CORRELATING PRINCIPALS' SELF-EFFICACY RATINGS WITH RATINGS OF THEIR EFFICACY BY THEIR TEACHERS: PERCEPTIONS OF LEADERSHIP

By

Wendell Lynn Campbell

Submitted in Partial Fulfillment of the Requirements

for the Degree of

Doctor of Education

in Educational Leadership

YOUNGSTOWN STATE UNIVERSITY

May, 2012

Correlating Principals' Self-Efficacy Ratings with Ratings of Their Efficacy by Their Teachers: Perceptions of Leadership

Wendell Lynn Campbell

I hereby release this dissertation to the public. I understand that this dissertation will be made available from the OhioLINK ETD Center and Maag Library Circulation Desk for public access. I also authorize the University or other individuals to make copies of this dissertation as needed for scholarly research.

Signature:

_____

Wendell L. Campbell, Student Date

Approvals:

_____

Dr. Karen H. Larwin, Dissertation Advisor Date

_____

Dr. Robert J. Beebe, Committee Member Date

_____

Dr. Karen Giorgetti, Committee Member Date

_____

Dr. Kenneth Miller, Committee Member Date

_____

Peter J. Kasvinsky, Dean of School of Graduate Studies and Research Date

Abstract

Principals' perceptions of their leadership efficacy play an important role in the success of the buildings they lead. This study was designed to contribute to the body of educational leadership literature pertaining to principal self-efficacy (PSE), thus informing principals and central office administrators of the importance of PSE. Thus far, research dealing with principal self-efficacy (PSE) has relied heavily on self-reporting. Therefore, the first research question explored the relationship between self-reported PSE ratings and the principals' efficacy ratings and predicted PSE by their teachers. The second research question explored whether or not there is any value in enhancing PSE across the three leadership realms explored: instructional, managerial, and moral leadership tasks. The Principal Sense of Efficacy Scale (PSES), an instrument developed by Tschannen-Moran and Gareis (2004) to measure principals' self-reported leadership efficacy, was administered to a stratified random sample of principals and teachers across the state of Ohio. Demographic variables of race, gender, building level, district typology, and years of service, overall and in current position, were collected. Performance Index (PI) and school building student enrollment data were also collected. Results were analyzed using SPSS Version 18 to compute descriptive and inferential statistics. Significant findings and implications for educational leaders were discussed.

DEDICATIONS

I dedicate this work first and foremost to my son, Tyler. No matter how complicated hypotonic cerebral palsy with developmental delay may sound, you never fail to make me see how simple life really is. If only all of us could see the world through your eyes. To Maddie, I only wish you could know the strength you have provided me. Brianna, your determination and smile are infectious, and they will both take you far in life. And Brayden, you have added inspiration to me and the entire family "Dovey." To my brother John, you have always been there to blaze a path for me. I may have been lost had you not done so. To my mother, you never let me lose focus on the importance of getting my education. While work defined your life, your true legacy is evident in seven children and 14 grandchildren. I only wish they could all have gotten to know you. I miss you mom. And finally, to my lovely wife, Sara, they say that behind every good man is an even better woman. That is an understatement when it comes to us. You didn't just come into my life, but rather, you became my life when we found us. A true partner, a first-rate loving mother, and the glue that keeps our family together-you are my everything. I love you.

ACKNOWLEDGEMENTS

First, I would like to acknowledge and thank the Kirtland Local School District. I was granted the time to attend the necessary doctoral cohort classes to complete this degree. While I was only out of the district a handful of school days to take these classes, it was nice to know I had support, thus making my attendance easy and focused.

At the university level, I am thankful for the day Dr. Karen H. Larwin agreed to be my committee chair. Her incessant dedication and focus to this project gave me the motivation and self-efficacy I needed to proceed. Dr. Larwin's patience and persistence with me as I grew, especially in the realm of quantitative analysis, made this final product one of high quality. Also, I am very grateful to have had the experience of taking multiple courses with Dr. Bob Beebe. His unique combination of expertise, teaching ability, and witty humor made me eager to delve further into my studies. The result of his tutelage was a novice researcher with a finely tuned problem statement and a general plan that prepared me for the dissertation process. Thanks to Dr. Karen Giorgetti for applying subtle pressure for me to pay attention to detail, data analysis, and academic writing. Last, but not least, I thank Dr. Ken Miller for his thoughtful insight and focus on reflective practices, thus ensuring that all points of view were considered and evaluated. I am honored to have had the opportunity to work with such a fine assembly of scholars. I thank all of the members for their time and commitment as their efforts drove me to continuously refine and revise my work as this dissertation came to fruition. Without their support and dedication, I would not have been able to complete this project.

Last, I wish to acknowledge all of the people who touched my life as a student (pre-K-college). I thank all of my teachers in the Minerva Local Schools, Minerva, Ohio

who made my public school experience a great one. Mostly, I recognize Mr. Jim Hetrick whose high expectations and love of math confirmed my dream of becoming a math teacher. Thanks JH! Finally, thanks to Tom Kishman who allowed me to grow and flourish within his business. It is with Tom's support of me and my family that I gained a well-rounded education alongside my schooling.

TABLE OF CONTENTS

CHAPTER

I.

Introduction……1

Background of the Study……..……..1

Problem Statement……...4

Significance of the Study…….……4

Overview of the Methodology…….……6

Limitations of the Study……..……..……..7

Delimitations of the Study……...7

Definition of Key Terms…….....8

Chapter Summary……8

II.

Introduction……...10

Part 1: The Construct of Self-Efficacy……..10

Part 2: Self-Efficacy and Performance……..14

Part 3: Brief Background of Principal Leadership……..…..24

Principal as Instructional Leader…….……..24

Principal as Manager……..……..…….....26

Principal as Moral Leader……..……..……..…….....27

Part 4: Self-Efficacy and Leadership/Principal Leadership…….29

Chapter Summary…….....37

III.

Introduction…….……..…….……...39

Research Questions……..……..…….……...39

Study Design…….…….…….……...39

Participants…….……40

Instrumentation……..……41

Procedure.……...……...43

Limitations of Methodology……..…….…….....45

Chapter Summary……..……45

IV.

Introduction……...46

Data Analysis…….47

Demographics……48

Reliability and Correlation of Instruments by Subscale ……...52

Assumptions……..……53

Inferential Analyses……...55

Dichotomizes PSE vs. Differences in PSE and Teacher Subscales…....57

Performance Index and Building Enrollment……...58

MANOVA Analyses……..……...62

Summary……66

V.

Introduction……...68

Discussion……..……69

Implications for Educational Leaders…….……78

Recommendations for Future Research……82

Chapter Summary…….83

REFERENCES…….84

APPENDIX…….....90

LIST OF TABLES

TABLE 1: Summary of Years of Service for Paired Respondents-Principals….....48

TABLE 1A: Summary of Years of Service for All Respondents-Principals…Appendix D

TABLE 2: Summary of Years of Service for Paired Respondents-Teachers……48

TABLE 2A: Summary of Years of Service for All Respondents-Teachers…..Appendix D

TABLE 3: Teachers' Gender for Paired Sample……...49

TABLE 3A: Teachers' Gender for All and Paired…… Appendix D

TABLE 4: Teachers' Race for Paired Sample……...49

TABLE 4A: Teachers' Race for All and Paired……Appendix D

TABLE 5: Building Level for Paired Sample……49

TABLE 5A: Teachers' Building Level for All and Paired……Appendix D

TABLE 5B: Principals' Building Level for All and Paired……...Appendix D

TABLE 6: Principals' Gender for Paired Sample……..50

TABLE 6A: Principals' Gender for All and Paired……...Appendix D

TABLE 7: Principals' Race for Paired Sample…….51

TABLE 7A: Principals' Race for All and Paired……..Appendix D

TABLE 8: District Typology…….51

TABLE 8A: District Typology for All and Paired…… Appendix D

TABLE 9: Reliability for All and Paired (Cronbach's alpha by subscale)……52

TABLE 10: Correlations (two tailed) by Subscale, PSES vs. Teacher Ratings (TR-1)…52

TABLE 11: Correlations by Subscale, PSES vs. Teacher Predictions (TR-2)…….53

TABLE 12: Normality Results for Paired Principals and Teachers……..54

TABLE 13: Subscale Differences (PSES -TR-1) and Enrollment……61

TABLE 14: Subscale Differences (PSES -TR-2) and Enrollment……62

TABLE 15: Multivariate Tests (TR-1)……..63

TABLE 16: Multivariate Tests (TR-2)……..63

TABLE 17: Tests of Between-Subjects Effects (PSES & TR-1)……..65

TABLE 17A: Tests of Between-Subjects Effects (PSES & TR-1)……Appendix D

TABLE 18: Tests of Between-Subjects Effects (PSES & TR-2)……..65

TABLE 18A: of Between-Subjects Effects (PSES & TR-2)…….Appendix D

CHAPTER I

Introduction

In this era of high accountability for schools defined by a national focus on test scores, standardization, growth models, and data-driven decision making, increasing attention is shifting to the leadership roles of the principal. The principal plays a key role in assuring success for a school. The aforementioned focal points have shifted the focus of most building principals as well, thus narrowing their priorities to tasks centered on instructional leadership. Of course there are many other tasks not directly associated with instructional leadership. Tasks that are of a managerial or moral nature are also important to the success of a school. Today's principal must balance all three of these areas of leadership: instructional, managerial, and moral.

This study sought existing correlation between principal self-efficacy (PSE) as self-reported by the principal and the leadership efficacy ratings of principals by the teachers whom they lead. Furthermore, an additional survey was administered to the teachers to gather their predictions of how the principals rated themselves. A quantitative survey methodology using descriptive statistics, correlation, and bivariate and multivariate analyses of variance (ANOVA and MANOVA, respectively) was used to analyze the results of teacher and principal surveys.

Background of the Study

Self-efficacy has been the center of much research in relation to education pertaining to student motivation, success of instructional programs, and teacher efficacy. Principals' self-efficacy (PSE), principals' perception of their own leadership abilities, is

a relatively new area of educational leadership research that deserves further examination. The Wallace Foundation (July, 2010) study corroborated this stance stating:

> We found that school districts are able to influence teaching and learning, in part, through the contributions they make to positive feelings of efficacy on the part of school principals . . . . It follows that principals possessed of strong efficacy beliefs will be more likely than others to undertake and persist in school-improvement projects . . . . Consistent with past research, our analysis of survey and achievement data yielded small but significant effects of principal efficacy on student test results. (p. 15)

The PSE construct has been examined recently, and a valid, reliable instrument to measure principal self-efficacy, the Principal Sense of Efficacy Scale (PSES), has been established (Tschannen-Moran & Gareis, 2004). Construct validity was verified by Tschannen-Moran and Gareis (2004, p. 580) by "correlating PSES to other known constructs" and finding significant relationships with work alienation ($r = -0.45$, $p < 0.01$), trust in teachers ($r = 0.42$, $p < 0.01$), and trust in students and parents ($r = 0.47$, $p < 0.01$) Justification for studying PSE is based on many factors. The factor most relevant to this study was the relationship between high PSE, which is based on the principal's self-perception of his or her leadership ability, and his or her actual ability to successfully lead. There was evidence to support that the higher one's beliefs about his or her abilities are, the more likely he or she is to be successful due to increased goal attainment orientation and the ability to cope with deficiencies (Bandura, 1994; McCollum & Kajs, 2009). These findings also suggested that teachers who feel more supported by an efficacious principal are more likely to have higher success in their classrooms as well as

lower stress levels (Margolis and Nagel, 2006; Ross and Gray, 2006). Therefore, the perceptions of teachers about their principals' leadership efficacy were worthy of study.

Another focus of this study was analysis of each subscale of the PSES pertaining to instructional, managerial, and moral leadership tasks. Implications may elucidate the potential need to: a) Explore teacher perceptions of their principals as an indicator of principal efficacy, and b) Inform principals of areas of need to enhance managerial and moral leadership efficacy as well as instructional efficacy. In light of one's perceptions of his or her performance, the day-to-day tasks associated with instructional, managerial and moral leadership are situation specific. Likewise, principal's self-efficacy as related to these tasks is also situational, thus varying leader to leader and even day-to-day. As principals have experiences within their environments, they stand to establish varying levels of self-efficacy, their beliefs about their abilities to have success and to what degree when performing those tasks. This would then apply across all three subcategories of leadership tasks relevant to this study, instructional, managerial, and moral leadership tasks. Analysis of the PSES with the teacher ratings and teacher predictions offers a way to see if teachers' perceptions of their principals' leadership efficacy match the principals' self perceptions.

The Principal Sense of Efficacy Scale (PSES), an instrument developed by Tschannen-Moran and Gareis (2004) to measure principals' self-reported leadership efficacy is an 18-item survey instrument consisting of three subscales dealing with moral, managerial, and instructional leadership tasks (6 items each). In a subsequent study, Tschannen-Moran and Gareis (2007) studied principals' responses on the PSES for demographic and context variables. Since support of teachers was one of the greatest

predictors of PSE, teachers were selected to be a central part of the present study of PSE. Furthermore, the Tschannen-Moran and Gareis (2007) study revealed the need to analyze effects of principals' leadership self-efficacy from the point of view of others, thus making the inclusion of teacher input an integral part of this present study.

Statement of the Problem

Research dealing with the relationship between Principal Self-Efficacy (PSE) and leadership tasks has relied heavily on self-reporting. Therefore, the purpose of this study was to see if teachers' perceptions of principal effectiveness correspond to the self-reported PSE, thus exploring and examining any disconnect between the self-efficacy a principal believes he or she projects versus the efficacy of the principal perceived by teachers.

Significance of the Study

Teachers with high self-efficacy inspire students to also be more efficacious and productive. Bandura (1994) stated, "Schools in which staff members collectively judge themselves capable of promoting academic success imbue their schools with a positive atmosphere for development that promotes academic attainments regardless of whether they serve predominantly advantaged or disadvantaged students." This same relationship may exist between principals and teachers. Principals with high self-efficacy may inspire teachers to be more efficacious and productive. Research has shown that support of teachers is one of the leading contributors to principal self-efficacy (Tschannen-Moran & Gareis, 2007). A reciprocal relationship of efficacy building between principals and teachers offered support for this study. Bandura (2007) summarized his reciprocal causation sub-construct of social cognitive theory as follows:

> In this transactional view of self and society, internal personal factors in the form of cognitive, affective, and biological events; behavior; and environmental events all operate as interacting determinants that influence one another bidirectionally. Reciprocity does not mean that the three sets of interacting determinants are of equal strength . . . . Nor do the mutual influences and their reciprocal effects all spring forth simultaneously as a holistic entity. (p. 6)

If teachers' perceptions of their principals' self-efficacy are an indicator of and have an effect on the efficacy of the principal, the implications would be many, including, but not limited to, principal professional development decisions for self-efficacy enhancement. Likewise, a reciprocal relationship between principals and teachers would highlight the need for principals to have the support of their teachers while at the same time being able to project the sense of confidence and self-efficacy of an effective leader. This study sought to find a correlation between the self-efficacy principals project and their efficacy as perceived by the teachers whom they lead. In short, principals and teachers impact each other and the educational environment in which they interact. Bandura (1977), in his establishing of Social Learning Theory stated, "In the social learning view . . . psychological functioning is explained in terms of a continuous reciprocal interaction of personal and environmental determinants" (pp. 11-12). Applying this idea to principal self-efficacy and its effect on principals and the teachers whom they serve, teachers' support of principals as well as principals' ability to project efficacious leadership behaviors can have reciprocal benefits on the school environment pertaining to the principal-teacher relationship.

Methodology Overview

The Principal Sense of Efficacy Scale (PSES) and a pair of modified PSES instruments for teachers to rate principals were administered to paired random samples of principals and teachers across Ohio (the principal and one teacher from each selected school). The modifications of the PSES to create the teacher versions were minor, thus consisting of slightly modified directions and adjusted pronouns to make it read smoothly from the teacher's point of view. A systematic random sampling method for principal selection was used as the researcher went through the Ohio Department of Education school directory selecting elementary, middle, and high schools in that order repetitively page-by-page, district-by-district. Next, teacher lists for these schools were found on the school websites. If that particular school did not publish this information online, the researcher went onto the next school of the same level in the directory. Once teacher rosters were found, a random number generator was used to select a teacher randomly from each list. These teachers and the verified principals served as the pairs of participants for the present study.

The first PSES for teachers (TR-1) served to simply rate the principal. The second PSES for teachers (TR-2), offering a new idea and point of view in self-efficacy research, served to gather how the teachers predicted how the principal responded on his or her own PSES self-rating. This will be referred to as Predicted Principal Self-Efficacy or TR-2 results. Survey responses were sought from 600 pairs of teachers and principals across the entire state of Ohio ($n_{\text{teachers}} = 600$ and $n_{\text{principals}} = 600$) for a total of 1,200 solicited participants. The scales consisted of three subscales with six items each (18 items in all), each with a 9-point response scale ranging from 1 = *none at all* to 9 = *a great deal*. Using

an explanatory model, responses of the principals were correlated against the corresponding teacher responses using SPSS. Ratings within each subscale (instructional, managerial, and moral leadership tasks) were analyzed. These subscales represent leadership tasks that are situation-specific as principals perform day-to-day duties in their buildings. Therefore, principal self-efficacy levels may vary among these subcategories as the self-efficacy levels may be situation-specific as well.

Limitations of the Study

1. While noted in the introduction, the current trend for principals to be focused on instructional leadership tasks may have skewed both principals' and teachers' perceptions of managerial and moral leadership tasks.
2. The sample of paired participants self-selected whether to participate or not. Therefore, many of the randomly solicited participants chose not to participate.
3. The author of this study's status as a principal in northeast Ohio may have been a source of bias in the implications of the results of the study.

