%) of the participants were White. Almost half (n = 181, 46.9%) of the respondents were 50 years of age or older. The participants' education was reported as follows: 3 (0.8%) Bachelor's, 40 (10.4%) Master's, 231 (60.0%) Specialists and 111 (28.8%) Doctorate. Participants had been educators for an average of 23.41 (SD = 7.90) years and had been at current school for an average of 7.19 (SD = 6.01) years. Additionally, participants had an average of 10.85 (SD = 6.09) years administrative experience and had been an administrator at current school for an average of 5.63 (SD = 3.86) years.

Table 1

Participants' Demographics: Gender, Ethnicity, Age, Education, School Level

Variable	*n*	%
Gender		
Female	198	52.4
Male	180	47.6
Ethnicity		
African American	71	18.4
Asian	3	0.8
Latino	3	0.8
White	307	79.5
Other	2	0.5
Age		
Under 30	1	0.3
30 – 34	16	4.1
35 – 44	121	31.3
45 – 49	67	17.4
50 +	181	46.9
Education		
Bachelor's	3	0.8
Master's	40	10.4
Specialist	231	60.0
Doctorate	111	28.8
School Level		
Elementary	183	48.2
Middle	74	19.5
High	110	28.9
Other	13	3.4

Table 2

Participants' Demographics: Years as Educator, Years at Current School, Years as Administrator, Years as Administrator at Current School

Variable	N	Min.	Max.	M	SD
Years as an Educator	386	8.00	46.00	23.41	7.90
Years at Current School	383	1.00	38.00	7.19	6.01
Years as Administrator	383	0.00	39.00	10.85	6.09
Years as Administrator at Current School	383	0.00	23.00	5.63	3.86

The principals also responded to a number of questions pertaining to their school and district. The descriptive statistics for these responses are listed in Tables 3 and 4. The average school population was 699.74 (SD = 372.44) students. The average district size was relatively large with over 16,000 students. Over half (221, 58.0%) of the principals reported that 50% or more of their students received free/reduced lunch. Twenty-six (6.9%) of the respondents reported that over 20% of their students received special education services. Approximately half (185, 51.2%) of the schools had Title I Status, and most of the schools (288, 78.5%) met the AYP standards.

Table 3

School/District Demographics

Variable	*n*	%
Percent Free-Reduced Lunch		
0 – 9%	16	4.2
10 – 19%	17	4.5
20 – 29%	40	10.5
30 – 39%	34	8.9
40 – 49%	53	13.9
50 – 59%	73	19.2
60% or more	148	38.8
Percent Special Education		
0 – 5%	54	14.3
6 – 10%	163	43.1
11 – 15%	108	28.6
16 – 20%	27	7.1
21% or more	26	6.9
Percent Receiving SST/504		
0 – 3%	137	36.4
4 – 6%	119	31.6
7 – 9%	64	17.0
10% or more	56	14.9
Title I Status		
Yes	185	51.2
No	176	48.8
AYP Status		
Needs Improvement	79	21.5
Meets Standard	288	78.5

Table 4

School/District Enrollment

Variable	N	Min.	Max.	M	SD
School Enrollment	382	3	2,402	699.73	372.44
District Enrollment	346	150	117,000	15,624.01	21,236.09

Research Question

Is there a relationship between principal efficacy beliefs and indicators of school effectiveness?

Research Hypothesis 1a

Elementary school principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of the CRCT Math passing rates.

Data Analysis for Hypothesis 1a

A multiple regression was conducted to determine if the elementary school principals' efficacy beliefs were significant predictors of math passing rates. The descriptive statistics for the dependent and predictor variables are listed in Table 5. The standardized residuals indicated that there were two outliers in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was not a significant predictor of CRCT Math passing rates, $F(3, 183) = 0.90$, $p = .443$, $R^2 = .02$. This indicates that together the predictors did not account for a significant amount of variation in the criterion. The regression coefficients

are listed in Table 6. The coefficients indicated that none of the efficacy subscales individually were significant predictors of CRCT Math passing rates within this model.

Table 5

Descriptive Statistics for Research Hypothesis 1a Variables

Variable	N	M	SD
CRCT Math Pass Rate	187	80.39	11.59
Efficacy for Management	187	7.04	1.27
Efficacy for Instructional Leadership	187	7.59	1.11
Efficacy for Moral Leadership	187	7.44	1.18

Table 6

Regression Coefficients for Research Hypothesis 1a

Predictor	B	SE	β	*t*	Sig.
Efficacy for Management	0.27	1.12	0.03	0.24	.811
Efficacy for Instructional Leadership	-0.24	1.62	-0.02	-0.15	.881
Efficacy for Moral Leadership	1.14	1.76	0.12	0.65	.517

Research Hypothesis 1b.

Elementary school principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of the CRCT Reading passing rates.

Data Analysis for Hypothesis 1b

A multiple regression was conducted to determine if the elementary school principals' efficacy beliefs were significant predictors of reading passing rates. The

descriptive statistics for the dependent and predictor variables are listed in Table 7. The standardized residuals indicated that there were two outliers in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was not a significant predictor of CRCT Reading passing rates, F (3, 182) = 0.68, p = .565, R^2 = .01. This indicates that together the predictors did not account for a significant amount of variation in the criterion. The regression coefficients are listed in Table 8. The coefficients indicated that none of the efficacy subscales individually were significant predictors of CRCT Reading passing rates within this model.

Table 7

Descriptive Statistics for Research Hypothesis 1b Variables

Variable	N	M	SD
CRCT Reading Pass Rate	186	90.01	6.01
Efficacy for Management	186	7.02	1.27
Efficacy for Instructional Leadership	186	7.59	1.12
Efficacy for Moral Leadership	186	7.43	1.18

Table 8

Regression Coefficients for Research Hypothesis 1b

Predictor	B	SE	β	*t*	Sig.
Efficacy for Management	0.69	0.58	0.15	1.19	.235
Efficacy for Instructional Leadership	0.05	0.84	0.01	0.06	.954
Efficacy for Moral Leadership	-0.34	0.91	-0.07	-0.38	.707

Research Hypothesis 2a.

Middle school principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of the CRCT Math passing rates.