Delimitations

1. All participants were teachers and principals in Ohio public school districts.
2. Since only one teacher was surveyed per principal, there is a greater chance of bias in that one teacher's responses based on his or her relationship with the principal than if several teachers were surveyed from each principal's building. However, the sample size, $n = 189$ was sufficient to minimize the effect of this bias on the results.

Definition of Key Terms

The following terms were defined to clarify this study.

1. Instructional Leadership: The principal's hands-on supervision of classroom instruction, teacher effectiveness, and student achievement (Hallinger, 2003).
2. Managerial Leadership: The principal's handling of non-instructional tasks involving paperwork, time-management, and operation of the school.
3. Moral Leadership: The principal's ability to tap emotions, appeal to values, and respond to connections with others (Sergiovanni, 1992).
4. Principal Sense of Efficacy: A principal's self-perceived capability to perform the cognitive and behavioral functions necessary to regulate group processes in relation to goal setting (McCormick, 2001).
5. Self-efficacy/Sense of Efficacy: The terms were used interchangeably to refer to one's self-belief in his or her capabilities to organize and execute the courses of action required to produce given attainments (Bandura, 1997).

Summary

This study served to elucidate the underpinnings of the construct of principal self-efficacy (PSE) as it correlates to teachers' perceptions of principal efficacy. This study added to the literature on the role PSE and leadership by incorporating the views of others (teachers). This study also added to the literature by adding a new idea of studying predicted principal self-efficacy (PPSE) as teachers' predictions of principal self-ratings

were analyzed, thus establishing two avenues from the teachers' point of view to determine if teachers perceive their principals' leadership efficacy across the three subcategories of instructional, managerial, and moral leadership tasks the same way as principals perceive themselves. A quantitative analysis of survey results sought any existing correlation between teacher and principal responses on their respective versions of the Principal Sense of Efficacy Scale (PSES). Results from the PSES (self-reported by principals), the teachers' version of the PSES (teachers rating principals), and the teachers' PPSE were analyzed and discussed. Findings and implications related to principal self-efficacy and the teachers' points of view according to both their ratings of the principal and their predictions about the principals' self-ratings were explored.

CHAPTER II

Review of the Literature

Introduction

In this era of data-driven accountability for public schools, the position of building principal has become a focal point. Tschannen-Moran and Gareis (2007) stated, "The principal is a key agent at the school level. He or she sets the tone and direction for the school, initiates change, provides expertise, marshals resources, unifies partners, and maintains effort" (p. 89). The leadership behaviors of the principal have been found to play a key role in successful schools in all facets ranging from implementing change and impacting student achievement to reinforcing teacher-principal relationships (DuFour, 1991; DuFour & Eaker, 1998; Gray & Streshly, 2008; Hallinger, 2003; Marzano, Waters, & McNulty, 2005). The construct of principals' self-efficacy may also play a role in supporting the multi-faceted realm of successful schools (Leithwood, 2007; Leithwood, Strauss & Anderson, 2007; Margolis & Nagel, 2006; Ross & Gray, 2006; Tschannen-Moran & Gareis, 2004, 2007). Linking the construct of self-efficacy to leadership, performance, and principal leadership, lays the foundation for this current study.

Part 1: The Construct of Self-Efficacy

Bandura (2007) defined self efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Foundations in motivational psychology yield four processes that are related to self-efficacy. They are affective, cognitive, motivational, and selection (Bandura, 1994). Each of these processes stands to have an impact on the effectiveness and self-efficacy of leaders and vice versa. Paunonen and Hong (2010) citing Bandura (1997, p. 46) stated:

> According to social cognitive theorists, self-efficacy has 'effects on thought, affect, action, and motivation.' Thus, someone high in self-efficacy might do better because that person approaches a task with a different mindset than does someone low in self-efficacy, even though both people might be at the same level of ability. (p. 340)

Self-efficacy can have many effects on cognitive processes. Bandura (1994) stated, "Most courses of action are initially organized in thought" (p. 3). These thoughts, based on the person's self-efficacy, can vary greatly. They can range from positive visions of successful scenarios, thus paving a positive pathway to successful actions. Or, on the other hand, these cognitions can be negatively focused on visions of unsuccessful outcomes, thus triggering fear and avoidance. Bandura (1994) stated:

> Indeed, when people are faced with the tasks of managing difficult environmental demands under taxing circumstances, those who are beset by self-doubts about their efficacy become more and more erratic in their analytic thinking, lower their aspirations and the quality of their performance deteriorates. (p. 3)

Self-efficacy is also related to the self-regulation of motivation (Bandura, 1994). Bandura stated, "Most human motivation is cognitively generated" (p. 3). Therefore, cognitive processes and motivation are more efficiently exercised by individuals with higher self-efficacy. In discussing the multi-faceted area of motivation, Bandura (1994) stated:

> There are three different forms of cognitive motivators around which different theories have been built. They include causal attributions,

> outcome, and cognized goals. The corresponding theories are attribution theory, expectancy-value theory and goal theory, respectively. Self-efficacy beliefs operate in each of these types of cognitive motivation. (p. 3)

Therefore, self-efficacy levels affect how decisions are made and how much effort will be applied to achieve the goals aligned with those decisions. How one feels about his or her ability to achieve a goal and how much effort, cognitively and physically, he or she is willing to apply to attain the goal are in part determined by his or her self-efficacy. As being examined in this present study, there may also may be a correlation between how teachers perceive their principal's self-efficacy versus the level that the principal believes he or she projects. An implication of this study may be for principals to correct any disconnect between these two measures, especially when teachers perceive the principals' actual efficacy or projected self-efficacy at lower levels than the principals' self-rating.

In the affective realm, the key role played by self-efficacy is in the area of coping skills. Bandura (1994) found, "People who believe they can exercise control over threats do not conjure up disturbing thought patterns. But those who believe they cannot manage threats experience high anxiety arousal. They dwell on their coping deficiencies" (p. 4). Low self-efficacy leads one to dwell on fear, thus negatively impacting their affective processes. The inability to cope, or the fear of not coping, increases stress and can lead to anxiety, depression and other negative affective afflictions.

As for selection processes, decisions concerning which tasks to embark on and engage in are also impacted by the person's self-efficacy. If one is not confident or self-efficacious about a task at hand, the task may be altogether avoided or delegated to

others. Furthermore, this applies to the jobs and career choices individuals make. Paunonen and Hong (2010) stated, “People with high generalized self-efficacy across many diverse domains have been found to have higher levels of success in general, excelling in outcomes related to academic achievement . . . job performance . . . and even physical health” (p. 340). Corroborating this stance, Bandura (2007) stated:

> People’s beliefs in their efficacy have diverse effects. Such beliefs influence the courses of action people choose to pursue, how much effort they put forth in given endeavors, how long they will persevere in the face of obstacles and failures, their resilience to adversity, whether their thought patterns are self-hindering or self-aiding, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize. (p. 3)

Previous discussion by Bandura (1994) similarly stated, “Therefore, beliefs of personal efficacy can shape the course lives take by influencing the types of activities and environments people choose. People avoid activities and situations they believe exceed their coping abilities” (p. 6).

Self-efficacy, while often associated with other constructs such as self-concept, self-esteem, and motivation, is its own construct. Self-esteem is concerned with self-worth, not capability. Self-concepts are measured with descriptive statements about one’s attributes rather than the wide variety of behaviors that can be attributed to self-efficacy. Effectance motivation is often overextended as it only applies under certain limited conditions while in social cognitive theory, “efficacy beliefs enter into the regulation of all types of performances” thus drawing distinction between the two constructs (Bandura,

2007, pp. 10-15). Therefore, self-concept, self-esteem, and motivation are not synonymous with self-efficacy. They are generally related, but they are different facets of self-conceptions. Furthermore, when analyzing task performance, self-efficacy beliefs apply across a varied range of behaviors including leadership tasks.

Part II: Self-efficacy and Performance

Can one's higher self-efficacy in and of itself produce higher performance for that individual in related tasks? There is empirical data that indicate that this is the case, and there are logical explanations for this (Harrison, Rainer, Hochwarter & Thompson, 1997). Their study revealed that one who is confident and has the perception that he or she is capable and able to perform well in a given area is more likely to spend more time preparing for the tasks at hand. Likewise, this confidence may result in increased stamina when practicing or preparing for the task as well. Furthermore, this person may be more persistent and confident that the outcome can be achieved, and thus making it happen as a result of the combination of these efforts and mindsets. Other studies taking place in laboratories, as well as in the work force, are discussed below. They indicate the general positive relationship between self-efficacy and task performance as proposed by Bandura (2000). In the realm or principal leadership, this relationship may give way to increased principal self-efficacy, thus increasing teachers' perceptions of their principals' efficacy as well. This may then lead to higher collective efficacy within the overall school environment with a wide range of positive relationships to teacher and student performance.

Paunonen and Hong (2010) explored the relationship between self-efficacy and task performance and its applicability to cognitive abilities. For their study they stated,

"Self-efficacy refers to one's conviction that one can achieve a given level of performance at some task" (p. 339). The purpose of the study was to "evaluate the contribution of self-efficacy beliefs to the prediction of task performance in specific cognitive ability domains" (p. 339). The cognitive ability domains tested for the study were numerical, verbal, spatial, and mechanical. The study participants consisted of 176 undergraduate college students (53 males and 123 females). Their arithmetic, vocabulary, and spatial abilities were tested via the Multidimensional Aptitude Battery (MAB). The mechanical ability subscale scores were collected using the Wiesen Test of Mechanical Aptitude (WTMA). To assess participant self-efficacy in advance, Paunonen and Hong asked participant to predict their scores on each of the tests after being given five sample items from each test. Data were collected and analyzed, and the authors elected not to use participant gender as a variable in the study as none of the preliminary results indicated that adding sex as a covariate changed the results of any significance testing or interpretation. Results of this study indicated that self-efficacy had an effect on the outcomes of three of the four given abilities tests: verbal, numerical and spatial. Paunonen and Hong (2010) reported:

> Self-efficacy accounted for significant ($p < .05$ or better) independent variance in the ability test scores. This means that self-efficacy ability correlations . . . for those domains were not simply due to overlap between self-efficacy and cross-domain abilities. In other words, our participants' self-efficacy ratings contributed something unique to the prediction of their ability to complete verbal, numerical, and spatial tasks. (pp. 353-354)

Paunonen & Hong went on to posit that there were two mechanisms by which self-efficacy can contribute to performance on ability measures. They were motivation to succeed and cross-domain or general overall ability. Therefore, principals may also increase day-to-day task performance by developing a higher level of self-efficacy.

While Paunonen and Hong (2010) found that self-efficacy contributed indirectly to performance of cognitive tasks, they were not ready to believe their statistical findings that self-efficacy directly affected performance on these tasks. They stated, "There must be other variables, variables not measured in this study, that mediate self-efficacy's effects on task performance" (p. 356). In a second explanation, Paunonen and Hong (2010) went on to describe a differing explanation for the effects of self-efficacy. They proposed the idea that while high self-efficacy cannot directly boost test performance, low self-efficacy on the other hand may directly affect test scores negatively. They predicted, "Those low in self-efficacy easily lose concentration, readily make mistakes, quickly get tired, and soon abandon their efforts to do well on the test" (p. 356). This proposed effect could impact performance across many fields including principal leadership. Rather than highly self-efficacious principals performing higher due to their self-efficacy, might it be more plausible that principals with low self-efficacy perform lower due to the effect of their low self-efficacy?

Also in the cognitive domain, Hansen and Wanke (2009) studied the mediating effect of self-efficacy on stereotype activation on behavior. Akin to self-fulfilling prophecy, stereotype activation is the idea that if one thinks it is true, then he or she will behave in a way consistent with that belief. Hansen and Wanke (2009) referred to these as priming effects. The authors went on to explore if these priming effects on simple

motor behaviors like walking could also exist for more advanced constructs such as cognition. The authors explained:

> Therefore, thinking of a stereotype (e.g., slowly walking elderly) could directly provoke a respective behavior (e.g., walking slowly). Whereas such a direct link explanation seems plausible for simple motor activities, such as walking fast or slowly, it is more difficult to imagine a direct link from perception on cognition and achievement, such as answering knowledge questions. (p. 77)

Similarly, based on Bandura's (1997) work, Hansen and Wanke (2009) posited that thinking of people who are successful, or imagining such, may lead to an individual gaining the confidence or perceived self-efficacy that he or she can also have success. They also stated that people with high self-efficacy usually demonstrate higher performance. Therefore, experiment one of this study was to find out if self-efficacy mediated stereotype activation, thus making participants perform higher or lower on a general knowledge test (Experiment 2) if their respective self-efficacy is high or low. For experiment one, college student participants (n = 29) were first primed with the mindset of either a professor or a secretary through the experimental process of having them design a questionnaire for each respectively. After priming the two groups, the participants were asked to predict how they would do against the other group. As expected, the professor group had a significantly higher self-efficacy rating than the secretary group based on self-reported predictions of success.

Building on these findings, experiment two commenced with another set of college student participants (n =49). The priming procedure was the same, except this

time the classifications were college professor and cleaning lady. The results of experiment one were replicated with those primed as professors having higher self-efficacy about their performance on a general knowledge test. Furthermore, upon following up with an actual general knowledge test, the professor group also performed significantly higher than the cleaning lady group with, $\beta = .363$, $R^2 = .132$, $p < .03$.

Generally speaking, those who had higher self-efficacy due to the stereotype priming not only had higher self-efficacy about their knowledge performance, they actually performed higher than those with lower self-efficacy and priming. Self-efficacy again showed to have a unique effect on the results. Just like Paunonen and Hong (2010), Hansen and Wanke (2009) alluded to the effects of self-efficacy as related to motivation, effort, and persistence. If their findings were to apply to principals' leadership task performance, then principals may increase their self-efficacy, and subsequently their performance by priming themselves after model principals and educators in the field.

Last, while the reliability of the Hansen and Wanke's (2009) knowledge testing in the form of a common trivia board game can and should be questioned, it is noteworthy to consider the potential effects of self-efficacy on performance when all other factors such as ability are equal. One might ask if teachers and principals were primed with the belief that they are among the best at what they do, would they actually improve their performance.

While many studies have found and discussed a positive relationship between task performance and self-efficacy, not all studies indicated such findings. Schmidt and DeShon (2009) found the opposite to be true. Modeling their research after Vancouver, Thompson, Tischner, and Putka (2002), they also found a negative relationship between

high self-efficacy and task performance under certain conditions. Schmidt and DeShon referenced the usual between-person positive relationship between self-efficacy as they stated, ". . . many theories, such as social cognitive theory, propose that self-efficacy and performance are reciprocally related" (p. 192). However, they pointed out that was not the case when studying one person's subsequent performances as discussed by Richard, Diefendorff, and Martin (2006). In other words, when a person possessed high self-efficacy due to successful past performance, self-efficacy was not positively related to success on subsequent performances. In fact they found a negative relationship between high self-efficacy and subsequent performance for individuals who were performing a task again after demonstrating success in the past. Schmidt and DeShon (2009) stated:

> High self-efficacy may lead individuals to underestimate the effort required to maintain performance at the level necessary to attain the goal. It is under these conditions that complacency may set in, leading to reduced effort and sub-optimal strategy development. With the perception that the desired outcome can and will be accomplished with relative ease, little incentive exists to invest maximum effort toward subsequent performance. (p. 194)

These findings resulted from an experimental design in which undergraduate college students (n = 89) participated. The participants were instructed on playing a computerized analytical game. Before each trial, participants rated their likelihood for success based on prior performances. After multiple trials, the authors reported, "Analysis . . . showed that self-efficacy exhibited a significant negative within-person relationship with performance whether operationalized as goal progress (y = -.26, SE =

.13, $p < .05$) or prior performance ($y = -.30$, $SE = .13$, $p < .05$)" (p. 197). Just as found by Vancouver et al. (2002), higher confidence was associated with declining performance when analyzed within-person. Contrary to these findings however, Schmidt and DeShon (2009) did find that self-efficacy was still positively related to task performance when individuals were repeating a task after performing it poorly. Participants who remained motivated and confident were able to improve their low performance. This was promising as previous research confirmed that failure at a specific task lowered both self-efficacy and future performance on the related task (Smith, Kass, Rotunda & Schneider, 2006). The key is for individuals (and perhaps groups/teams) to remain positive and focused to maintain higher self-efficacy whenever possible.

While the previously-discussed tasks were of an academic nature, Rees and Freeman (2009) examined the relationship between self-efficacy and performance in the athletic arena using male British amateur golf competitors ($n = 197$) as participants. Using self-reported questionnaires, the researchers gather data during practices prior to major competitions. The questionnaires gathered data related to social support, stressors, and self-efficacy as related to the upcoming competition. After the competition, performance was measured via their scores. Since these competitions took place on varying courses with varying weather, the authors employed a procedure to standardize the scores (p. 250).

Findings revealed that social support moderates the relationship between stressors and task performance. Rees and Freeman (2009) stated, "At low levels of stressors, level of social support was relatively unimportant; at high levels of stressors, however, and only those participants with high levels of social support maintained their performance

level" (p. 253). These finding held true when examining the mediating effect of self-efficacy between social support and stressors, $\beta = -17$, $p < .01$ (p. 254). In summary, the authors found:

> The moderated mediation analysis provided evidence of how social support was related to task performance. This analysis revealed that social support was associated with high levels of self-efficacy, and self-efficacy was associated with better performance scores. This effect was, however, most salient at moderate to high levels of stressors. (p. 258)

The authors proposed that the golfers' social support and higher self-efficacy may have manifested in the perception of having someone there for them in stressful times (emotional support), to boost confidence (esteem support), to give them advice (technical/informational support), and to facilitate practice sessions (tangible support). It is important to note that this support, even though coming from others, still needed to be internalized and perceived by the individual golfers. Therefore, their perceptions became their realities in the form of self-referenced awareness (or the perception thereof).

Steyn and Mynhardt (2008) examined the relationship between self-evaluation and the building of self-efficacy. To do so, recruits to the South African Police Service (n = 1,173) were tested on cognitive ability related to their training. They received one of three forms of feedback, a) Subjective self-referenced (in that they took the test and only had feedback based on their perception of how they did); b) Objective (they took the test and were given a key to grade it); and c) Social comparison (they took and scored the test and were given norm information). They also were given multiple self-efficacy questionnaires related to the specific cognitive task. These results indicated that receiving

subjective self-referenced feedback had the most positive relationship to building self-efficacy. Participants who took the test and felt positively about their performance internalized the perception of doing well and were able to better build self-efficacy as related to this cognitive task. As more objective information was made available to the participants, less self-referenced feedback played a role in self-efficacy building.

An interesting secondary finding was also discussed by Steyn and Mynhardt (2008). They found that recruits who were offered intervention after receiving their feedback tended to have decreasing self-efficacy rather than the expected increase. This aligned with Bandura's (1997) idea that when one is faced with a challenge, high self-efficacy will result from mastery. These participants did not feel as though they had mastered the task, so the result was a lowering effect on self-efficacy. The authors posit that this may also have been the result of the difficulty of the tasks and intervention (p. 570).

Furthermore, Steyn and Mynhardt (2008) discussed implications of their study. One such implication was the consideration of self-efficacy and self-evaluation when selecting job applicants. This knowledge would add more to the candidates' application than mental ability and people skills. Anderson et al. (2008) made similar statements about self-efficacy being a predictor of effective leadership. They stated, "Thus, it [self-efficacy] could have the potential to significantly increment the prediction of effectiveness over and above that provided by traditional methods (e.g., personality testing, intelligence testing, etc.)" (p. 607).

In examining the contributions of self-efficacy to the general construct of job performance, Jawahar, Meurs, Ferris, and Hochwarter (2008) found similar relationships.

However, unique to their study was their integration of two separate constructs, task performance and contextual performance. They defined task performance as "the execution of substantive or technical tasks" and contextual performance as "personal support, organizational support, and conscientious initiative" (p. 140). These dimensions of job performance have traditionally been studied separately from each other. Therefore, this study focused on both constructs through two lenses of social cognitive theory, self-efficacy and political skill. To clarify these constructs, Jawahar et al. (2008) stated:

> Individuals who perceive themselves as efficacious activate sufficient effort that, if well executed, produces successful outcomes…. Political skill refers to the ability to effectively understand others at work and to use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives. (pp. 142-143)

As was hypothesized, Jawahar et al. (2008) found that self-efficacy was more strongly related to task performance than to contextual performance. Political skill was more strongly related to contextual performance than to task performance, and self-efficacy was a greater predictor of task performance while political skill was a greater predictor of contextual performance. Furthermore, and perhaps more importantly, implications of this study not only distinguished which construct of job performance is related to self-efficacy (task performance), suggestions were made of how to enhance job performance. Jawahar et al. (2008) stated, "Unlike GMA [general mental ability] and personality, both self-efficacy and political skill can be enhanced with training, and our results suggest that enhanced levels of self-efficacy and political skill are likely to result in increased job performance" (p. 152).

In a study of undergraduate students' performance as related to metacognition and self-efficacy, Coutinho (2008) found, "This suggests that students with effective metacognitive strategies also have strong belief in their capabilities to successfully perform a task. These findings lend support to training programs for students that enhance self-efficacy and strengthen their metacognitive strategies and skills" (p. 165). Therefore, enhancing self-efficacy was suggested as a strategy to enhance performance. While these findings showed promise, limitations were acknowledged. First, the participants were all undergraduate students, so generalization to other populations would require further study. Also, correlation does not guarantee causation. Last, and of more interest to this writer in light of the goals of this current study, Coutinho (2008) identified utilization of only self-reported data for measures of metacognitive and self-efficacy ratings. Coutinho (2008) stated, "Future research could utilize observational measures instead of self reports" (p. 170). This was supported by Tschannen-Moran and Gareis (2007) as well as they suggested using ratings other then self-reported including ratings of self-efficacy as reported from colleagues and/or subordinates.

Part III: Brief Background of Principal Leadership

Principal as Instructional Leader

The instructional leader in this light refers to a hands-on principal who is involved in the monitoring of instruction, student achievement and progress. According to Leithwood (2007), ". . . instructional leadership has been, and continues to be, widely promoted as the most promising leadership response to the high student achievement standards the public has come to expect and policy makers are attempting to meet" (p. 190). In a study that examined collective leadership effects on student achievement

including school teams, parents, students and principals, Leithwood and Mascall (2008) found, "Principals were awarded the highest levels of influence in schools at all levels of achievement" (p. 529).

While most principals might subscribe to the need to be a strong instructional leader to be successful, results of studies linking principals' instructional leadership to student performance are mixed. In conducting a meta-analysis of over 125 studies between 1980 and 2000, Hallinger (2003) found, ". . . relatively few studies find a relationship between the principal's hands-on supervision of classroom instruction, teacher effectiveness, and student achievement" (pp. 333-334). On the other hand, a meta-analysis of 69 studies between 1976 and 2001 conducted by Marzano, Waters, and McNulty (2005) produced a list of 21 areas of responsibility, principals' behaviors, and correlated effects on student achievement associated with each area (pp. 42-43). Marzano et al. (2005) stated, ". . . we computed the correlation between the leadership behavior of the principal in the school and the average academic achievement of students in the school to be .25" (p. 10).

Tschannen-Moran and Gareis (2004) included six items to comprise the subscale for instructional leadership on the Principal Sense of Efficacy Scale (PSES). These tasks were:

> Motivate teachers; Generate enthusiasm for a shared vision for the school; Manage change in your school; Create a positive learning environment in your school; Facilitate student learning in your school; and Raise student achievement on standardized tests. (p. 581)

As noted previously, increased attention to the latter of these 6 items, raising student achievement on standardized tests, by policy makers and the general public has placed more pressures on principals to tend to test scores.

Principal as Manager

The principal as manager may not differ as greatly from principal as instructional leader. In principal and superintendent certification programs, one will hear the statement that it is important to be both a leader and a manager. This may create the presumption that they are different. In actuality, it may be argued that they are intertwined or even the same. Can one truly lead if he or she cannot manage and vice versa? From the standpoint of a principal, managerial roles may be perceived as making sure the buses are on-time and that the master schedule goes off without a hitch. Managers make sure there are plenty of desks and materials for the students and teachers. These things are true, but there is more to it than that. Managers must also carry out tasks within given timelines and restraints. Therefore, the tasks discussed as instructional leadership may only be effectively executed if the principal has the managerial skills and ability to do so.

In his discussion of the Level 5 Leader, Jim Collins (2005) created a hierarchical pyramid model showing the progression and attributes of leaders from level one (bottom of the pyramid) on up to level five. Dead center of the pyramid at level three lies "Competent Manager." The level three leader is described as one who, "Organizes people and resources toward the effective and efficient pursuit of predetermined objectives" (p. 12). Conceptually speaking, the base of the pyramid, level one, represents the basic foundation of a leader. As the levels increase by adding more attributes, it follows logically that the next level represents additional attributes to the levels below

while simultaneously serving as the base for the above levels. In this case, the competent manager is both the compilation of skills and attributes of levels one and two while also serving as the base for levels four and five. Therefore, the level 5 leader, "Executive" and level four "Effective Leader" must at first be "Competent Managers" (p. 12).

Tschannen-Moran and Gareis (2004) included six items to comprise the subscale for managerial leadership on the Principal Sense of Efficacy Scale (PSES). These tasks were:

> Handle the time demands of the job; Handle the paperwork required of the job; Maintain control of your own daily schedule; Prioritize among competing demands of the job; Cope with the stress of the job; and Shape the operational policies and procedures that are necessary to manage your school. (p. 581)

Principal as Moral Leader

When one considers the day-to-day activities and tasks performed by a building principal, leadership tasks discussed immediately preceding this section may be the first to come to mind. Instructional leadership tasks coupled with the act of "managing" a school fill the principal's day as teachers and students engage in the teaching-learning process. However, it is important to note the atmosphere within which this process takes place. The morale and camaraderie that exists, or does not exist, within and between student and teacher groups can be paramount to the success of the school. Therefore, the important role of moral leadership demands attention. According to Frick (2009), "The emphasis and preoccupation with bureaucratic scientism and management perspectives has given way to the importance of value, moral, and ethical bases for educational

leadership decision making" (pp. 50-51). Ethical decision making, while considering teacher evaluation and assignment, student discipline, curricular choices, and purchases, as well as what and how to communicate and with whom, is rooted in almost every other performance and leadership task in which the principal engages. Greenfield (2004) stated:

> First, the education of the public's children is by its very nature a moral activity . . . . Second, relationships among people are at the very center of the work of school administrators and teachers, and for this reason school leadership is, by its nature and focus, a moral activity . . . . (p. 174)

While test scores and principal behaviors that are directly aligned to them are often at the forefront, indirect behaviors that affect students and teachers via moral leadership are also of great importance in this light. Whether it be the facets of trust (Tschannen-Moran, 2007), inclusive leadership behaviors (Ryan, 2006), or Segiovanni's (2007) focus on servant leadership, there are many veins of moral leadership that must be considered when analyzing the leadership of a principal.

Tschannen-Moran and Gareis (2004) included six items to comprise the subscale for moral leadership on the Principal Sense of Efficacy Scale (PSES). These tasks were:

> Promote acceptable behavior among students; Promote school spirit among a large majority of the student population; Handle effectively the discipline of students in your school; Promote a positive image of your school with the media; Promote the prevailing values of the community in your school; and Promote ethical behavior among school personnel. (p. 581)

Part IV: Self-Efficacy and Leadership/Principal Leadership

Leadership self-efficacy (LSE) has been widely reviewed in many contexts. For specific details, see the LSE review of twenty studies in Hannah, Avolio, Luthans, and Harms (2008). This review revealed two propositions related to LSE. First, higher levels of LSE will yield higher levels of leader emergence and performance. Second, LSE will be moderated by the extent to which it matches the demands of the task and the context of the environment in which the leader exists. These propositions for LSE were consistent with findings discussed previously in the realm of task performance and context performance (Jawahar et al., 2008). In terms of confidence, McCormick (2001) stated, "Every major review of the leadership literature lists self-confidence as an essential characteristic for effective leadership" (p. 23). Self-efficacy and motivation have been at the center of many studies with some particularly focused on leadership (Leithwood, Strauss & Anderson, 2007; McCollum & Kajs, 2009; & Tschannen-Moran & Gareis, 2004, 2007). For a review focused on principal leadership and the construct of self-efficacy, see Tschannen-Moran and Gareis (2004).

To move forward with success in this achievement-focused, standards-based educational environment that is public education today, principals must possess and develop self-efficacy pertaining to their leadership capabilities. Bandura (2000) stated, ". . . 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, successful principals are likely to demonstrate high levels of self-efficacy,

thus explaining their ability to perform their duties and meet the challenges of the position.

One common definition of leadership is one's ability to persuade others to join or follow along to achieve success at a common task. Another is one's ability set a path or direction for followers to achieve goals. These definitions both imply that the leader not only sets the direction for the group, but that he or she also has goal attainment in mind. While goal attainment is multidimensional, Hendricks and Payne (2007) defined two types, performance goal orientation (PGO) and learning goal orientation (LGO). PGO is related to setting goals to complete tasks that are norm-referenced while LGO is related to setting goals to "further develop knowledge and skills" (p. 320) with mastery as the intended outcome. In both dimensions, self-efficacy had a mediating affect on goal orientation and leadership effectiveness (Hendricks & Payne, 2007).

Setting and achieving goals play a large role in the job of the principal. In a study focused on goal orientation and efficaciousness of principals, McCollum and Kajs (2009) examined the link between the two constructs. To rate efficacy, principals (n = 312) completed an instrument created and validated by McCollum, Kajs, and Minter (2006), the School Administrator Efficacy Scale (SAES). This instrument consisted of 51 items with eight subscales including Instructional Leadership and Staff Development, School Climate Development, Community Collaboration, Data-based Decision Making Aligned with Legal and Ethical Principles, Resource and Facility Management, Use of Community Resources, Communication in a Diverse Environment, and Development of School Vision. While McCollum and Kajs (2009) use the term efficacy throughout their

study, self-efficacy was the actual measure as the ratings given by the SAES were self-reported by the principals, thus yielding self-efficacy ratings.

To rate goal attainments, the 2 X 2 Goal Orientations for Education Leaders scale (McCollum & Kajs, 2007) was administered to the same principals. This was a 12-item scale with four subscales including Performance-Approach, Mastery-Avoidance, Mastery-Approach, and Performance-Avoidance. McCollum and Kajs (2009) found, "All of the dimensions of efficacy are statistically significantly positively correlated with mastery goal orientations" (p. 37). In summation, and of particular interest to this researcher, McCollum and Kajs (2009) stated, "One must have a goal, a set of positive characteristics associated with that goal, and a degree of efficacy for attaining the goal in order to make efforts, persist, and achieve the set goal" (pp. 32-33).

While these results were supportive of linking principal leadership and self-efficacy, the findings of McCollum and Kajs (2009) may not be able to be generalized. First, of the 312 principals participating in the study, an overwhelming majority were female (n = 222). This may be an indicator that primarily elementary principals were used, but this is not stated. Second, the participants consisted of a purposive sample of principals who are early in their administrative career with a mean score of 7.8 months of administrative experience making them first-year principals for the most part. Including principals with a greater variety of experience may have altered findings of the study.

An area of priority for any principal is student achievement. In a quantitative study to understand the link between principal self-efficacy and student achievement, Leithwood and Jantzi (2008) surveyed 96 principals and 2764 teachers on two separate instruments. Just as in the previous study, the surveys used to collect the LSE (Leader

Self-Efficacy) were self-reported by the principals, thus truly yielding measures of self-efficacy. The connection to the current study exists in the consideration given to principal self-efficacy. Leithwood and Jantzi (2008) stated, "Sense of efficacy is a belief about one's own ability (self-efficacy) . . . to perform a task or achieve a goal. It is a belief about ability, not actual ability" (p. 497). While the authors use the word efficacy as a stand-alone word throughout this study, it is clear that they are referring to self-efficacy. Of the four questions being examined by Leithwood and Jantzi (2008), the second question, "What is the relationship between leaders' efficacy and leader practices or behaviors, as well as school and classroom conditions?" (p. 498) was of particular relevance to the current study. Likewise, the third question, "What is the contribution of leaders' efficacy to variations in student learning?" (p. 498) was also of interest to this researcher. While links between student achievement and leadership behaviors and self-efficacy were likely to be indirect, not causal, leader self-efficacy was related to classroom and school conditions as well as student achievement. The strongest correlation between leader efficacy and school conditions ($r = .47$, $p < .01$) followed by leader self-efficacy and classroom conditions ($r = .39$, $p < .01$). As for student achievement, correlations were significant, but not as strong. The strongest correlation was between leader self-efficacy and state proficiency level in 2003 ($r =. 28$, $p < .05$). Using their results from regression analysis, Leithwood and Jantzi (2008) stated, "Leader efficacy, however, does explain significant variation in annual achievement scores" (p. 518).

Outside education, leadership self-efficacy has also been studied. Anderson, Krajewski, Goffin, and Jackson (2008) found that leadership effectiveness of executives

was related to leadership self-efficacy (LSE). They stated, "Canonical analysis (n = 227) yielded significant and highly interpretable relations between the taxonomic structure of LSE and leadership effectiveness" (p. 595). Furthermore, while it was important to note that general findings supported that self-efficacy had a positive relationship to leadership effectiveness, this was not true in all cases. They stated, "Indeed, it may be that up to a point, strong LSE beliefs may be beneficial-however, extreme LSE scores may actually lead to decreased effectiveness in certain areas. Investigation of these types of curvilinear relationships is a further avenue for future research" (p. 607). This postulation in the leadership realm was the performance realm in which cognitive task performance was also negatively related to high self-efficacy (Schmidt & DeShon, 2009). Furthermore, one must consider that not all leadership styles are the same. The realm of transactional leadership was broken down into two distinct styles, developmental leadership and supportive leadership, with the former being positively related to self-efficacy (Rafferty & Griffin, 2006).

When considering the capacity of a principal to lead, one must consider the contributions of leaders from the district level (Wallace Foundation, July, 2010). In a qualitative study, Leithwood, Strauss, and Anderson (2007) interviewed 31 principals to find what contributions they felt were most important. A 21-question instrument was used for this semi-structured interview process. Leithwood et al. (2007) stated:

> To foreshadow our detailed results, we found that districts contribute most to principals' sense of efficacy by establishing clear purposes (which become widely shared), unambiguously awarding priority to the improvement of instruction, and ensuring that teachers and administrators

> have access to appropriate amounts of meaningful professional development aimed at developing the capacities needed to achieve the shared purposes. (p. 736)

These findings suggest that district leaders directly affect the self-efficacy of building leaders, thus affecting student achievement indirectly.

In a quantitative study done for similar purposes, Tschannen-Moran and Gareis (2007) sought out supports or what they called "important antecedents" (p. 89) that had the greatest effect on principal self-efficacy. Tschannen-Moran and Gareis (2007) stated:

> Multiple regression revealed that, by and large, demographic variables of gender and race were not strong predictors of PSE [Principal Self-Efficacy]. The set of interpersonal support variables at the school building level (teachers, support staff, students, and parents) was the strongest predictor of PSE, followed by principal preparation and central-office staff, as well as resource support. (p. 89)

These authors explored the predictors of PSE as they marshaled through leadership and psychology literature to confirm the link between PSE and leadership. In doing so, Tschannen-Moran and Gareis stated, "It is important to recognize the inherent connection between a principal's self-efficacy and the outward responsibilities of working with and leading others" (p. 91). Upon performing factor analysis, Tschannen-Moran and Gareis found the above-mentioned interpersonal support variables produced factor loadings ranging from .48 to .79 while district-level supports produced factor loadings ranging from .30 to .87. The principal preparation considering both quality and utility of preparation produced factor loadings ranging from .66 to .86.