Data Analysis for Hypothesis 2a

A multiple regression was conducted to determine if the middle school principals' efficacy beliefs were significant predictors of math passing rates. The descriptive statistics for the dependent and predictor variables are listed in Table 9. The standardized residuals indicated that there were no outliers in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model significantly predicted CRCT Math passing rates, $F(3, 84) = 3.18, p = .028, R^2 = .10$. This indicates that together the predictors accounted for a significant amount of variation in the criterion. The regression coefficients are listed in Table 10. The coefficients indicated that none of the efficacy subscales individually were significant predictors of CRCT Math passing rates within this model.

Table 9

Descriptive Statistics for Research Hypothesis 2a Variables

Variable	N	M	SD
CRCT Math Pass Rate	88	77.77	11.95
Efficacy for Management	88	6.98	1.51
Efficacy for Instructional Leadership	88	7.25	1.50
Efficacy for Moral Leadership	88	7.11	1.58

Table 10

Regression Coefficients for Research Hypothesis 2a

Predictor	B	SE	β	*t*	Sig.
Efficacy for Management	1.47	1.56	0.19	0.94	.348
Efficacy for Instructional Leadership	4.35	2.44	0.55	1.78	.078
Efficacy for Moral Leadership	-3.47	2.30	-0.46	-1.51	.135

Research Hypothesis 2b

Middle school principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of the CRCT Reading passing rates.

Data Analysis for Hypothesis 2b

A multiple regression was conducted to determine if the middle school principals' efficacy beliefs were significant predictors of reading passing rates. The descriptive statistics for the dependent and predictor variables are listed in Table 11. The standardized residuals indicated that there was one outlier in the data. Evaluations of

linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was a significant predictor of CRCT Reading passing rates, $F(3, 84) = 6.61, p < .001, R^2 = .19$. This indicates that together the predictors accounted for a significant amount of variation in the criterion. The regression coefficients are listed in Table 12. The coefficients indicated that none of the efficacy subscales were significant predictors of CRCT Reading passing rates within this model.

Table 11

Descriptive Statistics for Research Hypothesis 2b Variables

Variable	N	M	SD
CRCT Reading Pass Rate	88	89.25	6.87
Efficacy for Management	88	7.02	1.46
Efficacy for Instructional Leadership	88	7.28	1.50
Efficacy for Moral Leadership	88	7.14	1.58

Table 12

Regression Coefficients for Research Hypothesis 2b

Predictor	B	SE	β	*t*	Sig.
Efficacy for Management	-0.11	0.89	-0.02	-0.12	.903
Efficacy for Instructional Leadership	2.44	1.33	0.53	1.84	.070
Efficacy for Moral Leadership	-0.36	1.27	-0.08	-0.29	.776

Research Hypothesis 3a

High school principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of the GHSGT Math passing rates.

Data Analysis for Hypothesis 3a

A multiple regression was conducted to determine if the high school principals' efficacy beliefs were significant predictors of math passing rates. The descriptive statistics for the dependent and predictor variables are listed in Table 13. The standardized residuals indicated that there was one outlier in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was a significant predictor of GHSGT Math passing rates, $F(3, 107) = 6.44$, $p < .001$, $R^2 = .15$. This indicates that together the predictors accounted for a significant amount of variation in the criterion. The regression coefficients are listed in Table 14. The coefficients indicated that none of the efficacy subscales were significant predictors of GHSGT Math passing rates within this model.

Table 13

Descriptive Statistics for Research Hypothesis 3a Variables

Variable	N	M	SD
GHSGT Math Pass Rate	111	83.81	12.53
Efficacy for Management	111	6.70	1.50
Efficacy for Instructional Leadership	111	7.22	1.52
Efficacy for Moral Leadership	111	7.05	1.50

Table 14

Regression Coefficients for Research Hypothesis 3a

Predictor	B	SE	β	*t*	Sig.
Efficacy for Management	-1.09	1.53	-0.13	-0.71	.478
Efficacy for Instructional Leadership	3.69	2.01	0.45	1.83	.069
Efficacy for Moral Leadership	0.43	2.27	0.05	0.19	.849

Research Hypothesis 3b

High school principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of the GHSGT Reading passing rates.

Data Analysis for Hypothesis 3b

A multiple regression was conducted to determine if the high school principals' efficacy beliefs were significant predictors of reading passing rates. The descriptive statistics for the dependent and predictor variables are listed in Table 15. The standardized residuals indicated that there were two outliers in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was not a significant predictor of GHSGT Reading passing rates, $F(3, 106) = 1.55, p = .206, R^2 = .04$. This indicates that together the predictors did not account for a significant amount of variation in the criterion. The regression coefficients are listed in Table 16. The coefficients indicated that none of the efficacy subscales were significant predictors of GHSGT Reading passing rates within this model.

Table 15

Descriptive Statistics for Research Hypothesis 3b Variables

Variable	N	M	SD
GHSGT Reading Pass Rate	110	89.27	6.92
Efficacy for Management	110	6.74	1.47
Efficacy for Instructional Leadership	110	7.26	1.47
Efficacy for Moral Leadership	110	7.09	1.46

Table 16

Regression Coefficients for Research Hypothesis 3b

Predictor	B	SE	β	*t*	Sig.
Efficacy for Management	-0.45	0.90	-0.10	-0.50	.621
Efficacy for Instructional Leadership	2.01	1.18	0.43	1.69	.093
Efficacy for Moral Leadership	-0.89	1.33	-0.19	-0.67	.506

Research Hypothesis 3c

High school principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of the students' graduation rates.

Data Analysis for Hypothesis 3c

A multiple regression was conducted to determine if the high school principals' efficacy beliefs were significant predictors of graduation rates. The descriptive statistics for the dependent and predictor variables are listed in Table 17. The standardized residuals indicated that there were no outliers in the data. Evaluations of linearity,

normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was a significant predictor of graduation rates, $F(3, 106) = 4.45$, $p = .006$, $R^2 = .11$. This indicates that together the predictors accounted for a significant amount of variation in the criterion. The regression coefficients are listed in Table 18. The coefficients indicated that none of the efficacy subscales were significant predictors of graduation rates within this model.

Table 17

Descriptive Statistics for Research Hypothesis 3c Variables

Variable	N	M	SD
Graduation Rates	110	78.22	12.12
Efficacy for Management	110	6.72	1.51
Efficacy for Instructional Leadership	110	7.21	1.53
Efficacy for Moral Leadership	110	7.05	1.51

Table 18

Regression Coefficients for Research Hypothesis 3c

Predictor	B	SE	β	*t*	Sig.
Efficacy for Management	2.65	1.54	0.33	1.72	.088
Efficacy for Instructional Leadership	-0.78	1.99	-0.10	-0.39	.697
Efficacy for Moral Leadership	0.77	2.26	0.10	0.34	.734

Research Hypothesis 4

Principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) are statistically significant predictors of overall school performance as measured by AYP Status (needs improvement vs. meets standard).

Data Analysis for Hypothesis 4

A binary logistic regression was conducted to determine if the principals' efficacy beliefs (efficacy for management, efficacy for instructional leadership, efficacy for moral leadership) were statistically significant predictors of overall school performance as measured by AYP Status (needs improvement vs. meets standards). The following dummy coding scheme was utilized for the dependent variable: AYP Status (0 = needs improvement, 1 = meets standard).

The variance inflation factors and tolerance levels did not reveal evidence of multicollinearity. The standardized residuals did not reveal any outliers in the data. The classification table is presented in Table 19. Two-hundred eighty-eight schools were in the meets standards category, and 79 fell in the needs improvement category. The omnibus model was a significant predictor of whether or not the school would meet the AYP standard, $\chi^2(3) = 34.20$, $R^2 = .14$, $p < .01$. This indicates that the model could significantly classify the schools in regards to their AYP status. The model correctly predicted 99.0% of the schools that met the standard. However, the model was only able to correctly classify 17.7% of the schools that fell in the needs improvement category. The coefficients are listed in Table 20. The coefficients indicated that none of the predictors were significant in this model.

Table 19

Classification Table for Research Hypothesis 4

Observed		Predicted AYP Status		Percentage Correct
		Needs Improvement	Meets Standard	
AYP Status	Needs Improvement	14	65	17.7
	Meets Standard	3	285	99.0
Overall Percentage				81.5

Table 20

Regression Coefficients for Research Hypothesis 4

Predictor	B	S.E.	Wald	*df*	Sig.	Exp(B)	95.0% C.I.for EXP(B) Lower	Upper
Efficacy for Management	0.28	0.17	2.93	1	.087	1.33	0.96	1.83
Efficacy for Instructional Leadership	0.35	0.24	2.22	1	.136	1.42	0.90	2.25
Efficacy for Moral Leadership	-0.08	0.25	0.10	1	.753	0.92	0.56	1.51

Research Hypothesis 5a

Principals' years experience, ethnicity (Caucasian vs. Other), school size and school AYP status are statistically significant predictors of the principals' efficacy for management.

Data Analysis for Hypothesis 5a

A multiple regression was conducted to determine if the principals' years experience, ethnicity (Caucasian vs. Other), school size and school AYP status were statistically significant predictors of the principals' efficacy for management. The nominal scaled independent variables were dummy coded with the following scheme: ethnicity (0 = Caucasian, 1 = Other) and school setting (0 = needs improvement, 1 = meets standards). The descriptive statistics for the dependent variable and continuous predictor variables are listed in Table 21. The standardized residuals indicated that there were four outliers in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was a significant predictor of the principals' efficacy for management, $F(3, 355) = 12.23, p < .001, R^2 = .12$. This indicates that together the predictors accounted for a significant amount of variation in the criterion. The regression coefficients are listed in Table 22. The coefficients indicated that the principals' years experience was a significant positive predictor of their efficacy for management, $\beta = 0.10, p < .05$. This indicates that efficacy for management increased with increasing years experience. The coefficients also revealed that AYP status was a significant predictor of the principals' efficacy for management, $\beta = 0.32, p < .01$. Given the coding of the independent variable, this suggests that principals who came from schools that meet the standards have higher levels of efficacy for management than the principals' who came from schools that fall in the meets improvement category. Schools size and ethnicity were not significant predictors within this model.

Table 21

Descriptive Statistics for Research Hypothesis 5a Variables

Variable	N	M	SD
Efficacy for Management	360	6.99	1.33
School Enrollment	360	706.19	375.76
Years Experience	360	23.16	7.81

Table 22

Regression Coefficients for Research Hypothesis 5a

Predictor	B	SE	β	*t*	Sig.
School Enrollment	0.00	0.00	-0.05	-0.93	.353
AYP Status	1.03	0.17	0.32	6.16	.003
Years Experience	0.02	0.01	0.10	2.04	.042
Ethnicity	0.22	0.17	0.07	1.31	.192

Research Hypothesis 5b

Principals' years experience, ethnicity (Caucasian vs. Other), school size and school AYP status are statistically significant predictors of the principals' efficacy for instructional leadership.

Data Analysis for Hypothesis 5b

A multiple regression was conducted to determine if the principals' years experience, ethnicity (Caucasian vs. Other), school size and school AYP status were statistically significant predictors of the principals' efficacy for instructional leadership.

The nominal scaled independent variables were dummy coded with the following scheme: ethnicity (0 = Caucasian, 1 = Other) and school setting (0 = needs improvement, 1 = meets standards). The descriptive statistics for the dependent variable and continuous predictor variables are listed in Table 23. The standardized residuals indicated that there were eight outliers in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was a significant predictor of the principals' efficacy for instructional leadership, $F(4, 351) = 7.69, p < .001, R^2 = .08$. This indicates that together the predictors accounted for a significant amount of variation in the criterion. The regression coefficients are listed in Table 24. The coefficients indicated that the principals' years experience was a significant positive predictor of their efficacy for instructional leadership, $\beta = 0.16, p < .01$. This indicates that efficacy for instructional leadership increased with increasing years experience. The coefficients also revealed that AYP status was a significant predictor of the principals' efficacy for instructional leadership, $\beta = 0.21, p < .01$. Given the coding of the independent variable, this suggests that principals' who came from schools that meet the standards have higher levels of efficacy for instructional leadership than the principals who came from schools that fall in the meets improvement category. Schools size and ethnicity were not significant predictors within this model.

Table 23

Descriptive Statistics for Research Hypothesis 5b Variables

Variable	N	M	SD
Efficacy for Management	356	7.55	1.11
School Enrollment	356	699.62	370.31
Years Experience	356	23.17	7.83

Table 24

Regression Coefficients for Research Hypothesis 5b

Predictor	B	SE	β	*t*	Sig.
School Enrollment	0.00	0.00	-0.00	-0.08	.937
AYP Status	0.57	0.15	0.21	3.91	.006
Years Experience	0.02	0.01	0.16	3.02	.003
Ethnicity	-0.22	0.15	-0.08	-1.51	.131

Research Hypothesis 5c

Principals' years experience, ethnicity (Caucasian vs. Other), school size and AYP status are statistically significant predictors of the principals' efficacy for moral leadership.