In the previous study by Tschannen-Moran and Gareis (2007), reciprocal causation was cited. Tschannen-Moran and Gareis stated, “Beliefs inform experiences, and experiences inform beliefs” (p. 103). Bandura (2007) indicated that reciprocal causation is the process in which one’s beliefs, like self-efficacy, can actually affect one’s performance. Furthermore, one’s performance can affect one’s beliefs. Ketelle (2005) found this to be true as well. Through assigning a leadership assignment to her students seeking administrator credentials, Ketelle found that the self-efficacy of the students was improved as a result. These findings suggest that the more leadership responsibility that one is given, the more efficacious he or she will become upon successful completion. If reciprocal causation holds true, then it stands to reason that these more efficacious students would be more effective leaders.

Teachers’ perceptions of principal efficacy play an important role in reinforcing the principal-teacher relationship. Teacher beliefs about collective efficacy, the combined efficacy of teachers and administrators based on support, resources, and leadership style, was found to be related to student achievement in grades 3 and 6 equivalent to .22 standard deviations (Ross & Gray, 2006). Teachers’ beliefs about relationships with administrators are not only related to student achievement, these relationships also affect teacher stress levels (Margolis & Nagel, 2006; Ross & Gray, 2006). These findings support the idea that teachers’ perceptions of their relationships with principals are important enough to be examined in this current study.

Three categories of leadership tasks lend themselves to being studied in light of the principal’s self-efficacy. These tasks are rooted in managerial, instructional, and moral leadership (Tschannen-Moran & Gareis, 2004, 2007). To develop an instrument for

measuring principal self-efficacy, Tschannen-Moran and Gareis (2004) made multiple attempts by reviewing existing scales and utilizing two new ones before arriving at the Principal Sense of Efficacy Scale (PSES) as their final product (p. 575).

Grounded in literature on leadership and social cognitive theory of Bandura, Tschannen-Moran and Gareis (2004) described and explained the importance of studying and measuring the construct of principal self-efficacy (PSE). To do so, the researchers conducted surveys of principals across the state of Virginia (n= 544). This 50-item survey, based on the Interstate School Leaders Licensure Consortium (ISLLC) standards, was narrowed down with the assistance of three educational leadership professors and one practicing superintendent to become the current final form of the PSES. The 18 items that were not excluded fell into three subscales: managerial, instructional, and moral leadership tasks. Tschannen-Moran and Gareis (2004) stated, "Items that were removed had a communality of less than 0.30, loaded on more than one factor, or a factor loading on one of the three principle factors of less than 0.40" (p. 580). Construct validity was tested by correlating the PSES with other known constructs including work alienation (negatively correlated), and trust in teachers, parents and students (positively correlated). Last, demographic factors were found to not be related to principal self-efficacy. The only exception was race with "white principals having slightly higher sense of efficacy than black principals ($r = 0.17$, $p < 0.01$)" (p. 580).

Implications of Tschannen-Moran and Gareis (2004) were many. First, it was proposed that district leaders, those responsible for improving quality of leadership, should make self-efficacy enhancement a priority. Tschannen-Moran and Gareis (2004) posited, "Bandura (2000) proposes three specific approaches for developing self-efficacy

in managers" (p. 583). They are guided mastery, cognitive mastery, and self-regulatory competencies using many means including self-efficacy appraisal. In summation, the first step was being able to measure the construct of principal self-efficacy, and the PSES made that possible.

Summary

Self-efficacy, one's beliefs about their capabilities to produce desired results, has far reaching implications across task performance and leadership behavior. The above discussion focused on the effects of self-efficacy on cognitive processes, affective processes, motivation, and selection processes. These processes were also discussed as they pertain to task performance and leadership. The implications of relating self-efficacy to goal attainment and the ability to cope with demanding situations and challenging environments that define the workplace of building principals are many, thus, the focus of the present study.

In short, individuals who possess high levels of self-efficacy tend to have more success in task performance and leading others toward common goal attainment. Highly self-efficacious people tend to be more willing to take on a wider variety of tasks across a greater range of difficulty than those less efficacious individuals. These individuals are also less likely to give up when faced with setbacks or increasingly challenging tasks. Furthermore, those with over-inflated levels of self-efficacy can develop levels of confidence that are not backed up by actual ability.

Last, it is important to note that high self-efficacy in a leader can contribute to higher collective efficacy of a group, such as teachers. Therefore, a principal with high self-efficacy does not only impact school goals and student achievement through his or

her behaviors and leadership, but he or she also does so by contributing to increased self-efficacy levels of those he or she leads, the teachers. The principal must display high self-efficacy across managerial, moral, and instructional leadership tasks. When teachers and principals join forces with these high levels of collective efficacy, school-wide goal attainment and student achievement stand to be positively impacted. Therefore, principal self-efficacy (PSE) is a promising construct.

CHAPTER III

Methodology

Introduction

The current investigation hypothesizes a relationship between principals' self-efficacy rating and their efficacy ratings done by the teachers they lead. This present study sought to further explore any correlation across the three situation specific subcategories of instructional, managerial, and moral leadership tasks. Principals completed self-ratings while a teacher from each principal's building rated the principal's performance on the same tasks. Teachers also completed the same instrument a second time, however with the instructions to predict their principals' responses to each task item.

Research Questions

1. Does a relationship exist between principals' leadership efficacy self-ratings and the ratings of their efficacy by teachers whom they lead, thus determining if principals' self-perceptions match how their teachers perceive their performance and their leadership efficacy?
2. Do results of the data analysis for this study justify the enhancement of principals' self-efficacy ratings (via professional development or increased supports) among all three PSES subscales, instructional, managerial, and moral leadership tasks?

Design of the Study

This study was a quantitative survey design using SPSS Version 18 to explore any correlation between teacher and principal ratings. *T*-tests, first-order correlation, one-way

analysis of variance (ANOVA), and multivariate analysis of variance (MANOVA) were used for this explanatory model. The Principal Sense of Efficacy Scale (PSES) items and subscale analysis among teacher ratings and principal self-ratings were conducive to the MANOVA correlation (Tabachnick & Fidell, 2007). Pearson's correlation coefficient was calculated to analyze the correlation of the data produced by the PSES and both of the teacher versions of the instrument, TR-1 and TR-2. Further, reliability testing was performed on each of the three subscales of the three instruments using Cronbach's alpha.

Participants

The subjects consisted of a stratified random sample of public elementary, middle, and high school principals (n = 600) and teachers (n = 600) solicited from across Ohio. This created a total of 1,200 potential participants, 600 teacher-principal pairs from 600 various school buildings. The sample was selected from the Ohio Department of Education Educational Directory via a methodical, systematic random sampling process in which an elementary, middle, and high school were selected repeatedly in that order from front to back of the directory. If contact information could be verified for that school, the principal was selected. If not, the researcher moved onto the next school until the principal was verified as still in service. Once the building and principal were selected and verified, the teachers were selected from the school's web page. When directory or web page links were found, the teachers were counted and randomly selected by using a random number generator. If teacher contact information was not available, that school was dropped from the list and the next school in the directory was chosen. After responses were collected, principals, n = 279 and teachers, n = 267 responded and took the online surveys. Of these, there was a total of 200 teacher and principal pairs, thus

representing 200 schools. There were an additional 143 respondents, 77 principals and 69 teachers, whose building match did not respond. In all 343 schools were represented with 200 of these being represented by both a teacher and the building principal.

Instrumentation

The Principal Sense of Efficacy Scale (PSES) survey instrument created by Tschannen-Moran and Gareis (2004) was used for principals. Tschannen-Moran and Gareis marshaled through their work in which it took three attempts resulting in three different studies to establish a valid and reliable scale to measure principal self-efficacy (PSE); the PSES was their final product. Tschannen-Moran and Gareis reduced an original set of 50 items down to the final 18 items. The original items were based on standards set forth by the Interstate School Leaders Licensure Committee (ISLLC) standards (1996). Tschannen-Moran and Gareis (2004) stated, "Items that were removed had a communality of less than 0.30, loaded on more than one factor, or a factor loading on one of the three principle factors of less than 0.40. Three subscales or factors emerged" (p. 580). The authors went on to test construct validity by correlating PSES against the constructs of work alienation, trust in teachers, and trust in students and parents. These constructs were ones that already had established validity. As stated in their results, Tschannen-Moran and Gareis confirmed a significant negative correlation between PSE and work alienation ($r = -0.45$, $p < .01$) and significant positive correlations between trust in teachers ($r = 0.42$, $p < 0.01$) and trust in students and parents ($r = 0.47$, $p < 0.01$).

These researchers used the PSES in a subsequent study identifying antecedents of PSE. Tschannen-Moran and Gareis (2007) explained their development of the PSES as

they stated, “This instrument was patterned on Bandura’s unpublished Teacher Self-Efficacy Scale, and it follows the guidelines outlined in his monograph on the construction of self-efficacy scales (Bandura, 2001)” (p. 97). In this study, results from the PSES served as the measure of PSE which was subsequently analyzed to explore relationships with demographic variables of race, gender, school poverty level, and typology. Other variables analyzed were various support measures including building level support from students, teachers, parents and support staff, and district level support from the superintendent and central office. The variable of principal preparation was also analyzed for relationships with PSES results for the participants. Tschannen-Moran and Gareis (2007) found the PSES to be a reliable instrument with Cronbach’s alpha reported at .91 for the overall scale and at .86, .87, and .83 for the subscales of instructional, managerial, and moral tasks, respectively.

The PSES was demonstrated to be a reliable instrument in another study that explored the relationship principal self-efficacy and their personal beliefs and environmental influences (Nye, 2008). Nye reported Cronbach’s alpha values of .86, .85, and .80 for the subscales of instructional, managerial, and moral tasks, respectively. These values were parallel to those reported by Tschannen-Moran amd Gareis (2007). Nye’s results included responses from principals in Texas, $n = 280$ while Tschannen-Moran and Gareis included results from principals in Virginia, $n = 544$.

In the present study, the same PSES was used with modifications made to the directions and pronouns in the wording of individual items to reflect the teachers’ point of view instead of principals’. The teachers completed two versions of the instrument. First they were asked to rate their principal (TR-1). Second, they were given the same

questions and asked to predict what they thought their principals' responses would be (TR-2). PSES, TR-1, and TR-2 had a common referent, the principal. This in essence yielded three data sets: the principals' self-ratings, the teachers' ratings of the principals, and the teachers' predicted principal responses. These instruments were then translated into an electronic web-based survey platform to make data collection electronic versus traditional paper copies. Construct reliability was already established for the PSES and its subscales by the creators in their initial study, however, Cronbach's alpha was calculated for the current investigation to check for reliability with the current population and for the revised versions of PSES. Each of the three subscales was reliable. This held true for both the PSES and the modified teacher versions.

Procedure

An invitation letter requesting participation in the study via an electronic survey was mailed to each prospective participant. The solicited population consisted of the principal and one teacher from 600 randomly selected public schools. These schools were chosen from the Ohio Department of Education Directory. The 1,200 solicited participants (600 principals and 600 teachers) were contacted initially with an invitation letter to participate via U.S. mail. The invitation letter explained the study briefly and provided each participant with a unique 5-digit code required to complete the survey as well as directions to the online survey links. This code was then used to pair the principal and teacher respondents by building, thus removing the need to track them by name. Two weeks after mailing the letters and collecting responses, 1,000 postcard reminders were mailed to non-respondents. Two weeks after that, e-mail reminders were sent. Over the next month, nearly 1,000 e-mails were sent out to solicit responses. As the number of

completed surveys increased, this writer became more concerned about the lacking number of paired responses, teachers and principals from common buildings. Teachers or principals whose matching respondent had completed the survey were then e-mailed to boost *n*-size of paired respondents. This continued until the *n*-size for paired respondents reached 200, thus providing the desired *n*-size. All solicitation used language that had been previously approved by the IRB of Youngstown State University, therefore IRB compliance was adhered to throughout. After two months of data collection, there were a total of 269 teachers and 277 principals who took the surveys with 200 of each being from common schools. Therefore, the paired respondent data set consisted of representatives from 200 Ohio public schools. Elementary, middle, and high schools were each represented in the population. In all, the entire data set consisted of representatives from 346 schools since there were 69 teachers and 77 principals respondents whose solicited match did not respond. Closer inspection of the selected final pairs revealed incomplete surveys, thus reducing the final selected pairs to be analyzed to $n = 189$.

Links to the surveys were placed on a designated web page for easy access and response collection. As an incentive, an Apple i-Pad was randomly given to one respondent. Identifying data from the aforementioned process was coded and kept confidential, thus only being available to the researcher. Respondent surveys that were completed and returned were numbered 1 through n, and a number from the total respondents was drawn. At the time of the drawing, there were 466 total respondents. Using a random number generator, number 26 was selected to receive the i-Pad. The winner was a teacher at Buckeye Trail Middle School in East Guernsey Schools. The school contact information that had been previously coded and kept for the researcher's

records was used to contact the random winner of the Apple i-Pad described in the directions/consent section of the survey instruments. The i-Pad was mailed to the same name and address as the survey had been sent to for that particular respondent and she contacted this writer to confirm receipt in July, 2011.

Limitations of Methodology

There were a few limitations to the methodology. The overrepresentation of male and female respondents among principals and teachers, respectively, made correlation of these variables impractical. Likewise, the underrepresentation of non-Whites and districts other than rural and suburban also made these variables not viable for further analysis.

Summary

The online principal and teacher surveys produced large, reliable data sets for analysis. Overall principal respondents, $n = 277$ and teacher respondents, $n = 269$ were paired down to a final selection of paired samples representing a final set of schools for analysis, $n = 189$. Descriptive analyses were performed for the overall and then again for the paired samples, thus revealing that the paired sample was representative of the full sample.

CHAPTER IV

Analysis of Data

Introduction

The results of all respondents, principals and teachers, were collected and analyzed using SPSS Version 18. The demographics collected for teachers and principals were summarized as well as the PSES responses on their respective survey instruments. Principals (n = 279) completed a self-rating using the PSES. The teachers (n = 267) completed two versions of the PSES. The first scale (TR-1) allowed them to rate their principals using the same items that the principal used. The second version (TR-2) presented the same questions again and asked the each teacher to predict what his or her principal's responses were.

A sample of matching principal-teacher data was extracted from the full sample, resulting in matched pairs (n = 200). Eleven cases were deleted because of incomplete responses. Algorithmic imputation was not possible due to the large number of unendorsed items. The end result was a set of principal-teacher pairs (n = 189) representing 189 schools across the state of Ohio.

All data sets for principals and teachers were sorted into three subscales as intended by the creators of the PSES. The three subscales each consist of six items representing instructional, managerial, and moral leadership tasks. The sums of these subscales were used to perform the reliability estimates and statistical analyses discussed below.

Data Analysis

Descriptive data were produced for both the overall set of respondents and the final selected paired samples (n = 189). Demographic variables of race, gender, years of service, years in current position, district typology, and building level were charted and analyzed against the subscales for the respective survey instruments. To explore relationships between principal self-ratings and the ratings by their teachers, Pearson's correlation coefficients were computed. The teacher responses were correlated against the responses from the respective principals. Any significant correlation that was found between any of the subscales was further analyzed via one-way Analysis of Variance (ANOVA) and Multivariate Analysis of Variance (MANOVA) as an explanatory model of principal efficacy based on both teacher ratings and teacher-predicted principal ratings.

After overall descriptive and the above-mentioned analyses were performed for all respondents, the results for the merged data from the final paired respondents were further analyzed. To do so, the responses for each subscale on the principals' instrument (PSES) were dichotomous, thus creating two data sets. A median split was used to create a high and low principal group for each subscale. Dichotomized principal subscale ratings (instructional, managerial, and moral) were then analyzed for each of the two teacher instrument responses. Next, teacher ratings on TR-1 and their predictions on TR-2 were subtracted from the principal PSES rating, thus creating two sets of differences by subscale. This analysis was justifiable in that each data set had a common referent, the principal. These differences served to quantify discrepancies between teachers' perception of their principals' efficacy versus the principals' self-ratings.

Demographics

Demographic data were analyzed for all respondents and for the matched pairs. Discussion in the body of this chapter focused on the final paired respondents, and the overall data including all respondents are displayed in Appendix D. The results for the final paired sample were parallel to the results of the overall sample (See Appendix D, Tables 1A through 8A, for results of All Respondents). Factors included race, gender, building level, district typology, years as a teacher or building administrator, and years in current role. Years of service and years in current role were analyzed for both teacher and principal respondents. Tenure as a teacher was longer than tenure as a building principal in general as well as pertaining to time served in current roles. See Table 1.

Table 1. *Summary of Years of Service for Paired Respondents-Principals*

Variable	***M***	***SD***	***Skewness***	***Kurtosis***
Years as a Building Administrator	11.05	6.755	0.961	0.687
Years in Current Principal Role	6.08	4.186	1.271	1.795

Overall, the teachers had approximately five years more experience in both categories. With mean differences between all respondents and the paired sample of respondents ranging from as little as 0.11 Years in Current Principal Role, to as large as 0.31 Years as a Teacher as shown in Table 2.

Table 2. *Summary of Years of Service for Paired Respondents-Teachers*

Variable	*M*	*SD*	Skewness	Kurtosis
Years as a Teacher	16.69	9.882	0.510	-0.271
Years in Current Teaching Role	10.99	8.064	1.185	1.259

Teacher gender was also summarized for the overall group of respondents and again for the final matched pairings. The representation of males and females overall as well as the final matched pairing were consistent as summarized in Table 3.