Data Analysis for Hypothesis 5c

A multiple regression was conducted to determine if the principals' years experience, ethnicity (Caucasian vs. Other), school size and school AYP status were statistically significant predictors of the principals' efficacy for moral leadership. The

nominal scaled independent variables were dummy coded with the following scheme: ethnicity (0 = Caucasian, 1 = Other) and school AYP status (0 = needs improvement, 1 = meets standards). The descriptive statistics for the dependent variable and continuous predictor variables are listed in Table 25. The standardized residuals indicated that there were nine outliers in the data. Evaluations of linearity, normality, homoscedasticity, and multicollinearity showed that the assumptions were met within acceptable limits.

The omnibus model was a significant predictor of the principals' efficacy for moral leadership, $F(4, 350) = 9.65$, $p < .001$, $R^2 = .10$. This indicates that together the predictors accounted for a significant amount of variation in the criterion. The regression coefficients are listed in Table 26. The coefficients indicated that the principals' years of experience was a significant positive predictor of their efficacy for moral leadership, $\beta = 0.15$, $p < .01$. This indicates that efficacy for moral leadership increased with increasing years experience. The coefficients also revealed that AYP status was a significant predictor of the principals' efficacy for moral leadership, $\beta = 0.26$, $p < .01$. Given the coding of the independent variable, this suggests that principals who came from schools that meet the standards have higher levels of efficacy for moral leadership than the principals' who came from schools that fall in the meets improvement category. Schools size and ethnicity were not significant predictors within this model.

Table 25

Descriptive Statistics for Research Hypothesis 5c Variables

Variable	N	M	SD
Efficacy for Management	355	7.40	1.16
School Enrollment	355	701.44	372.35
Years Experience	355	23.24	7.84

Table 26

Regression Coefficients for Research Hypothesis 5c

Predictor	B	SE	β	*t*	Sig.
School Enrollment	0.00	0.00	-0.04	-0.74	.458
AYP Status	0.73	0.15	0.26	4.86	.004
Years Experience	0.02	0.01	0.15	3.02	.003
Ethnicity	-0.09	0.15	-0.03	-0.59	.555

Research Hypothesis 6

There are statistically significant differences between the Title I Status (yes vs. no) for the principals' efficacy for management, efficacy for instructional leadership and efficacy for moral leadership.

Data Analysis for Hypothesis 6

A one-way MANOVA was conducted to determine if there were significant differences between the two groups for the three efficacy subscales (efficacy for management, efficacy for instructional leadership and efficacy for moral leadership). The means and standard deviations of each dependent variable by Title I status are listed

in Table 27. Box's test was significant, suggesting that the covariance matrices of the dependent variables were unequal across the groups. Levene's test was significant for the efficacy for management and efficacy for instructional leadership variables, suggesting that the groups had unequal error variances on these variables. However, MANOVA is robust to violations of the homogeneity of error variance and covariance matrices assumptions (Tabachnick & Fidell, 2007). The MANOVA failed to reveal a significant global multivariate difference on the dependent variables by Title I status, F (3, 357) = 1.73, p = .162 (η^2 = .01, power = .45). This suggests that the two groups did not significantly differ on any of the efficacy subscales. Univariate ANOVA post hoc tests were not conducted because of the non-significant multivariate effect.

Table 27

Means and Standard Deviations of Efficacy Subscales by Title I Status

Dependent Variable	Title I Status	M	SD	N
Efficacy for Management	Yes	7.09	1.25	185
	No	6.84	1.47	176
	Total	6.97	1.37	361
Efficacy for Instructional Leadership	Yes	7.62	1.06	185
	No	7.36	1.40	176
	Total	7.49	1.24	361
Efficacy for Moral Leadership	Yes	7.44	1.16	185
	No	7.24	1.41	176
	Total	7.34	1.29	361

Summary

In Chapter IV, the demographic data of the participants along with the participants' responses to the Principal Sense of Efficacy Scale (PSES) were reported. Means and standard deviations were provided. In addition, statistical analyses evidenced a lack of statistically significant relationships between the subscales of the PSES and the specified indicators of school effectiveness for five of the six tested hypotheses. In regard to Hypothesis V, statistically significant relationships were reported. Implications related to these findings are discussed in Chapter V.

CHAPTER V

DISCUSSION

Chapter V provides a summary of the researcher's findings and the implications that these findings present. Limitations of this study are discussed and recommendations for future research, policy, and practice are presented.

Introduction

As suggested previously, the justification for this study evolves from the importance of the school principal as the "key agent for setting the tone and direction of the school" (Tshannen-Moran & Gareis, 2005). Recent research has established a statistically significant correlation between school leadership and student achievement (Marzano, Waters, & McNulty, 2005). Moreover, McCormick (2001) suggested that principal self-efficacy is related to leadership function. It was the goal of the researcher to add to the knowledge base regarding principal self-efficacy along with its relationship to student achievement.

The purpose of this study was to examine the relationship of principal self-efficacy and school effectiveness. The research was guided by the following question: Is there a relationship between principal efficacy beliefs and indicators of school effectiveness?

To that end the following hypotheses were tested:

H_1: There will be a significant relationship between elementary school principal efficacy beliefs and indicators of school effectiveness.

H_2: There will be a significant relationship between middle school principal efficacy beliefs and indicators of school effectiveness.

H_3: There will be a significant relationship between high school principal efficacy beliefs and indicators of school effectiveness.

H_4: Principal efficacy is a significantly contributing factor to predicting overall school performance.

H_5: Principal efficacy beliefs can be predicted by school size, school AYP status, years experience, and/or ethnicity.

H_6: A significant relationship exists between principal efficacy beliefs and Title I status.

Interpretation of Findings

The results were obtained from 387 elementary, middle and high school principals from the state of Georgia. Participants were approximately split between male and female. Nearly half of respondents were around 50 years of age with advanced degrees (specialists or doctoral). The average number of years in education was 23 years. The average number of years of administrative experience was 10.85 with an average of 5.6 years as administrator in their current school.

A total of 2,220 administrators were identified and selected for this study using the most recent FTE data provided by the Georgia Department of Education. It should be noted that an email was sent to all school principals in the state of Georgia. However, many school districts prohibited their principals from participating in the online survey. Seven large school districts throughout the state had established board policies that prohibited research from being conducted without expressed written permission that resulted from a lengthy research approval process. The researcher was unaware of these policies until after the data collection process had begun and email from district Directors

of Research initiated contact. Discounting the 600 administrators that were explicitly denied participation by their local board policies, the response rate was approximately 24%.

In regard to overall principal efficacy, the respondents as a whole viewed themselves as very capable as reported by the Principal Sense of Efficacy Scale. A review of the means from the descriptive statistics for each of the first three hypotheses reveals means at or above 7 in all three efficacy scales indicating that as a group participants had a high degree of efficacy.

Hypothesis 1 pertained to the relationship between elementary school principal efficacy beliefs and indicators of school effectiveness. To determine if the elementary school principals' efficacy beliefs were significant predictors of school effectiveness, a series of multiple regressions were conducted. The researcher used principals' efficacy scores for management, instructional leadership, and moral leadership as the independent variables. To evaluate school effectiveness, the researcher used the respondent school's math and English CRCT passing rates as the dependent variables. The findings indicated that none of the efficacy subscales were significant predictors of school effectiveness.

Hypothesis 2 pertained to the relationship between middle school principals' efficacy beliefs and school effectiveness. To determine if principal efficacy beliefs were significant predictors of school effectiveness, a series of multiple regressions were conducted. The researcher used the principals' efficacy scores for management, instructional leadership, and moral leadership as the independent variables. To evaluate school effectiveness, the researcher used the respondent school's math and English CRCT passing rates as the dependent variables. The analyses indicated that the overall

model was significant. This suggested that together the predictors accounted for a significant amount of variation. However, it should be noted that none of the efficacy subscales were significant predictors of school effectiveness. In other words, the independent variables, the efficacy subscales, may be highly correlated. Together as a set, they may have a significant effect on the dependent variables, the math and English CRCT passing rates. Individually they did not. Additionally, it should be acknowledged that a trend was noticed in regard to efficacy for instructional leadership. In both multiple regressions, efficacy for instructional leadership was evidenced as a stronger predictor than either efficacy for management or efficacy for moral leadership.

Hypothesis 3 pertained to the relationship between high school principals' efficacy beliefs and school effectiveness. To determine if principal efficacy beliefs were significant predictors of school effectiveness, a series of multiple regressions were conducted. The researcher used the principals' efficacy scores for management, instructional leadership, and moral leadership as the independent variables. To evaluate school effectiveness, the researcher used the respondent school's math GHSGT passing rate, English GHSGT passing rate, and graduation rate as the dependent variables. The findings indicated that none of the efficacy subscales were significant predictors of school effectiveness. Additionally, it should be noted that the data revealed a trend in regard to efficacy for instructional leadership for both math and English GHSGT. In both multiple regressions, efficacy for instructional leadership was evidenced as a stronger predictor than either efficacy for management or efficacy for moral leadership. In regard to graduation rate, efficacy for management was a stronger predictor than either efficacy for instructional leadership or efficacy for moral leadership.

Hypothesis 4 questioned whether or not principals' efficacy beliefs were statistically significant predictors of overall school performance as measured by AYP status (needs improvement vs. meets standard). The regression model could correctly predict 99.0% of the schools that met standards. However, the model was only able to correctly classify 17.7% of the schools that were in the need improvement category. The regression coefficients indicated that none of the predictors were significant in this model. It should be noted that approximately 80 percent of the respondents were from schools that met AYP.

Hypothesis 5 questioned whether or not principals' years experience, ethnicity (Caucasian vs. Other), school size, and/or school AYP status were statistically significant predictors of principals' efficacy. In regard to efficacy for management, the findings indicated that principals' years experience was a significant positive predictor of their efficacy for management. Additionally, it was determined that AYP status was a significant positive predictor of their efficacy for management. This analysis suggested that efficacy for management increases with increasing years experience and principals who work in schools that are in the AYP category of meets standards have higher levels of efficacy for management than principals from schools that are in the AYP category of needs improvement.

In regard to efficacy for instructional leadership, principals' years experience and AYP status were both significant positive predictors of their efficacy for instructional leadership. This suggests that efficacy for instructional leadership increases with increasing years of experience. Moreover, it is suggested that principals from schools that

are in the AYP category of meets standard have higher levels of efficacy for management than principals from schools that are in the AYP category of needs improvement.

In regard to efficacy for moral leadership, principals' years experience and AYP status were both significant positive predictors of their efficacy for moral leadership. This suggests that efficacy for moral leadership increases with increasing years of experience. Additionally, it is suggested that principals from schools that are in the AYP category of meets standard have higher levels of efficacy for moral than principals from schools that are in the AYP category of needs improvement.

Hypothesis 6 questioned whether or not there was a statistically significant difference between Title I school status (yes vs. no) on the principals' efficacy for management, efficacy for instructional leadership, and efficacy for moral leadership. A one-way MANOVA was conducted to determine if there were significant differences between the two groups on the three efficacy subscales. The MANOVA failed to reveal any significant differences between the principals' efficacy beliefs and their schools Title I status. This suggests that the two groups did not significantly differ on any of the efficacy subscales. It should be noted that there were approximately the same number of respondents from Title I schools as from non-Title I schools. This further substantiates the finding that Title I status is not related to principal efficacy beliefs.

In summary, the researcher concluded that as a group the participants were highly experienced in the field of education and in the area of educational leadership. Additionally, the participants as a whole viewed themselves as very capable in their abilities as defined by the PSES. However, the statistical analyses evidenced a lack of statistically significant relationships between the subscales of the PSES and the specified

indicators of school effectiveness for five of the six tested hypotheses. In regard to Hypothesis 5, statistically significant relationships were reported for principals' years experience and AYP status. Furthermore, a trend was noticed in regard to principals' sense of efficacy for instructional management at the middle and high school levels in regard to math and English rates. Efficacy for instructional management emerged as a stronger predictor than efficacy for management and efficacy for moral leadership. An additional trend was noted at the high school level in regard to efficacy for management. Efficacy for management emerged as a stronger predictor for graduation rates than either efficacy for instructional leadership or efficacy for moral leadership.