Table 3. *Teachers' Gender for Paired Sample*

Variable	Frequency Paired	Percent Paired
Female	124	65.6
Male	65	34.4

Representation of males and females in the final paired sample only differed by 0.6% from the representation of the whole sample, again showing that the paired sample was representative of the overall set of teacher respondents (Appendix D) with the percentage of female participants nearly doubling the percentage of males at rates of 65.6% and 34.4%, respectively.

The reported race frequency is summarized in Table 4. Black respondents (n = 2) were not well represented in the final data set.

Table 4. *Teachers' Race for Paired Sample**

Variable	Frequency Paired	Percent Paired
Black	2	1.1
White	187	98.9

*Note: No other races responded

Three building levels (elementary, middle, and high school) were analyzed. Of all demographic variables, building level was the most evenly distributed as shown in Table 5.

Table 5. *Building Level for Paired Sample*

Variable	Frequency Paired	Percent Paired
Elementary	56	29.6
Middle	59	31.2
High	74	39.2

This could be attributed to the selection method described above in Chapter 3 as buildings from each level were selected from the Ohio Department of Education School Directory in repetitive order of elementary, middle, high school. While this was not as

completely random as the teacher selection which entailed a random number generator, this systematic random sampling method did result in a better balance of building levels being represented in the data. High school level teachers were slightly more represented, but only marginally with 9% more teachers at the high school level than the lowest level, elementary school.

Principals were also analyzed by gender. See Table 6.

Table 6. *Principals' Gender for Paired Sample*

Variable	Frequency Paired	Percent Paired
Female	55	29.1
Male	134	70.9

Similar to the teachers, principals in the final matched pairs were representative of the overall group. On the other hand, male principals were more represented than females in both sets. While females nearly doubled the males in the teacher category, males were more than doubly represented in the principal category with final paired rates of 70.9% and 29.1%, respectively.

While race categories of Black and Other were slightly represented among the overall group of principals, the final paired group still consisted of a disproportionate rate of Whites. With few non-White respondents in the paired sample this category did not lend itself for further analysis. While male and female representations discussed above were disproportional, the amount of disproportion resulting from nearly negligible representation of non-White principals was a limiting factor for this study as shown in Table 7.

Table 7. *Principals' Race for Paired*

Variable	Frequency Paired	Percent Paired
Black	4	2.1
White	181	95.8
Other Race	4	2.1

Finally, typology (urban, suburban, and rural) was analyzed. It was important to note that there is only one column in Table 8 for the paired sample as these participants as described in the Methodology were purposefully from the same building while this did not hold true for all of the overall respondents. Data for the whole sample are displayed in Appendix D. Over 93% of the districts analyzed were rural or suburban. This was representative of the overall state of Ohio which has a combined total for rural and suburban districts of 91%. The results of district typology for this study were displayed below in Table 8.

Table 8. *District Typology*

Variable	*n*	Percent Paired
Rural	105	55.6
Suburban	71	37.6
Urban	13	6.9

The low representation of urban districts $n = 14$, among the final pairs is lower than the current representation in the population. The state of Ohio consisted of 19% urban districts while the paired samples for this study only represented 6.9%.

These data revealed that the overwhelming majority of respondents were White, while 72% of principals were male and 65% of teachers were female. Building levels were nearly balanced with the high school level being more represented than elementary and middle schools, especially for principal respondents. Urban districts were underrepresented.

Reliability and Correlation of Instruments by Subscale

Each subscale of the PSES instruments was analyzed for reliability. Cronbach's alpha indicated acceptable reliability for each sub-construct (Field, 2009; Tabachnick & Fidell, 2007). These reliability results are displayed below in Table 9.

Table 9. *Reliability for All and Paired (Cronbach's alpha by subscale)*

Factor	PSES All	TR-1 All	TR-2 All	PSES Paired	TR-1 Paired	TR-2 Paired
Instructional	0.829	0.925	0.893	0.846	0.921	0.889
Managerial	0.842	0.942	0.891	0.832	0.938	0.904
Moral	0.769	0.923	0.860	0.787	0.920	0.856

The principals used the PSES to self-rate, the teachers rated the principals using the TR-1, and the teachers predicted their principal's self-rating via the TR-2.

Since the reliability of the instruments was determined acceptable with this sample of participants (Tabachnik & Fidell, 2007), the analysis proceeded to an examination of the relationship between the principal responses and the teacher responses. This was accomplished with Pearson's first-order correlation. The correlations between the principal factors demonstrated little to no relationship with the teacher responses with two exceptions as summarized in Table 10.

Table 10. *Correlations (two tailed) by Subscale, PSES vs. Teacher Ratings (TR-1)*

Subscale	TR-1 Instructional	TR-1 Managerial	TR-1 Moral
PSES Instructional	0.202*	0.144*	0.141
PSES Managerial	0.052	0.023	0.017
PSES Moral	0.109	0.061	0.107

*Significant ($p < .05$)

The relationship between principal instructional task ratings and teacher ratings on the instructional tasks was positively correlated. The other significant correlation was between principal instructional task ratings and the teachers' ratings of managerial tasks.

As principal self-ratings on instructional tasks increased, so did the teacher ratings in the instructional and managerial subscales. Both of these correlations were between PSES and TR-1. In total, these results suggest a flat relationship between the PSES and the two teacher instruments. There was no significant correlation between teachers' predictions of their principals' ratings (TR-2) and PSE for any of the three subscales as shown in Table 11.

Table 11. *Correlations by Subscale, PSES vs. Teacher Predictions (TR-2)*

Subscale	TR-2 Instructional	TR-2 Managerial	TR-2 Moral
PSES Instructional	0.129	0.002	0.047
PSES Managerial	0.081	0.034	0.044
PSES Moral	0.103	-0.014	0.099

Linearity was analyzed in an effort to check out possible non-linear relationships. Curve estimation demonstrated that no curvilinear relationships were present.

Assumptions

First, independence must be established. Field (2009) stated, "In some cases it means that data from different participants are independent, which means that the behavior of one participant does not influence the behavior of another" (p. 133). For the purpose of this study, participants were not made aware of the participation of others. Neither principal nor teacher respondents were told that the other was completing the survey instruments. Principals were not aware of other principals completing the PSES, likewise for teachers. Interference between principals and teachers was not likely since neither the principal nor the teacher participant from each building was informed about the other's participation. Finally, most of the teacher respondents completed the instruments after the school year had ended.

Second, interval data are assumed for parametric tests. The response choices to rate each task from 1 to 9 met this assumption as each increment from one selection to the next has equal value on each instrument (Field, 2009; Tabachnick & Fidell, 2007). In addition, all of the responses were summed to obtain a score for each construct resulting in interval level data for statistical analysis.

The third assumption is that of normality. Normality was measured via skewness, kurtosis, and the Kolmogorov-Smirnov (K-S) test. Normality results for the PSE, TR-1 and TR-2 are below in Table 12.

Table 12. *Normality Results for Paired Principals and Teachers*

Scale	*M*	*SD*	Skewness	Kurtosis	K-S
PSE Instructional	44.21	5.36	-0.89	3.15	0.02
PSE Managerial	41.43	6.50	-0.63	0.24	0.00
PSE Moral	45.43	4.99	-0.64	0.56	0.00
TR-1 Instructional	39.20	9.48	-0.52	-0.30	0.00
TR-1 Managerial	40.61	9.86	-0.82	0.29	0.00
TR-1 Moral	40.23	9.85	-0.64	-0.24	0.00
TR-2 Instructional	43.83	6.35	-0.45	-0.13	0.00
TR-2 Managerial	43.69	7.14	-0.74	0.59	0.00
TR-2 Moral	44.95	6.23	-0.76	0.94	0.00

Note. TR-1 represents teacher ratings and TR-2 represents teacher prediction of principal self-ratings.

While the K-S results were all significant, this finding does not indicate a lack of normality due to the large number of participants, $n = 189$. In fact, Field (2009) stated that large *n*-size can result in significant K-S scores with even the smallest differences even when the data are normal. By all other measures, these data were normal.

The fourth assumption is homogeneity. Homogeneity is discussed later in this chapter with MANOVA results.

Inferential Analyses

Demographic variables of race, gender, building level, typology, and years of service were examined for significant relationships with the dependent variables, the principal subscales. The teacher and principal subscale ratings were generated as sums with potential scores ranging from 6 to 54. If the respondent selected all ones the sum would be 6 while selecting all nines would result in a sum of 54 on a given 6-item subscale. Analysis of Variance (ANOVA) revealed that race, gender, district typology, and building level had no significant relationship to the principals' instructional, managerial, or moral PSE subscales.

In line with stated research questions, demographic data were analyzed for relationships after the principal responses on each of the three subscales (instructional, managerial, and moral) were subtracted from teacher ratings (TR-1). These differences served to quantify the discrepancy between principals' self-ratings and how the teachers perceived the principal, the common referent.

ANOVA examining the differences in principal self-efficacy (PSE) and the teacher ratings (TR-1) yielded significant results. Between-subjects effects were significant for the instructional subscale for district typology, $F(2, 186) = 4.60$, $p = 0.011$. Specifically, Tukey's HSD post hoc analysis indicated significant differences existed between Rural and Urban ($M = -8.57$) and Suburban and Urban ($M = -6.96$). This indicates that Urban districts had greater mean differences between the principal and teacher ratings, thus resulting in greater discrepancy between how teachers in those buildings perceive the principal in contrast to the principal's self-perception as an instructional leader.

Between-subjects effects were significant for the managerial subscale for district typology, $F(2, 186) = 5.97$, $p = 0.003$. Specifically, Tukey's HSD post hoc analysis indicated significant differences existed between Rural and Urban ($M = -11.56$) and Suburban and Urban ($M = -10.41$). Just as was the case on the instructional subscale, these differences indicate that the discrepancy (or disconnect) between teacher and principal ratings was significantly greater in Urban districts than in the other categories when considering the managerial efficacy of the principal. Last, for TR-1 differences, between-subjects effects were significant for the moral subscale for district typology, $F(2, 186) = 6.46$, $p = 0.002$. Specifically, Tukey's HSD post hoc analysis indicated significant differences existed between Rural and Urban ($M = -10.74$) and Suburban and Urban ($M = -8.77$). Just as was the case with the previous two analyses, disconnect between teacher and principal perceptions of the principal's moral leadership efficacy was greater than results for Rural and Suburban districts. Across all three subscales (instructional, managerial and moral), the greatest difference between teacher and principal perception was evident between Rural and Urban schools, thus indicating that Urban schools have the greatest disconnect between the principal and teacher's perceptions of the principal's leadership efficacy.

ANOVA was performed for the differences in teacher predictions (TR-2) and PSE. Between-subjects effects were significant only between the instructional subscale and district typology, $F(2, 186) = 3.11$, $p = .047$. Specifically, Tukey's HSD post hoc analysis indicated significant differences existed between Rural and Urban ($M = -5.56$). Similar to the TR-1 results, TR-2 results indicate that disconnect between principal and

teacher ratings in Urban schools was greater when analyzing differences between principal self-ratings and the teacher predictions of the principals' self-ratings.

Dichotomized PSE vs. Differences in PSE and Teacher Subscales

Given reliable data and flat relationships, the data were analyzed next with the independent variables, dichotomized PSES subscales. This approach to analysis was demonstrated by Wong, Steiner, and Cook (2011) as another perspective when looking at continuous data. This step made the PSE data conducive to analysis of principals with high versus low self-efficacy ratings across each of the three subscales. A median split was used for each subscale to produce a high and low category of principal self-efficacy. The median for the instructional subscale was 44.5, the median for the managerial was 42.5, and the median score for the moral subscale was 45.5.

As indicated earlier, a new dependent variable was created that represented the difference between the mean principal and teacher responses. It was hypothesized that the degree of these differences would be different for high and low PSE, thus quantifying teacher perceptions of their principals versus principal self-ratings. High or low PSE served as the independent variable. Only like-task subscales were analyzed, thus ignoring cross-analysis between different task subscales as assuming relationships across subscales would not be in line with self-efficacy research that suggests that self-efficacy is task-specific (Bandura, 1997, 2007). All *t*-test results between the dichotomized PSES ratings were significant across all subscales of both teacher ratings, TR-1 and TR-2, indicating that a statistically significant difference in means exists between the high and low PSE groups on each individual subscale.

Levene's test for Equality of Variance (Field, 2009) confirmed the assumption of homogeneity for each dichotomized subscale with only one significant finding for difference of managerial tasks, $F(2, 187) = 5.87$, $p = 0.016$. This finding was negligible due to the large number of participants ($n = 189$) according to Tabachnick and Fidell (2007).

Pearson correlation of the dichotomized PSES and differences in principal and teacher ratings was significant between principals with low instructional PSE and their teachers' ratings on the instructional subscale, $r = 0.325$, $p = 0.002$ (two tailed). The lower these principals rated themselves, the lower the teachers' ratings were of them as well on instructional tasks. Likewise, principals with low moral PSE and their teachers' ratings on the moral subscale were significantly correlated, $r = 0.232$, $p = 0.028$ (two tailed). The lower the principals rated themselves, the lower the teachers' ratings were on moral tasks.

Performance Index and Building Enrollment Size

For further analysis, the dependent variables of school Performance Index (PI) and school size as measured by student enrollment numbers were obtained for each of the schools used for final paired analysis, $n = 189$. It was hypothesized that principal self-ratings and teacher ratings of their principals may be related to student achievement level as measured by PI and school size as measured by student enrollment. School size and achievement levels of students in a building stand to have a relationship to how the principal is perceived by others. The state of Ohio rates schools (ILRC) on achievement, and these results are published for the public to see. Likewise, numbers of students taking

given achievement tests and class sizes are among many building level factors the principal needs to consider to effectively administer the academic program.

These data were retrieved from the Ohio Department of Education (ODE) website of Interactive Local Report Cards (ILRC, September, 2011). PI is used to rank school performance on achievement tests by assigning a scaled value to a given score on the test and then multiplying the percentage of students scoring at each given level by the scaled value. For example, students scoring at the Basic level receive a lower scaled score, 0.6, while those scoring at the highest level, Advanced, receive a higher scaled score, 1.2. If 100% of students scored Advanced, then the highest possible PI, 120, would be given to that school. The theory is that if every student was proficient, which has a scaled value of 1, then the PI score for that school would be 100. Therefore, a PI score of 100 is the minimum score expectation set forth by ODE.

Correlation between the differences of principal (PSES) and teacher ratings (TR-1) versus building PI scores yielded two significant results. Teacher ratings on the managerial subscale were significantly correlated to PI, $r = -0.163$, $p = 0.025$ (two tailed), as were teacher ratings on the moral subscale, $r = -0.182$, $p = 0.012$ (two-tailed). These negative correlations suggest that as PI increases, thus the higher achieving the school, the difference between principal self-ratings and teacher ratings of the principals' managerial and moral task self-efficacy decreases. There were no significant correlations between differences of PSES and teacher predictions of their principals' self-ratings (TR-2) on any subscale.

Enrollment was also significantly correlated to the differences between principal self-ratings (PSES) and their teachers' ratings (TR-1) of them. Differences of principal

and teacher ratings on the instructional task subscale were significant, $r = 0.147$, $p = 0.045$ (two tailed). This indicates that as enrollment increases, so does the discrepancy between principal and teacher ratings, thus suggesting greater disconnect between teachers and principals in larger buildings. Enrollment was also significantly correlated to two subscales on the teacher predictions of their principals' self-ratings (TR-2). First, enrollment was significantly related to differences on PSE and TR-2 for the instructional subscale, $r = 0.229$, $p = 0.002$ (two tailed). Second, differences on the moral subscale were significant, $r = 0.146$, $p = 0.046$ (two tailed). Again, as enrollment increases, so does the difference between principal ratings and teacher ratings. TR-2 represents teacher predictions of principal PSE, so enrollment even has a relationship to disconnect between principals' self-perception and the perception the teachers have of their PSE. Finally, years of service as a building administrator was significantly correlated to enrollment, $r = 0.167$, $p = 0.022$, and years in current principal role was significantly correlated to PI, $r = 0.185$, $p = 0.011$ (two tailed). This indicates that as building size and achievement increase, so do the principals' years of service and years in current role, respectively.

To further explore the relationships with enrollment, school size was categorized for analysis into quartiles. From the smallest 25% of schools, $n = 47$, to the largest 25% of schools in the study, $n = 47$, each of the four categories of schools were correlated against the differences between principal and teacher ratings on each subscale. Descriptive results are summarized below. Enrollment size categories were numbered from one to four, smallest to largest enrollment, respectively. Differences between principal self-ratings and teacher ratings are labeled as Diff_1 as shown in Table 13.

Table 13. Subscale Differences (PSES -TR-1) and Enrollment

Subscale	Enrollment	*M*	*SD*
Instr_Diff_1	98-331	1.553	8.620
	332-479	7.809	10.936
	480-672	4.167	9.279
	674-2536	6.532	9.767
Man_Diff_1	98-331	-0.532	11.163
	332-479	4.575	12.614
	480-672	-1.542	11.334
	674-2536	0.830	10.985
Mor_Diff_1	98-331	1.255	9.766
	332-479	8.979	11.111
	480-672	4.938	9.494
	674-2536	5.638	10.660

Note. Diff_1 is the difference between principal and teacher ratings for each given subscale.

The difference between PSES and TR-1 by subscale was related to student enrollment size. Particularly, category two for each subscale above had a higher mean difference than the other three categories. Category 1, the smallest buildings in the data set, had the smallest mean difference across all three subscales. The differences between PSES and TR-2, the teacher predictions of their principals' self-ratings are displayed below in Table 14.