Implications of Findings

Based on a review of the literature and the results of this study, several implications were proposed. It can be concluded that this study did not find a strong relationship between principals' sense of efficacy beliefs and school effectiveness. However, the research did uncover some important relationships and trends. Most notable are those related to the relationships identified by the data analyses. Although principals' sense of efficacy for instructional leadership was not a significant predictor of school effectiveness as defined by the researcher, a pattern was noticed at the middle and high school levels that would warrant further investigation. Additionally, the relationship between high school graduation rates and efficacy for management also warrants further investigation.

In regard to statistically significant relationships, the analyses have provided evidence that years experience and AYP status are important considerations. It is suggested that efficacy increases with an increase in years experience. This finding is

comparable with the findings of Aderhold (2005) and Santamaria (2008). Additionally, school administrators from schools that met AYP have higher levels of efficacy than school administrators from school that did not meet AYP. This is similar to Santamaria's (2008) findings as well. It should be noted that the other demographic items evaluated in this study were of no significance. Future research should limit focus on these variables and focus on the aspects where a significant relationship or trend has been identified.

Implications for practitioners are rather numerous. The pattern evidenced in regard to principals' sense of efficacy for instructional leadership at the middle and high school levels demonstrates the importance of effective instructional leadership in regard to student achievement. One might postulate that student achievement on standardized tests is impacted by sound instructional leadership. Additionally, the pattern that was evidenced in regard to principals' sense of efficacy for management at the high school level demonstrates the importance of effective management practices in regard to student graduation. One might also surmise that student graduation rates are impacted by sound management practices. Hypothesis 2 and Hypothesis 3 provide partial support to these statements. The trend suggests that a relationship exists between the principals' sense of efficacy for instructional leadership and for management in regard to student achievement and graduation.

Additional implications for practitioners are related to the significant relationships identified in the analyses of Hypothesis 5. AYP status and years experience were significant predictors of all of the efficacy subscales. Bandura (1998) states that mastery experiences are the most influential sources of efficacy. Remembering that efficacy is

context specific (Bandura, 1997), one can see how successful experience can provide an increase in self-efficacy.

Recommendations for Policy and Practice

As a result of this study, the researcher offers several recommendations that can impact policy and practice. Hoy and Miskel (2008) and Goddard et al. (2004) have stressed the importance of efficacy in the area of school administration. This research offers additional support that efficacy research should continue to examine the relationships between school administration and school effectiveness. Specifically, policy makers and researchers should examine the relationships that exist between efficacy for instructional leadership and efficacy for management. As discussed previously, these factors, much like the leadership practices identified by Leithwood et al. (2004), provide insight into the underlying skills that help the administrator manage the instructional process, provide instructional leadership, provide effective managerial support, and to promote a positive school culture. It is with these statements in mind that the researcher suggests that policy and practice can be impacted by providing school administrators with professional development aimed at increasing awareness of self-efficacy. Moreover, this research suggests that years experience in a successful setting can lead to increased sense of efficacy beliefs. Policy makers should take these findings into consideration when making personnel decisions.

Implications for the field of educational leadership are also an important concern of the researcher. The literature review produced many examples of effective leadership traits, qualities, and practices (Cotton, 2003; Marzano, Waters, & McNulty, 2005; Davis, 2006; Leithwood, Louis, Anderson, & Wahlstrom, 2004). From these examples, one can

get a sense as to how important effective instructional leadership and managerial skills are when addressing school effectiveness. This research underscores the importance of having principals that demonstrate efficacy in these areas.

Although this research did not find statistically significant relationships between principal efficacy and school effectiveness, this does not discount Bandura's (1977a, 1977b, 1986, 1988, 1991, 1993, 1995, 1997, & 2000) self-efficacy theory and its implications to the field of educational leadership. One must keep in mind that one's self-efficacy can impact or influence one's actual performance. Moreover, self-efficacy can be altered and/or enhanced through mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states (Bandura, 1989). Policy makers should take this into consideration when developing principal mentoring programs, professional development opportunities, school improvement goals, and hiring practices.

Limitations

The following are considered as limitations of this study:

1. The results were limited to the self-reported belief statements of administrators in Georgia.
2. The results were limited by the self disclosure of participants.
3. The results were limited by the possibility of multiple responses from a single participant.
4. The ethnic make-up of participants was not diverse.
5. Local board policy prohibited many school administrators from participating in this study.

6. It is possible that principal efficacy may be the independent variable and not the dependent variable in the analyses.
7. The time of year that the surveys were sent out and collected may have impacted results.

Recommendations for Future Research

Based on the findings of this study, the following recommendations are suggested by the researcher:

1. Replicate the study within the context of a school district. As many school districts prohibited participation without formal written approval, it is suggested that future research examine principal efficacy from a district specific basis.
2. Replicate the study in a manner that will include more diversity. As the majority of participants were Caucasian, it is suggested that future research attempt to examine principal efficacy beliefs in a manner that includes more ethnic diversity.
3. Investigate the relationship between efficacy for instructional leadership and school effectiveness at the middle and high school levels. As a trend was noticed in regard to instructional leadership at the middle and high levels, it is suggested that future research examine the potential relationship that exists between efficacy for instructional leadership and school effectiveness.
4. Investigate the relationship between efficacy for management and graduation rates at the high school level. As a trend was noticed in regard

to efficacy for management at the high school level, it is suggested that future research examine the potential relationship that exists between efficacy for management and school effectiveness.

5. Investigate efficacy at different levels of school administration (building vs. district). As this study focused on school level administrators, it is suggested that this study be replicated at different levels of school administration.
6. It is suggested that future research examine the types of training school administrators had been provided during their careers to ascertain whether or not there is a relationship between efficacy ratings and types of training.

Summary

The purpose of this project was to examine the relationship of principal self-efficacy and school effectiveness. Interpretation of findings, implications of findings, recommendations for policy and practice, limitations, and recommendations were reviewed. It is the conclusion of the researcher that there is not a strong link between principal efficacy beliefs and indicators of school effectiveness as demonstrated by this research. However, there were some interesting findings that justify the continued exploration of principal efficacy beliefs and factors associated with school effectiveness.