Table 14. Subscale Differences (PSES -TR-2) and Enrollment

Subscale	Enrollment	*M*	*SD*
Instr_Diff_2	98-331	-2.872	6.337
	332-479	1.021	7.922
	480-672	0.375	8.416
	674-2536	2.979	7.291
Man_Diff_2	98-331	-3.894	7.749
	332-479	-0.957	10.082
	480-672	-3.667	10.358
	674-2536	-0.489	9.339
Mor_Diff_2	98-331	-2.298	6.666
	332-479	1.468	7.871
	480-672	0.854	7.187
	674-2536	1.894	8.066

Note. Diff_2 is the difference between principal ratings and teacher predicted ratings for each given subscale.

There were six occurrences when the differences between PSES and TR-2 yielded a negative mean, thus indicating that principals rated themselves lower in those subscales than their teachers predicted they would. This occurred consistently in the schools with the smallest student enrollment across all three subscales.

MANOVA Analyses

Two MANOVAs were conducted to examine whether mean differences exist across enrollment levels, and the high/low instructional, managerial, and moral self-efficacy variables on an overall measure of PSE with TR-1 and TR-2. Although self-efficacy is more appropriately measured with task-specific scores, this analysis provides both the multivariate and between-subjects estimates without the threat of a Type I error.

Multivariate analyses were obtained for the PSES-TR-1 and PSES-TR-2. Box's *M* was analyzed and indicated no significant results for either MANOVA analysis. Tabachnick and Fidell (2007) and Field (2009) cited Box's test as negligible when sample sizes are equal, and both cited Hotelling's statistic as robust. Therefore,

Hotelling's test statistic was chosen to report the equality of covariance matrices, thus indicating that the assumption of equality of variance was justified. Multivariate test results for TR-1 are displayed in Table 15.

Table 15. *Multivariate Tests (TR-1)*

Effect		Value	*F*	*P*	Partial Eta Squared	Observed Power
Enrol_C	Hotelling's Trace	0.100	1.984	0.039	0.032	0.853
Instruct_di	Hotelling's Trace	0.112	6.703	0.000	0.100	0.973
Manage_di	Hotelling's Trace	0.284	17.041	0.000	0.221	1.000
Moral_di	Hotelling's Trace	0.125	7.526	0.000	0.111	0.985

Note. Enroll_C is categorized enrollment and _di represents dichotomized, high versus low, groupings of the given subscale.

In the TR-1 MANOVA, dichotomized managerial subscale (Manage_di) had the greatest mean differences followed by the dichotomized moral subscale (Moral_di), dichotomized instructional subscale (Instruct_di) and categorized enrollment (Enrol_C), on the total PSE Score. A similar pattern of results was also found with the TR-2 MANOVA results as indicated in Table 16.

Table 16. *Multivariate Tests (TR-2)*

Effect		Value	*F*	*P*	Partial Eta Squared	Observed Power
Enrol_C	Hotelling's Trace	0.071	1.401	0.185	0.023	0.679
Instruct_di	Hotelling's Trace	0.154	9.251	0.000	0.134	0.996
Manage_di	Hotelling's Trace	0.327	19.609	0.000	0.246	1.000
Moral_di	Hotelling's Trace	0.185	11.073	0.000	0.156	0.999

Note. Enroll_C is categorized enrollment and _di represents dichotomized, high versus low, groupings of the given subscale.

However, no significant mean differences were found in the TR-2 across the categorized enrollment variable. As indicated earlier, the TR-1 MANOVA examined the differences in the principal and teacher responses, and the TR-2 examined the differences between the principals' self-ratings and the teachers' predictions of PSE. While these multivariate

results are in line with Tschannen-Moran and Gareis' (2004) purpose for the survey, more meaningful results are provided by the between subjects analysis.

MANOVA between-subjects analysis between PSES and TR-1 revealed significant categorical group differences across enrollment levels (Enrol_C) and managerial subscale differences (diff_mang_1) as well as moral subscale differences (diff_moral_1) indicating that enrollment size accounted for significant amounts of variance in the differences between principal self-ratings and the teacher ratings on managerial and moral tasks.

There were also significant mean differences between each of the three dichotomized constructs for TR-1 and the respective PSES subscales. To review, the PSES principal responses were dichotomized by using the median score for each subscale, thus creating a high PSE and low PSE group for each. Furthermore, the difference for each subscale was calculated by subtracting the teachers' subscale mean from the principals' subscale mean. PSES-TR-1 between-subject results are displayed in Table 17.

Table 17. *Tests of Between-Subjects Effects (PSES & TR-1)*

Source	DV	Df	*F*	*P*	Partial Eta Squared	Observed Power
Enrol_C	Diff_mang_1	3	2.688	0.048	0.042	0.648
	Diff_moral_1	3	3.212	0.024	0.050	0.734
Instruct_di	Diff_inst_1	1	5.495	0.020	0.029	0.645
Manage_di	Diff_mang_1	1	26.010	0.000	0.125	0.999
Moral_di	Diff_moral_1	1	9.683	0.002	0.051	0.872

Note. Enroll_C is the categorized enrollment variable and _di represents dichotomized, high and low groupings, for each given subscale. Diff_1 represents differences in principal and teacher responses for each given subscale.

These results indicate that high versus low PSE accounted for a significant amount of variance in the differences between principals' self-ratings and the ratings by their teachers.

The PSES and TR-2 between-subjects analysis revealed significant mean differences between categorized enrollment (Enrol_C) and instructional subscale differences (Diff_inst_2) indicating that enrollment size accounted for significant amounts of variance in the differences between principal self-ratings and the teacher predictions of their principals' self-ratings on instructional tasks. See Table 18.

Table 18. *Tests of Between-Subjects Effects (PSES & TR-2)*

Source	DV	Df	*F*	*P*	Partial Eta Squared	Observed Power
Enrol_C	Diff_inst_2	3	2.819	0.040	0.044	0.671
Instruct_di	Diff_inst_2	1	19.538	0.000	0.097	0.993
Manage_di	Diff_mang_2	1	48.569	0.000	0.211	1.000
Moral_di	Diff_moral_2	1	17.924	0.000	0.090	0.988

Note. Enroll_C is the categorized enrollment variable and _di represents dichotomized, high and low groupings, for each given subscale. Diff_2 represents differences in principal ratings and teacher predicted responses for each given subscale.

As was the case between PSES and TR-1, PSES and TR-2 between-subjects analysis revealed significant mean differences between each of the three TR-2 subscales and the respective PSES dichotomized subscales. These results indicate that high versus low PSE

accounted for a significant amount of variance in the differences between principals' self-ratings and teacher predictions of principals' self-ratings. See Appendix D, Tables 17A and 18A, for a display of all results as only significant results are displayed in Tables 17 and 18.

Summary

Data collected for both the overall sample as well as the final paired sample of teachers and principals was reliable, and the paired sample used for final analysis was parallel to the whole original sample. In summation, level of the demographic variables was not related to the dependent variable, PSES with the exception of years of service as a building administrator versus the instructional task subscale. When differences between teacher ratings and principal self-ratings were analyzed, district typology and building level were significant across all three subscales of principal self-ratings. Initially, first-order correlations were conducted between the principal subscales and the two teacher instruments. These results were flat, thus revealing no significant relationships between the data sets. Therefore, the decision was made to use the median to dichotomize the PSES data, thus creating two subsets of the principals' self ratings across each of the three subscales. This allowed for analyses of principals with high self-efficacy ratings, those with scores above the median, as well as those with low self-efficacy ratings, those below the median. These dichotomized subscale ratings were also correlated and analyzed for variance against differences on each subscale between principal and teacher ratings. Dichotomized principal ratings for instructional, managerial, and moral subscales were analyzed against the teacher instruments as well as other demographic and dependent variables of student enrollment and Performance Index (PI). Pearson

correlation revealed flat overall data, and curvilinear relationships were ruled out. However, when PSE subscales were dichotomized using the median value for each, correlations surfaced based on how principals with high and low PSE responded versus their ratings by their teachers. Likewise, when differences between PSE and each teacher ratings and teacher predicted ratings were correlated with PSE, significant relationships resulted. Further analyses revealed that Performance Index and categorical student enrollment numbers were related to PSE. Last, MANOVA results were examined for each of the teacher scales, the TR-1 teacher ratings and TR-2 teacher predictions of principal ratings. Between-subjects and multivariate analyses findings were discussed indicating that high and low PSE accounted for the greatest amount of variance in managerial ratings.

A limitation of the methodology that affected results was the sample size, n = 189, on both the Kolmogorov-Smirnov test of normality and the Levene's test for homogeneity. Samples of this size can yield significant results on these tests even when the data are generally normally distributed and have homogeneous variation from the means (Field, 2009; Tabachnick & Fidell, 2007). In particular, normality was confirmed by skewness and kurtosis measures as well as visible inspection of stem-and-leaf plots and histograms.

Other limitations existed regarding demographic variables. There was a disproportional, underrepresentation of Black and Other respondents when analyzing race as over 98% of respondents were White. Also, gender was not balanced as 66% of teachers were female while 71% of principals were male.

CHAPTER V

Summary, Conclusions and Recommendations

Introduction

The position of principal in a public school is one that demands a wide range of skills to perform a variety of tasks. In today's data-driven, standards-based arena of public schools, specific skills are required for principals to be able to collect, analyze and interpret data. These data range from school and district-wide standardized test scores to daily formative assessments administered in each classroom. The principal is expected to be able to lead the curricular, instructional, and evaluative processes that are embodied in the term instructional leadership. That is, however, only one part of the job. Principals are also expected to serve as a liaison between the school and community members and parents. Communicating student achievement and calendars of events is an important task as well as handling student discipline and promoting ethical behavior of staff members. These tasks, along with several others, are embodied in the realms of managerial and moral leadership, respectively. The effective principal strives to balance and achieve mastery in all three of these realms: instructional, managerial, and moral leadership tasks.

This study was designed to contribute to the body of educational literature pertaining to principal self-efficacy (PSE). The first research question has two parts. First it explored the relationship between principals' self ratings and ratings by their teachers (TR-1). Second, it explored the relationship between principals' self-ratings and teachers' predictions of their principals' self-ratings (TR-2). This question was designed to see if the teachers' perceptions of their principals' efficacy were consistent with principals' self- perceptions. The second research question explored whether or not there is any

value in enhancing PSE across the three leadership realms explored: instructional, managerial, and moral leadership tasks.

To answer these questions, descriptive and inferential statistics were analyzed. This is the first study of PSE to include ratings other than principal self-ratings. Teacher ratings of principal efficacy were collected and analyzed with the principal self-ratings with the principal as the common referent, thus creating a line of research that includes meaningful feedback on PSE from others as recommended by Tschannen-Moran and Gareis (2007). Teacher ratings were collected on two levels. First they rated their principals' level of efficacy (TR-1). Second, they predicted their principals' self-rating scores (TR-2) across all three leadership task subscales (instructional, managerial, and moral). This created a second line of new research where the predictions served to rate how the teachers perceive principals based on the leadership efficacy projected by the principals.

Discussion

First order correlation between principal ratings and the teacher rating revealed two statistically significant relationships. First, a positive relationship was found between principal instructional task ratings and teacher ratings of principal instructional efficacy. Second, a positive relationship was found between principal instructional task ratings and teacher ratings of principal managerial task efficacy. These findings revealed that principals with higher self-efficacy in instructional leadership were rated higher by their teachers in performance of instructional and managerial tasks. This may be attributed to the common focus of principals and teachers on increasing student achievement on standardized tests. Teachers expect the principal to provide support and an atmosphere

that are conducive to learning. If the teachers perceive the principal to be effectively performing instructional tasks, it may also be understood that this can only occur if the operation of the building is well-managed. Therefore, if teacher perceptions of the principals' instructional leadership are parallel to the principals' self-perception, an increase, or decrease if both teachers and principals perceptions are low, in collective efficacy may be the result. There were no other significant relationships revealed between principal managerial and moral self-ratings and the teacher rated subscales (instructional, managerial, and moral). Furthermore, there were no significant relationships between any of the PSE subscales and the teacher predictions of their principals' self-ratings. These limited results were opposite to the expectations of this researcher based on the literature review of this study (Bandura, 2007; Coutinho, 2008; Jawahar, Meurs, Ferris, & Hochwater, 2008; Paunonen & Hong, 2010; Rees & Freeman, 2009). These authors' contributions and findings that associated high self-efficacy with increased performance were not supported to the degree expected in this portion of the study. This researcher expected positive relationships across most if not all subscales.

Analysis of Variance (ANOVA) results demonstrated that demographic variables of race, gender, building level, or typology accounted for no significant variance in principal self-efficacy ratings. However, years of service accounted for significant variance in principal instructional ratings. These results indicate that those with more experience as a building principal reported higher self-efficacy on instructional task performance than those principals with less experience. Considering the first order correlations discussed above, this is important as those results revealed that principals with high instructional PSE are rated higher on the instructional task subscale by

teachers. Therefore, experience plays a key role as principals enhance their own perceptions as well as the teachers' perceptions of PSE regarding the performance of instructional leadership tasks. It is possible that the experienced principal has developed higher PSE due to ongoing experience, and this self-perception is likely to be accurate as the experienced principal has managed to stay employed in a role that demands effective managerial skills. If managerial skills underlie instructional leadership skills, then the relationship of these areas from the teacher's point of view would be understandable.

As a means to quantify teacher perceptions of principal leadership efficacy in comparison to PSE, differences of respective subscales were calculated. Teacher subscale ratings (TR-1) were subtracted from the principal self-ratings. ANOVA analyses examining these differences and PSES yielded significant results. District typology accounted for a significant amount of variance across all three subscales, demonstrating differences in how the teachers perceive their principals' performance. Specifically, mean differences between principal and teacher ratings of principal efficacy were greater in urban schools. This indicates that the disconnect between the principals' self-perceptions and the teachers' perceptions are greater than in both rural and suburban schools, thus implying a greater disconnect between the principal and teachers in these buildings. ANOVA was repeated between demographic variables and the differences in PSE and the teacher predictions (TR-2) of their principals' self-ratings. This was an attempt to see if there were significant differences between how the principals rated themselves and how the teachers thought principals would rate themselves. Demographic variables did not have any significant relationship to these differences.

Next, a median split was performed to dichotomize principal responses on the PSES. This split yielded a set of principals with high PSE and a set of principals with low PSE, thus allowing for another perspective when analyzing continuous data (Wong, et al., 2011). This researcher justified this analysis to explore beyond the flat correlation results. Furthermore, this is in line with what is at the core of the research questions, i.e. whether or not principals with high PSE versus low PSE are perceived differently by teachers. It was hypothesized that the degree of these differences would represent high and low PSE. T-test results were significant across all three subscales for both teacher ratings and teacher predictions of PSE. This indicates that mean scores between the low and high groups are statistically different, thus high and low PSE are related to how teachers rate the principals.

Pearson correlations of dichotomized PSE and differences in principal and teacher ratings (TR-1) indicated a significant relationship between principals with low instructional PSE and their teachers' ratings on the instructional subscale. Likewise, low moral PSE ratings and teacher ratings on moral subscale tasks were significantly correlated. Specifically, principals with low self-efficacy on these two subscales are also rated low by their teachers. This suggests that the teachers' perception of the principal is parallel to the self-perception of the principal. Since PSE is based on perception, these findings do not indicate that the principal truly is performing at a low level, but lower performance is more likely to be expected when both PSE and teacher ratings are low. While this analysis did not bear out similar results for principals with high PSE, the sub-construct of reciprocal causation (Bandura, 2007) suggests that this may be the case. Therefore, principals in the low PSE groups may improve the perceptions their teachers

have of them if they can seek ways to increase their own self-perception, thus increasing collective leadership efficacy at the building level (Leithwood & Mascall, 2008).

To further explore potential relationships between building factors and PSE, the differences in principal and teacher ratings (TR-1) were correlated with Performance Index (PI). PI is a score assigned by ODE as a holistic indicator of school performance on mandated standardized tests. The greater the proportion of students scoring at the accelerated and advanced level of performance on tests, the higher the PI score, with a maximum score of 120. To achieve a score of 120, 100% of the tested student body would have to score at the advanced level, the state's highest category. Analysis yielded two significant results. Differences on the managerial subscale were negatively correlated to PI scores. Likewise, differences on the moral subscale were negatively correlated to PI scores. These findings indicate that higher performing schools as measured by PI have less discrepancy between teacher and principal ratings of principal self-efficacy than lower performing schools. The self-perceptions of the principals are similar to those of the teachers. This may be due to effective best practices being implemented in higher achieving schools, especially across the instructional subscale tasks. Practices like professional learning communities (PLC) and leadership teams as well as principal-led professional development have been associated with closer principal-teacher relationships and improved communication (DuFour, 1991; DuFour & Eaker, 1998). Correlation of teacher predictions, TR-2, and principal ratings with PI yielded no significant findings.

School size as measured by student enrollment figures was analyzed. Pearson correlation yielded three significant findings. First, there was a positive relationship between principal and teacher rating (TR-1) differences on the instructional subscale and

enrollment. This indicated that as school size increases, so does the mean difference between the principal's self rating and the teacher's rating. Therefore, school size was related to perceptions of leadership efficacy. As student enrollment increases, it is likely that the number of teachers increases as well. This increase in the teacher-principal ratio may account for less personal relationship knowledge, thus weakening the level of interaction between the principal and teacher. Best practices discussed above may be harder to implement when the principal is dealing with a larger staff and a larger student body. The second and third significant correlation findings were between enrollment and teacher predictions of PSE, TR-2. Positive relationships existed between enrollment and predicted instructional subscale ratings as well as between enrollment and the predicted moral subscale ratings. As building enrollment increased, so did the discrepancy between what the teachers predicted PSE to be versus actual PSE. This is yet another sign that school size contributes to the disconnect between principal and teacher perception of PSE as the principals rated themselves consistently higher than the teachers predicted which suggests that the principals are not sending the signal to the teachers that they think they are sending.

Pearson correlation yielded significant relationships between demographic variables of years of service as a building administrator and years in current role versus enrollment and PI, respectively. The former suggests that larger schools have principals with more overall experience, while the latter suggests that higher performing schools tend to have principals with more years of experience in their current role. The longer principals and teachers work together in the same environment, the greater the performance of the students on state-wide testing. This is consistent with the discussion

above regarding the effective managerial skills that the data suggest principals develop over time.

While the instructional task rating difference was the only subscale from the teacher ratings, TR-1, with a relationship to enrollment, further analysis of enrollment by category revealed more details about this relationship. Four categories were created for school enrollment from category one, the smallest quartile of schools, to four, the largest quartile of schools. Across all three subscales (instructional, managerial, and moral), mean differences between principal and teacher perceived (TR-1) leadership efficacy were greatest for schools in category two. Schools in this quartile had populations ranging from 332-479 students. Schools in this range had greater discrepancy between PSE and teacher ratings of principal efficacy. Schools with the smallest enrollment also had the least discrepancy between principal and teacher perceptions, thus indicating that teacher and principal ratings in the smallest schools are most similar. This may be attributed to a possible likelihood that school buildings in category two are less likely to have an assistant or associate principal, thus increasing the teacher-principal ratio as discussed above.

Differences between teacher predictions of PSE (TR-2) and principal self-ratings were analyzed with categorized enrollment. While there was no apparent pattern, there was a relationship that surfaced. Principals rated themselves lower than the teachers predicted they would half of the time. This was most prominent for the managerial task subscale for which all four categories of building enrollment had negative differences. The greatest difference in the managerial subscale was for the smallest category, indicating that these teachers over-predicted how their principals would respond more so

than teachers from buildings in the other three enrollment categories. This may be an indication that the principals in the smallest schools may be feeling overwhelmed, thus resulting in lower PSE ratings. The teachers in these buildings, however, still predicted a high PSE. This suggests that the principal is managing to send the message that he or she is efficacious even though he or she is not rating himself or herself as such.

Multivariate analysis of variance (MANOVA) tests for categorized enrollment and each of the dichotomized subscales (instructional, managerial, and moral) were analyzed. The relationship between the teacher rating scales (TR-1) and level of PSE (high versus low) was most statistically significant for teachers' perception of principal performance of managerial leadership tasks. From the teacher's point of view, managerial tasks may be viewed as the nuts and bolts or the basic requirements to perform a principal's duties. When a principal perceives himself or herself as having high or low PSE, the teacher perceives this readily. This was true for moral and instructional leadership task performance, respectively. Teachers' ratings of the principals' efficacy do not vary as greatly based on level of the principals' self-perceptions of instructional tasks. Therefore, of the three subscales (instructional, managerial, and moral), high versus low PSE is not as strongly related to the teacher rating on the instructional subscale as much as it is the other two subscales. This could be due to the increased focus over the years on the principal as the instructional leader. Statewide systems such as the Success portal and the Value Added system to monitor state-mandated achievement and growth, measures that are reflected directly on the school and district annual report card, may have driven school boards and superintendents as well as regional support centers such as State Support Teams (SST) and Educational Service Centers (ESC) to offer sweeping support

and professional development aligned to these measures. All of these efforts apply to the instructional subscale of PSE, therefore, mean differences among principals' instructional PSE as related to teachers' perceptions was not as substantial. All of these supports seem to have a positive overall relationship to teachers' and principals' ratings of efficacy, regardless of high or low PSE groupings. Last, building enrollment size was related to teacher perceptions less than the three PSE subscales. These findings suggest that principals looking to improve teacher perceptions of their efficacy should begin by developing managerial leadership skills, moral leadership skills, and instructional leadership skills, respectively. Improving performance of tasks may result in increased perceptions of the teachers. The principal has no practical control over enrollment. However, effective leadership skills may improve the environment of a building, no matter what the size.

MANOVA results for the teacher predictions of PSE (TR-2) were parallel to the results from the teacher rating (TR-1) results. Teacher predictions were affected by level of PSE, high versus low, the same as teacher ratings of their principals. Relationships between teacher predictions and dichotomized PSE were most statistically different across the managerial task subscale followed by moral and instructional subscales, respectively.

Tests of between-subjects effects yielded significant results between principal and teacher (TR-1) differences and each, managerial and moral subscales. Also, size of the student body had a significant relationship with the differences in teacher and principal efficacy perceptions. Furthermore, dichotomized PSE (high versus low) had a significant relationship with the principal-teacher differences in principal efficacy across all three

subscales (instructional, managerial, and moral). The managerial subscale was affected most, followed by moral and instructional subscales, respectively. As discussed previously, the principals' connection and interactions with teachers and students may become more difficult to maintain when the teacher-principal ratio increases. Therefore, it is possible that the managerial tasks demand the most of the principal, thus making staff members more critical as time allotted for other tasks and relationship-building diminishes.

Similar to the previous results from principal and teacher (TR-1) differences, dichotomized PSE, high versus low, was significantly related to the PSE and teacher predictions (TR-2) of PSE differences in principal efficacy across all three subscales (instructional, managerial, and moral). Tests of between-subjects effects yielded significant results between PSE and teacher predictions of PSE on the instructional task subscale and categorized enrollment. Again, the greatest mean differences were found with the managerial subscale, followed by instructional and moral subscales, respectively. Whether exploring teacher ratings or teacher predictions of principal efficacy, the differences between principal and teacher perception were related to enrollment and levels of PSE, high versus low. This parallels earlier discussion regarding how the focus of principals may tend to be centered on managerial task performance when there is a larger teacher-principal ratio.

Implications for Educational Leaders

Exploring principal self-efficacy (PSE) as a promising construct for educational leadership research has proven to be worthwhile. Significant findings from this study have been discussed, and there are implications for educational leaders. Years of service

as an administrator and years in current principal role were the only demographic variables that were related to PSE. In short, experience matters. An implication of this might be for a principal to remain in a given role to grow professionally and become efficacious. One cannot control time and become more experienced as far as years of service are concerned. However, one can seek out ways to gain more experience by taking on various roles in the building, district, or region. Bandura (1994) discussed the importance of redoubling efforts when faced with a challenge or task. Increased effort to be successful at a variety of leadership tasks may complement experience. Vicarious experiences and modeling behaviors after more experienced, successful principals may be another way to achieve PSE levels comparable to principals with more experience.

Another implication of these findings is the importance of developing high PSE on instructional tasks. As Instructional PSE increases, so do the perceptions of teachers for both instructional tasks and managerial tasks. Teachers perceive principals as more effective managers and instructional leaders when the principal has a higher perception of his or her instructional leadership efficacy.

The relationship between building enrollment size and typology on PSE also has implications. The principal cannot control the typology or enrollment size of a school. However, he or she does have control over his or her choices. Bandura (1994) discusses the impact of self-efficacy on decision making. The implication here may be one of fit. A principal may be more efficacious if he or she chooses to take a position in a building of a given type or size for which he or she is most suited to be efficacious.

Analysis of dichotomized PSE, high versus low, revealed significant relationships. Differences in how teachers perceive the principal versus how the principal

perceives himself or herself revealed that level of PSE is significant. Principals should work to improve their self-efficacy across all leadership task subscales (instructional, managerial, and moral). Doing so may affect self-perceptions as well as perception of others. Professional development that helps principals improve upon their self-efficacy is a worthwhile endeavor since findings of this study imply that higher self-efficacy is desirable. Reciprocal causation (Bandura, 2007) suggests that improved PSE may result in increased ratings by the teacher. As stated earlier, increased collective efficacy may increase overall performance due to the effects of self-efficacy on decision making, task performance, and redoubling of efforts in the face of adversity.

Principals in higher performing buildings tend to have higher PSE. These principals may tend to be more experienced, thus demonstrating higher actual ability as well. It is also likely that the reciprocal relationship between teachers and the principal in a high performing building may result in higher collective efficacy, thus higher student performance. While this finding may not assume causation between PSE and PI scores, it does lend itself to exploration.

Another implication of this study regarding school building factors was the relationship between PSE and enrollment. Principals in buildings ranging in student counts from 332 -479 students had the greatest disconnect with teachers as to how each, principal and teacher, perceived the principal's leadership efficacy. One possible explanation for this may be the teacher to administrator ratio. Schools larger than this most likely have a principal with one or more associate or assistant principals, thus increasing accessibility to administrative support while it is a given that principals in the smallest schools most likely have more direct contact with teachers. To improve the

ability of the principal to connect in buildings within this size category, the district administrative team may find it worthwhile to increase administrative support for the principal. This may also be accomplished by establishing leadership teams or a lead teacher network within the building to support the principal. Another relationship to enrollment was the finding that principals in the smallest schools consistently rated themselves lower than the teachers did. However, principals in this category had the least amount of disconnect between their self-ratings and their teachers' ratings. This implies the need for these principals to be supported as they may feel overwhelmed. Bandura (1994) discusses the increased likelihood that a person with low self-efficacy may give up or avoid tasks they see as challenging. So, if self-ratings are low for principals in these buildings, then it is important for district support, especially that of central office, to be given to those principals to improve as central office support is an important antecedent to PSE (Tschannen-Moran & Leithwood, 2007).

Last, findings of this study suggest that principals who are actively seeking to improve upon their leadership efficacy would be best served to begin with the managerial leadership tasks based on variance of teacher ratings and teacher predictions of PSE. Workshops on time management and paperwork efficiency or collaboration with other administrators to improve these skills may improve PSE, and subsequently improve the ratings by teachers. Next, principals should focus on the moral task subscale. Handling issues involving student discipline, fairness, and ethics more effectively stands to boost PSE, likewise boosting teacher ratings on this subscale. Variance of teacher responses on the instructional subscale was the lowest of the three subscales. Performing instructional tasks such as motivating teachers, creating a shared vision and facilitating student

learning and performance on standardized tests with greater effectiveness may boost PSE and teacher perceptions. Teacher ratings of principals on the instructional subscale had the least variance, thus indicating that principals from both groups, high and low PSE, have consistent ratings from themselves and teachers. This may be an indication that more time should be spent developing PSE on the other two subscales even though this may seem counterintuitive since improving instruction and assessment is at the core of the principal's responsibilities.

Recommendations for Future Research

Principal self-efficacy (PSE) pertaining to leadership tasks has proven to be a worthwhile area of study. Based on the finding of the present study, there are more areas of PSE that warrant investigation. First, gender lends itself to further exploration. First order correlations yielded flat data with gender revealing no relationship overall. Further exploration of the data via dichotomizing PSE and calculating differences in teacher and principal responses by subscale yielded significant findings. These more in-depth analyses, however, did not include manipulation of the gender variable. Therefore, replicating this study with all females and again with all males may lead to more in-depth relationships between PSE and gender. Furthermore, replicating this study with a larger sample of various non-White teachers and principals might also lead to more in-depth relationships between PSE and race.

Another suggestion for future research would be to focus more on each building level. Replicating as much of this study as possible at each distinct building level (elementary, middle, and high school), would offer insight into the relationship that building level has to both PSE and teacher perception of principal leadership efficacy.

Combining the former suggestions regarding gender and race with further exploration of building level may give a third option for future research. An investigator may seek the varied relationship to gender and race at each building level to see if interplay of these demographics has significant relationships to PSE.

Finally, future research could focus on the PSES subscale items. Therefore, it would be recommended that confirmatory factor analysis be conducted with data collected with the PSES. There is some question whether the items listed for each sub-construct appropriately define their constructs. For example, Tschannen-Moran and Gareis (2004) assigned the effective handling of discipline to the moral subscale. When one considers disciplining of students from the point of view of a student, fairness and justice are moral constructs, but student discipline might be more appropriately placed in the managerial subscale from the point of view of a teacher as teachers might see this as a time-sensitive task or service performed by the administrator. Confirmatory factor analysis may give some insight as to whether one or more items might be more appropriately included under a different construct.

Summary

This chapter began with an introduction that reminded the reader of the focus of the present study. Discussion of results produced a narrative description of the data and findings. Relationships were discussed, and key points related to findings were highlighted. Implications for school leaders spelled out many considerations related to using the results of this study to improve PSE and teacher perceptions of their principals. Last, suggestions for future research were made based on the findings and implications of the present study.

REFERENCES

Anderson, D., Krajewski, H., Goffin, R., & Jackson, D. (2008). A leadership self-efficacy taxonomy and its relation to effective leadership. *The Leadership Quarterly, 19*, 595-608.

Armstrong, T. (2006). *The best schools: How human development research should inform educational practice*. Alexandria, VA: Association for Curriculum and Supervision.

Bandura, A. (1977). *Social learning theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, (1998). Retrieved April 5, 2010, from http://www.des.emory.edu/mfp/BanEncy.html

Bandura, A. (1997). *Self-efficacy: The Exercise of control.* New York: W.H. Freeman and Company.

Bandura, A. (2000). Cultivate self-efficacy for personal and organizational effectiveness. In E. A. Locke (Ed.), *The Blackwell handbook of principles of organizational behavior* (pp. 120-136). Malden, MA: Oxford.

Collins, J. (2005). *Good to great in the social sectors: A monograph to accompany Good to Great.* Boulder, CO: Jim Collins.

Coutinho, S. (2008). Self-efficacy, metacognition, and performance. *North American Journal of Psychology, 10*(1), 165-172.

DuFour, R. (1991). *The principal as staff developer*. Bloomington, IN: National Education Service.

DuFour, R. & Eaker, R. (1998). *Professional learning communities at work*. Bloomington, IN: National Education Service.

Field, A. (2009). *Discovering statistics using SPSS.* Thousand Oaks, CA: SAGE Publications.

Frick, W. (2009). Principals' value-informed decision making, intrapersonal moral discord, and pathways to resolution: The complexities of moral leadership praxis. *Journal of Educational Administration, 47*(1), 50-74.

Gray S. & Streshly, W. (2008). *From good schools to great schools: What their principals do well*. Thousand Oaks, CA: Corwin Press.

Greenfield, Jr., W. (2004). Moral leadership in schools. *Journal of Educational Leadership, 42* (2), 174-196.

Hallinger, P. (2003). Leading educational change: Reflections on the practices of instructional and transformational leadership. *Cambridge Journal of Education,* 33(3), 329-351.

Hannah, S., AvolioB., Luthans, F. & Harms, P. (2008). Leadership efficacy: Review and future directions. *The Leadership Quarterly, 19*, 669-692.

Hansen, J. & Wanke, M. (2009). Think of capable others and you can make it! Self-efficacy mediates the effect of stereotype activation on behavior. *Social Cognition, 27*(1), 76-88.

Harrison, A., Rainer, Jr., R., Hochwarter, W. & Thompson, K. (1997). Testing the self-efficacy-performance linkage of social cognitive theory. *The Journal of Social Psychology, 137*(1), 79-87.

Hendricks, J. & Payne, S. (2007). Beyond the big five: Leader goal orientation as a predictor of leadership effectiveness. *Human Performance, 20*(4), 317-343.

ILRC. *Interactive Local Report* Card. Ohio Department of Education. Retrieved from http://ilrc.ode.state.oh.us/ on September 30, 2011.

Interstate School Leaders Licensure Consortium: Standards for school leaders. (1996). Council of Chief State Scool Officers. Washington, DC.

Jawahar, I., Meurs, J., Ferris, G. & Hochwarter, W. (2008). Self-efficacy and political skill as comparative predictors of task and contextual performance: A two-study constructive replication. *Human Performance, 21*, 138-157.

Ketelle, D. (2005). Self-efficacy development in school leaders: An alternate paradigm. *AASA Journal of Scholarship and Practice 2*(1), 3-6.

Kincheloe, J. (2008). *Critical pedagogy* (2nd ed.). New York: Peter Lang.

Leithwood, K. & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly, 44*(4), 496-528.

Leithwood, K. & Mascall, B. (2008). Collective leadership effects on student achievement. *Educational Leadership Quarterly, 44*(4), 529-561.

Leithwood, K. (2007). Transformation school leadership in a transactional policy world. In *The jossey-bass reader on educational leadership* (2nd ed.). (pp. 183-196). San Francisco, CA: Jossey-Bass.

Leithwood, K., Strauss, T. & Anderson, S. (2007). District contributions to school leaders' sense of efficacy: A qualitative analysis. *Journal of School Leadership, 17*(6), 735-770.

Margolis, J. & Nagel, L. (2006). Education reform and the role of administrators in mediating teacher stress. *Teacher Education Quarterly, 33*(4), 143-159.

Marzano, Waters, & McNulty. (2005). *School leadership that works: From research to results.* Alexandria, VA: Association for Curriculum and Supervision.

McCollum, D. & Kajs, L. (2009). Examining the relationship between school administrators' efficacy and goal orientations. *Educational Research Quarterly, 32*(3), 29-46.

McCollum, D. & Kajs, L. (2007). Applying goal orientation theory in an exploration of student motivations in the domain of educational leadership. *Educational Leadership Quarterly, 31*(1), 45-49.

McCollum, D., Kajs, L. & Minter, N. (2006). School administrators efficacy: A model and measure. *Educational Leadership Review, 7*(1), 81-92.

McCormick, M. J. (2001). Self-efficacy and leadership effectiveness: Applying social cognitive theory to leadership. *Journal of Leadership Studies, 8*(1), 22-33.

National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Retrieved March 28, 2010, from http://www.ed.gov/pubs/NatAtRisk/title.html

Nettles, S. & Herrington, C. (2007). Revisiting the direct effects of school leadership on student achievement: The implications for school improvement policy. *Peabody Journal of Education, 82*(4), 724-736.

Ohio Department of Education. (October, 2006). *Proposal to the United States Department of Education for employing a growth model for No Child Left Behind accountability purposes.*

Paunonen, S. & Hong, R. (2010). Self-efficacy and the prediction of domain-specific cognitive abilities. *Journal of Personality, 78*(1), 339-360.