APPENDIX A

Cotton's 25 Categories of Principal Characteristics and Behaviors
Classroom observation and feedback to teachers
Collaboration
Communication and interaction
Discussions of instructional issues
Emotional and interpersonal support
High expectations for student learning
Instructional leadership
Monitoring student progress for program improvement
Norm of continuous improvement
Ongoing pursuit of high levels of student learning
Parent and community outreach and Involvement
Positive and supportive climate
Professional development opportunities and resources
Protecting instructional time
Responsibility and perseverance
Rituals, ceremonies, and other symbolic actions
Recognition of student and staff achievement
Role modeling
Safe and orderly environment
Self-confidence
Shared leadership, decision making, and staff empowerment

Support of risk taking

Support of teachers' autonomy

Visibility and accessibility

Vision and goals focused on high levels of student learning

APPENDIX B

McREL's 21 Categories of Leadership and Behaviors
Affirmation
Change agent
Contingent rewards
Communication
Culture
Discipline
Flexibility
Focus
Ideas/beliefs
Input
Intellectual stimulation
Involvement in curriculum, instruction, and assessment
Knowledge of curriculum, instruction, and assessment
Monitoring/evaluating
Optimizer
Order
Outreach
Relationships
Resources
Situational awareness
Visibility

APPENDIX C

PRINCIPAL SENSE OF EFFICACY SCALE

Principal Questionnaire

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. The scale of responses ranges from "None at all" (1) to "A Great Deal" (9), with "Some Degree" (5) representing the mid-point between these low and high extremes. You may choose any of the nine possible responses, since 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..."	None at All		Very Little		Some Degree		Quite a Bit		A Great Deal
1. facilitate student learning in your school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. generate enthusiasm for a shared vision for the school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. handle the time demands of the job?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. manage change in your school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. promote school spirit among a large majority of the student population?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. create a positive learning environment in your school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. raise student achievement on standardized tests?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. promote a positive image of your school with the media?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. motivate teachers?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. promote the prevailing values of the community in your school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. maintain control of your own daily schedule?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12. shape the operational policies and procedures that are necessary to manage your school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
13. handle effectively the discipline of students in your school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14. promote acceptable behavior among students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15. handle the paperwork required of the job?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
16. promote ethical behavior among school personnel?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
17. cope with the stress of the job?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
18. prioritize among competing demands of the job?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

APPENDIX D

PERMISSION TO USE INSTRUMENT

Charles,
I am pleased that you would like to study principal's self-efficacy beliefs. You are right that this is a little studied construct that would benefit from more scholarly attention. I will attach the page proofs of a forthcoming article in the Journal of School Leadership that may give you some ideas for additional constructs that you may want to pursue. Personally, I don't find demographic variables particularly interesting in relation to self-efficacy beliefs. I think we are much more interested in the contextual factors and organizational processes associated with the self-efficayc beliefs of educators.
All the best,

Megan Tschannen-Moran

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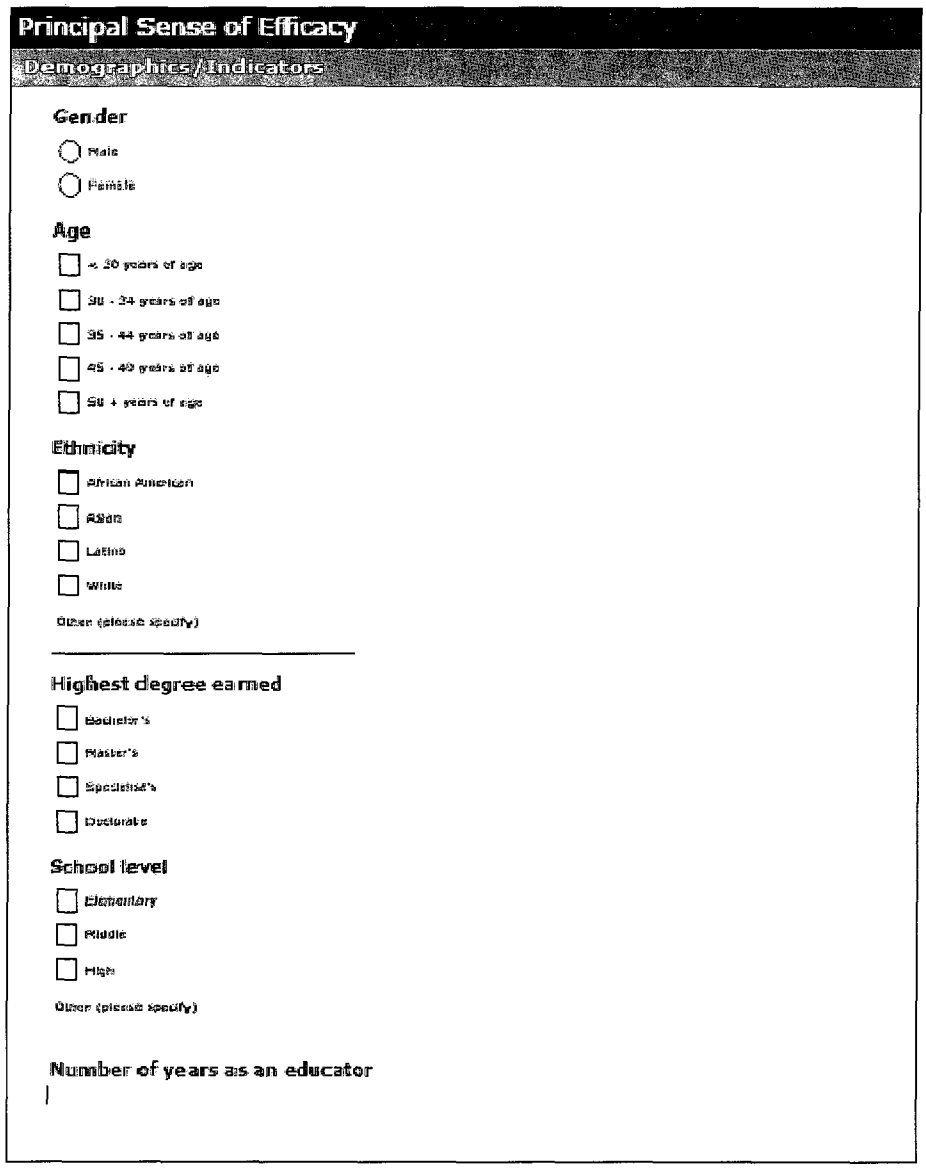
-----Original Message-----
From: clovell@white.k12.ga.us [mailto:clovell@white.k12.ga.us]
Sent: Thursday, June 07, 2007 8:31 PM
To: mxtsch@wm.edu
Subject: Re:Principal Efficacy