Rafferty, A., & Griffin, M. (2006). Refining individualized consideration: Distinguishing developmental leadership and supportive leadership. *Journal of Occupational and Organizational Psychology, 79*, 37-61.

Rees, T. & Freeman, P. (2009). Social support moderates the relationship between stressors and task performance through self-efficacy. *Journal of Social and Clinical Psychology, 28*(2), 244-263.

Richard, E., Diefendorff, J. & Martin, J. (2006). Revisiting the within-person self-efficacy and performance relation. *Human Performance, 19*(1), 67-87.

Ross, J. & Gray, P. (2006). School leadership and student achievement: The mediating effects of teacher beliefs. *Canadian Journal of Education, 29*(3), 798-822.

Ryan, J. (2006). *Inclusive leadership.* San Francisco: Jossey-Bass.

Schmidt, A. & DeShon, R. (2009). Prior performance and goal progress as moderators of the relationship between self-efficacy and performance. *Human Performance, 22*, 191-203.

Sergiovanni, T. (2007). Leadership as stewardship: "Who's serving who?" In *The jossey-bass reader on educational leadership* (2nd ed.). (pp. 75-92). San Francisco, CA: Jossey-Bass.

Sergiovanni, T. (1992). *Moral leadership.* San Francisco: Jossey-Bass.

Smith, S. Kass, S., Rotunda, R. & Schneider, S. (2006). If at first you don't succeed: Effects of failure on general and task-specific self-efficacy and performance. *North American Journal of Psychology, 8*(1), 171-182.

Steyn, R & Mynhardt, J. (2008). Factors that influence the forming of self-evaluation and self-efficacy perceptions. *South African Journal of Psychology, 38*(3), 563-573.

Tabachnik, B. & Fidell, L. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Pearson.

Tschannen-Moran, M. (2007). Becoming a trustworthy leader. In *The jossey-bass reader on educational leadership* (2nd ed.). (pp. 99-113). San Francisco, CA: Jossey-Bass.

Tschannen-Moran, M. & Gareis, C. (2004). Principals' sense of efficacy: Assessing a promising construct. *Journal of Educational Administration, 42*(5), 573-585.

Tschannen-Moran, M. & Gareis, C. (2007). Cultivating principals' self-efficacy: Supports that matter. *Journal of School Leadership, 17*(1), 89-114.

Vancouver, J., Thompson, C., Tischner, E., & Putka, D. (2002). Two studies examining the negative effect of self-efficacy on performance. *Journal of Applied Psychology, 87*, 506-516.

Wallace Foundation. (July, 2010). Learning from Leadership Project. *Investigating the links to improved student learning: Executive summary of research findings.* Retrieved from http://www.cehd.umn.edu/CAREI/

Wong, V., Steiner, P., & Cook, T. (2011). *Analyzing regression-discontinuity designs with multiple assignment variables: A comparative study of four estimation methods.* Retrieved from http://www.sesp.northwestern.edu/docs/publications/3108984724e542619c0aca.pdf

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL AND

NIH “PROTECTING HUMAN RESEARCH PARTICIPANTS” CERTIFICATE

Youngstown
STATE UNIVERSITY

One University Plaza, Youngstown, Ohio 44555
School of Graduate Studies and Research
330.941.3091
Fax 330.941.1580
graduateschool@cc.ysu.edu

April 4, 2011

Dr. Karen Larwin, Principal Investigator
Mr. Wendell Lynn Campbell, Co-investigator
Department of Educational Foundations, Research, Technology and Leadership
UNIVERSITY

RE: HSRC Protocol Number: 125-2011
Title: Correlating Principals' Self-efficacy Ratings with Ratings of their Efficacy by their Teachers: Perceptions of Leadership

Dear Dr. Larwin and Mr. Campbell:

The Institutional Review Board has reviewed the abovementioned protocol and determined that it is exempt from full committee review based on a DHHS Category 2 exemption.

Any changes in your research activity should be promptly reported to the Institutional Review Board and may not be initiated without IRB approval except where necessary to eliminate hazard to human subjects. Any unanticipated problems involving risks to subjects should also be promptly reported to the IRB.

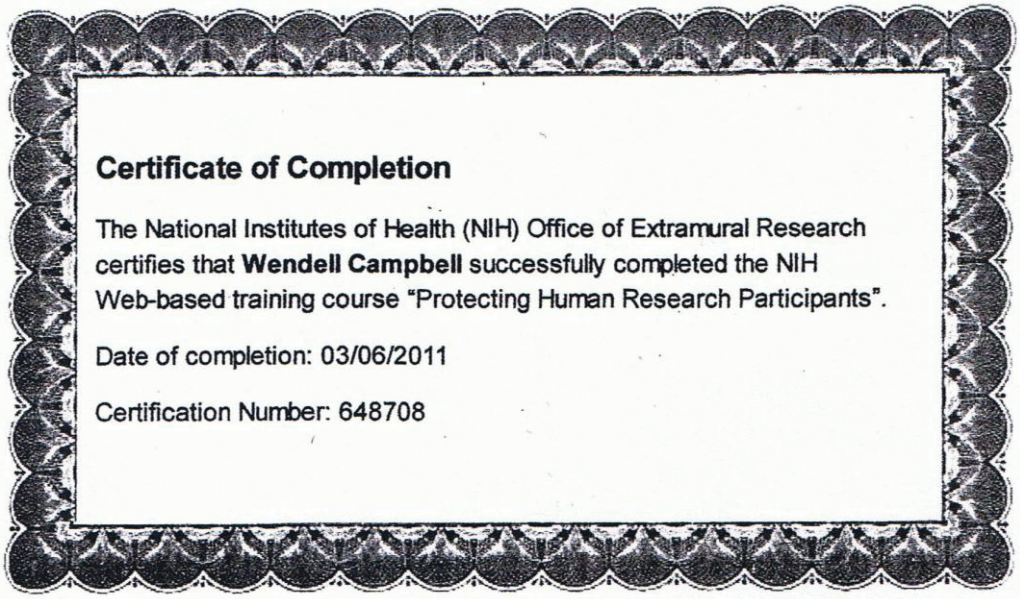
The IRB would like to extend its best wishes to you in the conduct of this study.

Sincerely,

Peter J. Kasvinsky
Dean, School of Graduate Studies and Research
Research Compliance Officer

PJK/cc

c: Mr. Joseph Edwards, Interim Chair
Department of Educational Foundations, Research, Technology, and Leadership



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Wendell Campbell** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 03/06/2011

Certification Number: 648708

APPENDIX B

PRINCIPAL SENSE OF EFFICACY SCALE (PSES)

PRINCIPAL Survey

1.

Hello, my name is Wendell Lynn Campbell, a doctoral student at Youngstown State University. After 11 years of successful classroom teaching and the past 6 years as a building principal, I am keenly aware of how busy you are in your role. I also know how valuable your input is in helping educational researchers learn more about the complexities that exist when studying principal leadership. If you are willing to help me with my research project, please take 5-10 minutes to complete the following series of survey questions. Your submission of the survey constitutes your consent to participate.

All of your answers and school contact information are confidential and will only be available to the researcher. If you have any questions after submitting your surveys, or if you would like information about how to see the completed project, you may contact me via e-mail at wlcampbell@my.ysu.edu . Thanks for your participation and subsequent contribution to educational literature.

Completing and returning this survey is voluntary and you have the right to refuse with no penalty. You may stop completing the survey at any time. If you have questions about participating as a human subject in this project, you may contact Dr. Edward Orona, Director of Grants and Sponsored Programs at YSU (330-941-2377)

PRINCIPAL Survey

2. Enter your 5-digit code

*1. Please enter the 5-digit code (It is VERY important that you enter this code accurately). Your answers are confidential and are only available to the researcher.

PRINCIPAL Survey

3. Demographic Questions

Please answer the following questions about yourself and your current position.

***1. How many years of experience do you have as a building administrator?**

***2. How many years have you been in your current role?**

***3. Please indicate your race.**

- ◯ Black
- ◯ White
- ◯ Other

***4. Please indicate your gender.**

- ◯ Female
- ◯ Male

***5. How would you describe your district?**

- ◯ Rural
- ◯ Suburban
- ◯ Urban

***6. What level best describes your building?**

- ◯ Elementary
- ◯ Middle
- ◯ High

PRINCIPAL Survey

4. Principal Self-Efficacy Scale (Tschannen-Moran & Gareis, 2004)

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 . . .

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

PRINCIPAL Survey

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

PRINCIPAL Survey

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

PRINCIPAL Survey

5. That's it . . .

Thanks for completing the survey (please be sure to press the "Done" button before exiting).

APPENDIX C

TEACHER RATING OF PRINCIPAL EFFICACY SCALE (TR-1) and TEACHER PREDICTION OF PRINCIPAL SELF-RATINGS (TR-2)

TEACHER Survey

1.

Hello, my name is Wendell Lynn Campbell, a doctoral student at Youngstown State University. After 11 years of successful classroom teaching and the past 6 years as a building principal, I am keenly aware of how busy you are in your role. I also know how valuable your input is in helping educational researchers learn more about the complexities that exist when studying principal leadership. If you are willing to help me with my research project, please take 5-10 minutes to complete the following series of survey questions.Your submission of the survey constitutes your consent to participate.

All of your answers and school contact information are confidential and will only be available to the researcher. If you have any questions after submitting your surveys, or if you would like information about how to see the completed project, you may contact me via e-mail at wlcampbell@my.ysu.edu . Thanks for your participation and subsequent contribution to educational literature.

Completing and returning this survey is voluntary and you have the right to refuse with no penalty. You may stop completing the survey at any time. If you have questions about participating as a human subject in this project, you may contact Dr. Edward Orona, Director of Grants and Sponsored Programs at YSU (330-941-2377)

TEACHER Survey

2. Enter your 5-digit code

* 1. Please enter your 5-digit code.(It is VERY important that you enter all 5 digits of this code accurately. Your answers are confidential and are only available to the researcher)

TEACHER Survey

3. Demographic Questions

Please answer the following questions about yourself and your current position.

*** 1. How many years of experience do you have as a teacher?**

*** 2. How many years have you been in your current role?**

*** 3. Please indicate your race.**

- ◯ Black
- ◯ White
- ◯ Other

*** 4. Please indicate your gender.**

- ◯ Female
- ◯ Male

*** 5. How would you describe your disrict?**

- ◯ Rural
- ◯ Suburban
- ◯ Urban

*** 6. What level best describes your building?**

- ◯ Elementary
- ◯ Middle
- ◯ High

TEACHER Survey

4. Principal Efficacy Scale (based on Tschannen-Moran & Gareis, 2004)

Please respond to each of the questions by considering the combination of your principal's current ability, resources, and opportunity to do each of the following in his/her present position.

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

TEACHER Survey

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

TEACHER Survey

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

TEACHER Survey

5. Predicted Principal Self-Efficacy Scale (based on Tschannen-Moran & Gar...

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

TEACHER Survey

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

TEACHER Survey

Survey questions have been removed due to copyright.
Refer to the print version of this dissertation.

TEACHER Survey

6. That's it . . .

Thanks for completing the survey (please be sure to press the "Done" button before exiting).

APPENDIX D

TABLES INCLUDING RESULTS OF ALL RESPONDENTS OR INCLUDING NON-SIGNIFICANT RESULTS

Table 1A. *Summary of Years of Service for All Respondents-Principals*

Variable	*M*	*SD*	Skewness	Kurtosis
Years as a Building Administrator	11.38	6.919	0.824	0.315
Years in Current Principal Role	5.97	4.379	1.571	3.292

Table 2A. *Summary of Years of Service for All Respondents-Teachers*

Variable	*M*	*SD*	Skewness	Kurtosis
Years as a Teacher	16.38	9.829	0.507	-0.35
Years in Current Teaching Role	10.73	8.066	1.164	1.055

Table 3A. *Teachers' Gender for All and Paired*

Variable	Frequency All	Percent All	Frequency Paired	Percent Paired
Female	170	65	124	65.6
Male	90	35	65	34.4

Table 4A. *Teachers' Race for All and Paired*

Variable	Frequency All	Percent All	Frequency Paired	Percent Paired
Black	4	1.5	2	1.1
White	256	98.5	187	98.9

*Note: No other races responded

Table 5A. *Teachers' Building Level for All and Paired*

Variable	Frequency All	Percent All	Frequency Paired	Percent Paired
Elementary	81	31.2	56	29.6
Middle	80	30.8	59	31.2
High	99	38.1	74	39.2

Table 5B. *Principals' Building Level for All and Paired**

Variable	Frequency All	Percent All	Frequency Paired	Percent Paired
Elementary	75	27.2	56	29.6
Middle	93	33.7	59	31.2
High	108	39.1	74	39.2

*Paired consisted of final pairs, $n = 189$

Table 6A. *Principals' Gender for All and Paired*

Variable	Frequency All	Percent All	Frequency Paired	Percent Paired
Female	77	27.9	55	29.1
Male	199	72.1	134	70.9

Table 7A. *Principals' Race for All and Paired*

Variable	Frequency All	Percent All	Frequency Paired	Percent Paired
Black	9	3.3	4	2.1
White	260	94.2	181	95.8
Other Race	7	2.7	4	2.1

Table 8A. *District Typology for All and Paired**

Variable	Percent All Tchrs.	Percent All Prin.	Percent Paired
Rural	54.2	55.4	55.6
Suburban	37.7	37.7	37.6
Urban	8.1	6.9	6.9

*Paired consisted of final pairs, n = 189

Table 17A. *Tests of Between-Subjects Effects (PSES & TR-1)*

Source	DV	Df	*F*	*P*	Partial Eta Squared	Observed Power
Enrol_C	Diff_inst_1	3	2.460	.064	.039	.605
	Diff_mang_1	3	2.688	.048	.042	.648
	Diff_moral_1	3	3.212	.024	.050	.734
Instruct_di	Diff_inst_1	1	5.495	.020	.029	.645
	Diff_mang_1	1	.001	.973	.000	.050
	Diff_moral_1	1	.001	.973	.000	.050
Manage_di	Diff_inst_1	1	.471	.494	.003	.105
	Diff_mang_1	1	26.010	.000	.125	.999
	Diff_moral_1	1	.816	.368	.004	.146
Moral_di	Diff_inst_1	1	1.297	.256	.007	.205
	Diff_mang_1	1	.373	.542	.002	.093
	Diff_moral_1	1	9.683	.002	.051	.872

Table 18A. *Tests of Between-Subjects Effects (PSES & TR-2)*

Source	DV	Df	*F*	*p*	Partial Eta Squared	Observed Power
Enrol_C	Diff_inst_2	3	2.819	.040	.044	.671
	Diff_mang_2	3	1.601	.191	.026	.416
	Diff_moral_2	3	1.362	.256	.022	.358
Instruct_di	Diff_inst_2	1	19.538	.000	.097	.993
	Diff_mang_2	1	1.482	.225	.008	.228
	Diff_moral_2	1	2.148	.144	.012	.308
Manage_di	Diff_inst_2	1	3.796	.053	.020	.491
	Diff_mang_2	1	48.569	.000	.211	1.000
	Diff_moral_2	1	2.782	.097	.015	.382
Moral_di	Diff_inst_2	1	1.647	.201	.009	.248
	Diff_mang_2	1	.076	.783	.000	.059
	Diff_moral_2	1	17.924	.000	.090	.988

APPENDIX E

PARTICIPANT INVITATION LETTER

Dear Fellow Educator,

I am writing to request your help with my dissertation as part of the Ed.D. program with Youngstown State University. The study is about leadership efficacy and principal-teacher perceptions. I am at the point of collecting data for my project, and **I truly need your help**. I have prepared a very short (approximately 5 minutes) survey, and I would like you to participate. Just for helping me out, you will be entered into a drawing to win a new Apple i-Pad upon completing the short survey. Confidentiality of your identity will be maintained by keeping the log linking your code to your name in a locked office in which only the research study investigators have access.

I know how busy you are, so I would not request your help this time of year if this were not a very worthwhile project. I have taught (11 years) and served as a principal (the past 6 years), and I appreciate all that you do for kids. By participating in this study, you will be reaching beyond your walls to help contribute to educational literature, thus helping kids in yet another way as teachers and principals work to grow and serve kids. Here are the steps:

1) Please visit my website: _____
   (Participation and withdrawal information will be provided with other general information about the study when you access the survey on-line)

2) Click on the appropriate link ("Teacher" or "Principal") that applies to your current role

3) Please be sure to enter the 5-digit code below as your name is not requested as part of the survey
   (This code is the only link I have to your directory information once you submit the survey, again see the above statement about confidentiality)

4) Submit your responses on or before Saturday, May 14th and you are entered to win the i-Pad

And that's it! I will notify the winner of the i-Pad very soon after May 14th so stay tuned...it may be you!

Sincerely,

W. Lynn Campbell

APPENDIX F

CREATOR'S PERMISSION TO USE AND CREATE A TEACHER VERSION OF THE PSES

Date: **Wed, 21 Jul 2010 15:34:57 -0400**

From: "Megan Tschannen-Moran' **Block Address**

To: "'Wendell Campbell'

Subject: **RE: PSES**

Reply | Reply All | Forward | Print | Delete

W. Lynn Campbell,

I think the study you have proposed would make a useful contribution to the literature on principal self-efficacy beliefs. I hope that you will design a study of sufficient size so that your findings would be publishable if you ended up with some interesting results.

You have my permission to modify the Principal Sense of Efficacy Scale to capture teachers' views of their principals' effectiveness in the areas assessed by the PSES.

All the best,

Megan Tschannen-MoranThe College of William and Mary
School of Education
PO Box 8795
Williamsburg, VA 23187-8795
Telephone