Dr. Tschannen-Moran,
Hope all is going well. I have been reading some of your work of late. I appreciate the article on the instrument. I found it very informative and useful. As I stated in my earlier email, I completed a project on teacher efficacy in the spring. Unfortunately, I found the percentage rate of respondents somewhat low. At present, I am putting together my dissertation topic. I would like to use your Principal Efficacy instrument. I have been working for the past several days trying to put together a list of research questions. The literature seems to have a void on this topic. I live in Georgia and would like to survey administrators throughout the state. I have a list of demographic variables that I would like to collect. It would be nice if I could examine some effective school correlates as well. Are you aware of anyone else doing similar research? Any advice would be greatly appreciated.
Thanks,
Charles Lovell

APPENDIX E

ONLINE DEMOGRAPHIC AND SURVEY INSTRUMENTS



Principal Sense of Efficacy

Number of years in present school

Number of years as an administrator

Number of years as an administrator in present school

School enrollment

District enrollment

Percentage of students on free and reduced lunch

- [ ] 0 - 9 %
- [ ] 10 -19 %
- [ ] 20 - 29 %
- [ ] 30 - 39 %
- [ ] 40 - 49 %
- [ ] 50 - 59 %
- [ ] 60 % +

Percentage of students receiving special education services

- [ ] 0 - 5 %
- [ ] 6 - 10 %
- [ ] 11 - 15 %
- [ ] 16 - 20 %
- [ ] 20 % +

Percentage of students receiving SST/504 services

- [ ] 0 - 3 %
- [ ] 4 - 6 %
- [ ] 7 - 9 %
- [ ] 10 % +

Title I school status

- ( ) Yes
- ( ) No

Principal Sense of Efficacy

Elementary (1-5)

Test participation rate

CRCT Math passing rate

CRCT Reading passing rate

Attendance rate

Middle (6-8)

Test participation rate

CRCT Math passing rate

CRCT Reading/English passing rate

Attendance rate

High (9-12)

Test participation rate

GHSGT Mathematics passing rate

GHSGT Reading/English passing rate

Graduation rate

AYP status

- [ ] Met
- [ ] Needs improvement
- [ ] Continue monitored

Principal Sense of Efficacy

Principal Sense of Efficacy Scale

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. The scale of responses ranges from "None at all" (1) to "A Great Deal" (9), with "Some Degree" (5) representing the mid-point between these low and high extremes. You may choose any of the nine possible responses, since 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..."

	Not at All		Very Little		Some Degree		Quite a Bit		A Great Deal
facilitate students learning in your school?	○	○	○	○	○	○	○	○	○
generate a shared vision for the school?	○	○	○	○	○	○	○	○	○
handle the time demands of the job?	○	○	○	○	○	○	○	○	○
manage change in your school?	○	○	○	○	○	○	○	○	○
promote school spirit among a large majority of the student population?	○	○	○	○	○	○	○	○	○
create a positive learning environment in your school?	○	○	○	○	○	○	○	○	○
raise student achievement on standardized tests?	○	○	○	○	○	○	○	○	○
promote a positive image of your school with the media?	○	○	○	○	○	○	○	○	○
motivate teachers?	○	○	○	○	○	○	○	○	○
promote prevailing values of the community in your school?	○	○	○	○	○	○	○	○	○
maintain control of your own daily schedule?	○	○	○	○	○	○	○	○	○
shape the operational policies and procedures that are necessary to manage your school?	○	○	○	○	○	○	○	○	○
handle effectively the discipline of students in your school?	○	○	○	○	○	○	○	○	○
promote acceptable behavior among students?	○	○	○	○	○	○	○	○	○
handle the paperwork required of the job?	○	○	○	○	○	○	○	○	○
promote ethical behavior among school personnel?	○	○	○	○	○	○	○	○	○
cope with the stress of the job?	○	○	○	○	○	○	○	○	○
prioritize among competing demands of the job?	○	○	○	○	○	○	○	○	○

APPENDIX F

IRB PERMISSION TO CONDUCT STUDY

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

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HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **29020301**
PROJECT TITLE: **Principal Efficacy: An Investigation of School Principal Self-Assessments and Indicators of School Effectiveness**
PROPOSED PROJECT DATES: **12/05/08 to 12/04/09**
PROJECT TYPE: **Dissertation or Thesis**
PRINCIPAL INVESTIGATORS: **Charles Wayne Lovell**
COLLEGE/DIVISION: **College of Education & Psychology**
DEPARTMENT: **Educational Leadership & Research**
FUNDING AGENCY: **N/A**
HSPRC COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF APPROVAL: **02/03/09 to 02/02/10**

Lawrence A. Hosman, Ph.D.
HSPRC Chair

2-6-09
Date

APPENDIX G

INVITATION TO PARTICIPATE

Dear School Administrator,

I would like to thank you in advance for participating in this research investigation. Your assistance in this project is greatly appreciated.

This project is research for my dissertation on Principal Efficacy: An Investigation of School Principal Self-Assessments and Indicators of School Effectiveness. Fullan (2003) identifies a trend that demonstrates a dramatic decrease in the principal's perceptions of effectiveness, authority, trust, and involvement. Therefore, the efficacy beliefs of the principal are vital to meeting the challenging expectations facing school administrators (Paglis & Green, 2002). Likewise, principal efficacy research could play a significant role in any change in recruitment, preparation, development, and retention programs that a district might implement. It is the intent of this study to determine if there are statistically significant relationships between Georgia school administrator self-efficacy scores on the Principal Sense of Efficacy Scale (PSES) and indicators of school effectiveness.

There are no known risks from participating in this survey. Although the questionnaires are anonymous, there may be some, however, who become anxious about the potential of others to learn of their status. I want to assure you of anonymity and confidentiality. No participants' identity will be obtained nor reported and all individuals are reminded of their right to withdraw or refuse participation at any time without penalty. It should take approximately 15-20 minutes for you to complete this short questionnaire. Please answer the questions honestly and completely. By submitting your responses, you are indicating your consent to participate in this study.

Summary results, aggregated so no individual or facility is identifiable, will be available by June of 2009. Alternatively, if you have questions or would like to learn the results of this study, you may contact me, Charles Lovell at clovell@white.k12.ga.us. Thank you for your participation. What is learned through this study has the potential to improve our administrator induction programs and staff development offerings so your responses are very valuable.

Sincerely,

Charles Wayne Lovell
Doctoral Candidate
The University of Southern Mississippi

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